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CENTER FOR DRUG EVALUATION AND RESEARCH (CDER)

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LUNG CANCER PUBLIC MEETING ON
PATIENT-FOCUSED DRUG DEVELOPMENT

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Food and Drug Administration

White Oak Campus

10903 New Hampshire Avenue

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- 1 PROCEEDINGS
  - 2 DR. EGGERS: Okay. I think we'll go ahead 3 and get started. We have a very full morning today,
- 4 lots of discussion, so I'm going to try to keep my
  5 remarks as brief as possible. My name is Sara Eggers,
- 6 and I am in FDA Center for Drug Evaluation and Research
  7 in the Office of Strategic Programs, and I will be the
  8 facilitator for today's discussion. This meeting is a
  9 public meeting on lung cancer as part of our Patient-
- 10 Focused Drug Development Initiative.
- I am just going to go over the agenda and a
- 12 few housekeeping things before I turn it over to Pat
- 13 Keegan to give some welcome remarks.
- 14 This morning's agenda -- you should all have
- 15 the agenda. We're going to spend a few minutes, about
- 16 a half hour, setting the context on the background of
- 17 our initiative called Patient-Focused Drug Development
- 18 and on
- 19 Lung Cancer and Treatment Options, and then I
- 20 will go over the discussion format. And then we're
- 21 going to have two discussions today: the first is going
  - 22 to be focused on the most significant symptoms of lung

- 1 cancer and the impact on daily life, and then we'll
- 2 move after a break into a discussion on patients'
  3 perspectives on lung cancer and treatment options. We
- 4 will follow this with an Open Public Comment period, so 5 if there is something that anyone here today, that you
- 6 want to say something, make a statement that's not
  7 really relevant to Topic 1 or 2, then I encourage you
  8 to sign up for the Open Public Comment, and I believe
  9 we'll take registrants for that until the break. And
- 10 depending on the number of registrants we have, we will
- 11 determine the amount of time that's available for that
- 12 public comment.
- 13 There are restrooms located out about as far
- 14 away as they can be in this building, straight to the
- 15 back and to the right you'll find those, and there is a
- 16 kiosk that serves some basic food and coffee. And if
- 17 you need anything, there are folks traveling around,
- 18 let us know if you need anything, and with that, I will
- 19 turn it over to Pat Keegan, who will give some opening
- 20 remarks. Welcome
- DR. KEEGAN: Thank you, Sara.
- 22 Good morning, and welcome to this meeting on

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1 Lung Cancer Patient-Focused Drug Development. is Patricia Keegan, and I am the Director of the Division of Oncology Products II in the Center for Drug Evaluation and Research at FDA. We're excited to see lots of people in the 5 audience today and on the web, and we have a broad range of people in attendance today, including patients, patient advocates, researchers, drug 9 developers, government officials, and many others, and 10 we're happy to see such interest in and look forward to this discussion. 11 12 Today's meeting is the third of the Patient-Focused Drug Development meetings. This initiative is 13 about getting a better understanding of patients' 15 perspectives on a particular disease and its treatment. 16 Theresa Mullin will be talking about this initiative in 17 more detail in a few minutes. 18 Lung cancer has a significant public health 19 impact in this country. Although it is the second most 20 common cancer, it is the leading cause of cancer death 21 in both men and women in the U.S., so we're looking forward to hearing directly from patients about the 22

- 1 symptoms they experience and how they view existing and 2 potential therapies for treating lung cancer to help
- 3 advance drug development for this very devastating form
- 4 of cancer for which effective treatments are still
- 5 needed.
  - 6 One of the reasons we initially nominated
- 7 lung cancer to be part of this series of meetings was 8 because our current way of measuring the effects of
- 9 lung cancer treatments don't capture some of the
- 10 aspects of the disease, specifically how these
- 11 treatments affect the way that patients feel either
- 12 positively or negatively. One reason for this is that
- 13 there is often not a dominant symptom in patients who
- 14 are diagnosed with lung cancer that we can rely on.
- 15 Also, when cancer metastasizes to different parts of
- 16 the body, we have difficulty weighing symptoms from
- 17 different sites. Therefore, it's difficult to figure
- 18 out how symptomatic changes translate into treatment
- 19 benefits because the symptoms often differ from patient
- 20 to patient.
- So what we're hoping to hear today is that we
- 22 can really help think through some of these issues and

- 1 use that discussion to inform the new and existing work
- 2 on drug development tools and do outcome measures for
- 3 lung cancer.
- One reminder for the audience is that while 5FDA plays a key role in drug development, FDA does not
- 6 actually conduct clinical trials or develop drugs. The
- 7 researchers, developers, advocacy groups, and others 8 might submit applications for new products to FDA, and
- 9 our role is, after the applications are submitted, to
- 10 carefully evaluate safety and effectiveness of
- 11 products.
- 12 Today's discussion can also enhance our
- 13 understanding of the patients' value in potential
- 14 treatments. Sometimes we struggle with how to evaluate
- 15 treatments that may have a small benefit to patients
- 16 and very large risks, and so hearing what patients
- 17 think about these issues can really help strengthen our
- 18 benefit-risk thinking in those situations.
- 19 So thank you again for attending. We look
- 20 forward to your input, and I will now turn things over
- 21 to Theresa Mullin to provide background on the FDA
- 22 initiatives. Overview of FDA's Patient-Focused Drug

10 Development Initiative 2 DR. MULLIN: Thanks, Pat. Welcome. We're very glad that you could make it to the meeting today, and we're really looking forward to hearing from our patients who are here today; that's the whole point of this meeting. And so I was just surprised that my slides 7 got advanced. I got it. 9 But I want to take a few minutes to give you a general background on this initiative. As Pat said, 10 this is the third of our meetings, patient-focused 11 meetings, and this is a new effort for us, but it's all 12 tied to our basic approach at FDA and in the Center for 13 Drugs to doing benefit-risk assessment. And one of the 15 initial steps or one of the sort of foundational 16 components of that assessment is to consider the 17 severity of the condition and the degree to which there 18 are no good therapies today, so the degree of unmet 19 medical need, and that comprises what we call the 20 clinical context. 21 And so this patient-focused effort is really inspired by the fact that we recognize that patients

- 1 are the ones who will be directly experiencing those
- 2 benefits and risks. They are uniquely positioned to
  - 3 inform us about the severity of the condition and the
- 4 degree to which current therapies meet their needs and
- 5 that we would certainly benefit from a more systematic
- 6 way to get that kind of input from patients to help us
- 7 have more insight as we approach the review of a
- 8 particular drug.
- 9 And what we have today and prior to this
- 10 initiative were a limited number -- we do have some
- 11 mechanisms for getting that kind of input, but they
- 12 can't cover all the things we would like to discuss.
- 13 We have a patient representative program, so a patient
- 14 representative can participate in the context of
- 15 decision making typically around a particular drug, and
- 16 it's often they will participate in advisory
- 17 committees. So that's a particular setting. What
- 18 we're hoping that this patient-focused effort can do is
- 19 give us a more wide- ranging discussion to explore
- 20 questions that are of particular concern to the review
- 21 divisions, issues that are of particular concern to the
- 22 patients outside of the context of a particular drug,

- 1 which can limit that discussion a bit, and so that's
- 2 what we're doing here.
- And so we are developing this more systematic
- 4 way to capture this input, this getting the patient
- 5 perspective. That's what these meetings, these
- 6 patient- focused meetings, are about. This is our sort
- 7 of exploration of how to do this well. We're learning
- 8 in varying things a little bit on each of these
- 9 meetings in part, and in large part, to fit the needs
- 10 of the questions for a particular disease area but also
- 11 trying to test out technologies and ways that we can
- 12 maximize our ability to learn from the patients who are
- 13 experiencing that disease.
- 14 Under PDUFA V, we have committed to convene
- 15 at least 20 such meetings over the next 5 years, and,
- 16 as I said, we are in this kind of learning mode both
- 17 about how to do this well and about the particular
- 18 diseases that we'll be discussing in those meetings.
- 19 In trying to figure out, well, what 20
- 20 diseases should we focus on in this initial effort?
- 21 here are the criteria that we developed and worked on
- 22 with the review divisions to try to see what would be a

1 good place to start, and this is the list of criteria that we used to develop that initial list that we're working with. So we're looking at diseases that are chronic, symptomatic, affect activities of living, 5 affect patients' lives, ones where these aspects of disease may not be very well captured in clinical 6 7 trials today, where there may not be good therapies or 8 therapies that work in all populations, there may be subpopulations that are not well served by the current 10 therapies. Covering the set of 20 should cover a range 11 of severity, and we hope to cover a wide range of 12 affected patient populations and maybe conditions where there are particularly affected subpopulations, for 13 example, the pediatric subpopulation or maybe the 15 elderly. 16 Last September, we published a Federal Register Notice with a list of potential areas, 39 17 18 areas, disease areas, for public comment. We received 19 about 4,500 comments covering and identifying 90 20 different disease areas. We reviewed the comments. 21 looked at the disease areas that were recommended or by

the public input that we received, went back to our

- 1 review divisions to talk about what diseases they felt 2 they had issues that really were sort of urgent issues
- 3 that they were aware of, and there were no other
- 4 meetings where they were already trying to capture this
- 5 kind of input. So there were a variety of
- 6 considerations that we tried to put together to come up 7 with a set of 20, and so far, we've identified 16 for
- 8 the first 3 years, and we'll come back and try to 9 revisit and figure out what diseases to do in the last
- 10 2 years of this 5-year reauthorization.
- And just to go over this quickly, this is the
- 12 set of diseases we're covering in this fiscal year.
- 13 Now, the fiscal year ends at the end of September, and
- 14 so, as you can see, we're in our third meeting, we'll
- 15 cover narcolepsy in September, and then we have -- this
- 16 is just the set, I'm not going to go through it, and
- 17 you can, I'm sure, get these slides later if you want
- 18 to see this. We have a Federal Register Notice we
- 19 published on April 11th with the list, all the list, of
- 20 diseases, but these are the ones we're going to be
- 21 covering in the next 2 fiscal years.
- 22 And so in planning these meetings, we are

- 1 trying to tailor each meeting format and questions to
- 2 really fit the context of that disease, so the current
- 3 state of development for that disease, particular
- 4 questions or issues the review division may be
- 5 grappling with and they would like the benefit of
- 6 patient input on those issues, the needs of the patient
- 7 population. Some populations we know are having a
- 8 harder time with mobility or travel issues and other
- 9 things, sometimes fatigue can play a role, so we're
- 10 trying to really tailor our format to the needs of the
- 11 patient, the information needs of the review division,
- 12 and so on.
- So, for example, with chronic fatigue
- 14 syndrome, we focused on patients' daily lives and the
- 15 experience that they have. How are they treating their
- 16 condition today? There are not very many therapies
- 17 available, so how are they dealing with it today?
- 18 With HIV, we focused more on the experience
- 19 of living with current treatments and also trying to
- 20 get the patients' perspective on whether or not they
- 21 would be willing to participate in cure research
- 22 because there is talk of cure research now, and how did

16 they see that? 2 what were their views on cure research? that was very helpful to us. In both of these meetings, we got the input from patients' caretakers, patient advocacy groups, and 5 they provided us a lot of really helpful insights that 6 we hadn't heard before, so these venues are providing 8 us with really helpful additional information. And the stakeholder involvement going into these meetings and afterwards has been critical to their success as well, 10 11 so we've really found that to be just incredibly 12 helpful to us. In addition to these, we've been having 13 periodic meetings with patient groups just to help us 15 think through our process on how to do these meetings 16 So we're exploring different methods. 17 been trying clicker technology, we have interactive 18 webcasts, and to see how well these things work. 19 After each of these meetings, we're going to be producing a relatively short, we think, very 20 21 readable meeting report that we intend to have faithfully captured the words of the patients, the 22

- 1 perspectives of the patients, that will provide insight
- 2 to our reviewers and may be of use to other 3 stakeholders as well, and so that's the immediate work
- 4 product that comes from these efforts.
- And so with that, I'll turn it over to the 6 next speaker. And Sean is going to give a background
- 7 on lung cancer and its current treatment options.
- 8 Background on Lung Cancer and Treatment Options
  - 9 DR. KHOZIN: Hello. I'm Sean Khozin. I'm a
- 10 Medical Officer in the Division of Oncology Products.
- 11 And I'm going to give a brief background on lung cancer
- 12 and current therapeutic options.
- So, as Dr. Keegan mentioned, lung cancer is
- 14 the second most common cancer in the United States. It
- 15 comes after prostate in men and breast cancer in women;
- 16 however, it is the leading cause of cancer deaths in
- 17 the United States. There are more than 200,000
- 18 diagnoses a year and about 160,000 deaths each year, so
- 19 the burden of disease is high.
- In general, there are two broad categories of
- 21 lung cancer: small cell lung cancer, which is about 50
- 22 percent of the diagnoses; and non-small cell lung

- 1 cancer, which is about 85 percent. Now, these are 2 histological diagnoses, meaning the diagnosis is made
- 3 based on essentially what a tumor looks like under the 4 microscope. And non-small cell lung cancer is further
- 5 subdivided into squamous cell carcinoma,
- 6 adenocarcinoma, and other categories.
- 7 This is an overview of the staging and
- 8 treatment for non-small cell lung cancer. So
  9 traditionally we have four stages for non-small cell:
- 10 Stage I to IV. And Stage I is essentially localized
- 11 disease. It's when the disease can potentially be
- 12 cured by surgery. Stage II can also be localized, but
- 13 there is usually spread to the nearby lymph nodes, and
- 14 the treatment modality for Stage II is surgery plus or
- 15 minus chemotherapy depending on the extent of the
- 16 spread of the disease and the size of the tumor. As
- 17 you go into Stage III and IV, the treatment goal
- 18 changes from potential cure to palliation, and what I
- 19 mean by that is the treatment goal for advanced stage,
- 20 Stage III and IV, is usually aimed at improving the
- 21 patients' symptoms or prolonging their life. And Stage
- 22 III, we often use a combination of chemotherapy and

- 1 radiation therapy. And Stage IV, which is the
- 2 metastatic stage, when the cancer has spread beyond the
- 3 lungs and to other organs, systemic therapy is a
- 4 primary way of treating the disease.
- 5 Small cell lung cancer tends to be very
- 6 aggressive, and it has a tendency of metastasizing
  7 early, so rarely you catch it at a stage where you can
- 8 fully resect it. So there are essentially two
  9 different stages of small cell lung cancer: a limited
- 10 stage and an extensive stage. In both cases,
- 11 chemotherapy is used to treat the disease. In limited
- 12 stage small cell lung cancer, we use radiation therapy
- 13 in addition to chemotherapy, and they are thought to
- 14 work synergistically. And limited stage is essentially
- 15 small cell lung cancer that is limited to one radiation
- 16 port, and once the cancer goes beyond one single
- 17 radiation field, we call it extensive stage and we use
- 18 chemotherapy.
- 19 So early on, the symptoms of lung cancer can
- 20 be few and often none and difficult to detect. That's
- 21 one the reasons that most patients present in the
- 22 advanced stage. Once symptoms develop, you can have

1 respiratory or what we call constitutional symptoms.

- 2 Respiratory symptoms include cough and shortness of
- 3 breath. Constitutional symptoms would be loss of 4 appetite, weight loss, and a general sense of fatigue
- 5 and just feeling unwell.
- So I already talked about surgery as a 7 primary modality of treatment for lung cancer that's
- 8 localized and can be potentially cured if fully 9 resected, but radiation therapy is also used for both
- 10 small cell and non-small cell. So radiation therapy is
- 11 essentially high-energy radiation, x-ray or gamma
- 12 radiation, and in some cases charged particles, and
- 13 they are basically delivered to the tumor site to
- 14 reduce the size of the tumor and kill the cancer cells
- 15 by damaging their DNA. And, again, it's used both in
- 16 small cell and non-small cell lung cancer.
- 17 Radiation therapy can be used to support or
- 18 replace surgery for early stage disease if a patient is
- 19 not a candidate for surgery. You can, in some cases,
- 20 use radiation therapy to potentially cure the patient,
- 21 or in some cases, when the tumor is resected and there
- 22 is residual tumor, you can go in and radiate the tumor

- 1 to address the residual disease. It can be used
- 2 concurrently with chemotherapy; they often work
- 3 synergistically. And in the advanced stage of the
- 4 disease, in Stage IV, when the tumor has metastasized,
- 5 we often use radiation therapy as a palliative measure 6 to reduce tumor size if the tumor is causing symptoms
- 7 such as pain.
  - 8 And systemic therapy is generally comprised
- 9 of chemotherapy and the newer so-called "targeted"
- 10 therapies. Now, these two different types of therapies
- 11 are based on two different views on treatment.
- So on the left side you see the traditional
- 13 view, which bases treatment decisions with chemotherapy
- 14 on the tumor histology, and these are histological
- 15 classifications that I mentioned earlier. Small cell
- 16 and non-small cell, and non-small cell is subdivided
- 17 into further categories, and that's the pie chart that
- 18 you see on the left side.
- 19 And the newer view on lung cancer treatment
- 20 is called the molecular view, and it attempts to target
- 21 treatment to specific genetic abnormalities in the
- 22 tumor. So instead of dividing tumors by histological

- 1 subtypes, researchers are now dividing tumors based on
- 2 their genetic makeup. And on the right side you see
- 3 that we've been able to identify many different genetic
- 4 abnormalities, so there are many different types of
- 5 lung cancer based on the genetic profile of these
- 6 tumors. And for many of the abnormalities that you see 7 on the right side, there are drugs under development,
- 8 and few have been approved.
- 9 The common side effects of treatment
- 10 essentially relate to the type of treatment. With
- 11 surgery, you have the common surgical complications and
- 12 side effects, including pain, weakness, fatique,
- 13 shortness of breath, risk of infection or bleeding, in
- 14 the immediate time point after surgery. A lot of these
- 15 symptoms resolve or get better as the patient and the
- 16 body recuperates. With radiation therapy, most of the
- 17 symptoms are related to damage that's done to the
- 18 normal tissue and normal parts of the body, so you can
- 19 have a localized skin reaction or sore throat,
- 20 difficulty swallowing, if, for example, the esophagus
- 21 is involved. There can be cognitive impairment with
- 22 brain irradiation. And about 5 to 15 percent of

- 1 patients who have radiation to the thorax, to the chest
- 2 area, experience lung inflammation that can present
- 3 itself as shortness of breath and cough.
- 4 With chemotherapy, nausea, vomiting, fatigue
- 5 is very common. You can have nerve damage which causes
- 6 what we call neuropathy, numbness and tingling usually
- 7 in the toes and fingers, hair loss very common, and
- 8 also increased risk of bleeding and infection, which is
- 9 usually due to the suppressive effects of chemotherapy
- 10 on the bone marrow. Targeted therapies have a
- 11 different profile of side effects. Some overlap with
- 12 chemotherapy. You can have rash, diarrhea, fatigue,
- 13 high blood pressure, increased risk of bleeding, visual
- 14 changes, lung injury, and liver injury.
- Now, in approving new drugs, the FDA requires
- 16 substantial evidence from adequate and well-controlled
- 17 clinical trials, and the way this evidence is weighed
- 18 is by balancing the safety of the drug with its
- 19 efficacy. And one way to think of drug efficacy is by
- 20 looking at the concept of clinical benefit, which is
- 21 defined as an improvement in how a patient feels or
- 22 functions or prolongation of survival. So if a drug

- 1 can accurately show that a patient feels better or
- 2 functions better or it prolongs survival, it has likely
- 3 demonstrated clinical benefit.
  - 4 Now, there are times in certain situations
- 5 and in some cancer types that a validated surrogate for
- 6 one of the metrics that I just mentioned can be used to
- 7 define clinical benefit. For example, the way that a
- 8 tumor responds to a new drug and the duration of that
- 9 response can in some cases be a surrogate for survival
- 10 and therefore clinical benefit.
- 11 And there are two broad categories of review
- 12 at the FDA. There is a standard review, which the
- 13 review time is within 10 to 12 months for new drug
- 14 applications. And also there are expedited programs
- 15 that are targeted at major advances to treat serious
- 16 conditions such malignances in cancer, and the review
- 17 time for expedited programs is within 6 to 8 months.
- And this is just a snapshot of the FDA's
- 19 current expedited programs: Fast Track, Breakthrough,
- 20 which is the newest program available for drugs that
- 21 show very promising early evidence of activity, there
- 22 is Priority review, and Accelerated Approval.

- 1 Now, this is just a partial list of the drugs
- 2 that have been approved by the FDA for the treatment of
- 3 lung cancer. On the left side, you have common
- 4 chemotherapeutics that are used in treating lung
- 5 cancer, such as cisplatin, paclitaxel. On the right
- 6 side, there are the newer targeted therapies, such as
- 7 crizotinib, which is for patients with a specific
- 8 genetic abnormality called ALK-rearrangement; there is
- 9 erlotinib for patients with certain types of EGFR
- 10 mutations; and this category also includes antibodies
- 11 that bind to either receptors or other what we call
- 12 ligands that are involved in malignant process, such
- 13 bevacizumab.
- 14 A few years ago, the FDA issued a guidance on
- 15 patient-reported outcomes, or PROs, to facilitate the
- 16 participation of patients in the drug development
- 17 process. Now, PROs can represent direct measures of
- 18 treatment benefit. They are essentially instruments
- 19 that measure or aim to measure how a patient feels or
- 20 functions. There are technical challenges with using
- 21 PROs in clinical trials. These measurements have to be
- 22 done in a very well-controlled clinical trial and

- 1 proper measures should be taken, but they are
- 2 potentially very useful in capturing how the patient
- 3 actually feels when given the new drug. So PROs, in
- 4 essence, highlight the patient's unique ability to
- 5 contribute to the field of drug development, and the
- 6 FDA certainly encourages the development of well-
- 7 defined and reliable PRO instruments that capture the
- 8 clinical benefit concepts that are important to
- 9 patients.
- 10 That's all I have to say. I would like to
- 11 turn the podium back to Sara. Overview of Discussion
- 12 Format
- 13 DR. EGGERS: Thank you very much, Sean.
- 14 And thank you, Theresa, for giving the
- 15 background on the program, and Sean for giving the
- 16 background on lung cancer and its treatment.
- 17 Now it's my job to give a bit of background
- 18 on the discussion format. Again, my name is Sara
- 19 Eggers, and I will be the facilitator. And this
- 20 meeting is run a little bit differently than public
- 21 meetings that you may have attended in the past in that
- 22 our main goal is to engage patients and patient

- 1 representatives in dialogue. By "patients," I'm using
- 2 that as a shorthand for people who are living with lung
- 3 cancer; and by "patient representatives," I mean
  4 caretakers, loved ones, and patient advocates who are
- 5 in the room today and on the web.
  - 6 Let me start first with a discussion format.
  - For each of the two topics that I described 8 earlier, the first topic is about the most significant 9 symptoms of lung cancer and its impact on daily life,
- 10 and the second is on patient perspectives on treatment
- 11 approaches. We will first hear from a panel of
- 12 patients and patient representatives, and I would like
- 13 to call up the ones who are participating on Panel 1
- 14 now: Kathleen, Susan, Sheila, and Lorren. If you
- 15 could just sit at the far end of the table and bring
- 16 your name tags, please, you little tent cards.
- 17 The purpose of these first panel discussions
- 18 is to really set a good foundation for our discussion
- 19 with everyone. The panel members include patients and
- 20 advocates, and they reflect a range of experiences with
- 21 lung cancer.
- 22 We'll then broaden the discussion to include

- 1 other patients and patient representatives in the
- 2 audience. And this is a very important part of our 3 discussion today, and we encourage you to participate.
  - 4 The purpose here is to build on the experiences shared
- 5 by the panel and see what we can expand upon, maybe
- 6 what's different than what was heard from the panel,
  7 and really get at the questions that have been posed.
- 8 And by the way, all of the questions are written on the
- 9 second half, on the backside, of the agenda.
- We'll generally be following those questions,
- 11 but as this is a facilitated discussion, we will be
- 12 straying a bit and focusing on where the conversation
- 13 leads us and what is most important to the experts. So
- 14 I'll be asking follow-up questions and inviting people
- 15 to raise their hand to speak.
- 16 We tried an experiment before and we're going
- 17 to continue this experiment where periodically we will
- 18 invite those in person and web participants to respond
- 19 to specific questions, and I'm going to ask for the
- 20 clickers to be handed out.
- So you, in-person, we have clickers to
- 22 respond to a question, and we're going to practice here

- 1 in a minute. So Chad is going to hand out the
- 2 clickers. Yeah, in the front there. And so we need
- 3 those back at the end, they're not really useful
- 4 outside of this room, so please remember to leave them
- 5 on the table when you're done.
- 6 And web participants can respond to the poll
- 7 that will be on the webcast, and I wanted to take an
- 8 opportunity to give a special welcome to the web
- 9 participants. Lung cancer is a very debilitating
- 10 condition with a wide range of severity, and we
- 11 recognize that it is very difficult for those to come
- 12 who are ill, to come in person, and we hope that you
- 13 are able to present on the web, and your participation
- 14 is very important, and we will try every opportunity to
- 15 collect your comments. So although they may not be
- 16 read or summarized all today, feel free to use the
- 17 comment box that is in the webcast to submit a comment,
- 18 and those will be included in our public record, and
- 19 we'll try to summarize what we can today, but your
- 20 voice will be heard if you're on the webcast. And we
- 21 ask for the web polling and for those with the clickers
- 22 to only patients and patient representatives, please.

- We have a few ground rules to make sure that 2 this discussion is the most effective and the fairest 3 for everyone in the room and that we ensure that FDA 4 and the patients and patient representatives get the 5 most out of today.
  - 6 So we encourage patients, caregivers, and
- other patient representatives to contribute to the 8 dialogue. We want to hear the patient perspective, so 9 if you're an advocate and caregiver, we want you to
- 10 contribute to the conversation, and we ask that you
- 11 provide what you can about the patient's perspective.
- 12 Caretakers and loved ones who are here, particularly if
- 13 you are here representing someone who is too ill to
- 14 travel today, you're very important at giving that
- 15 perspective.
- 16 There are a number of other folks in the
- 17 audience today, and we're very excited to see so many
- 18 people from industry, from the research community, and
- 19 from government here today. We even put out the white
- 20 tablecloths for you. We just ask that you stay in
- 21 listening mode today and learn. We think this should
- 22 be very important for you as well.

- Our FDA staff is here to listen, and I'm

  2 going to ask them to introduce themselves in a minute,

  3 but first I'll make my disclaimer. I am not a medical

  4 expert, and my goal today is to try to get by without
- 5 saying one of those complicated drug names because I
- 6 will mess that up, so I really rely on my colleagues up
- 7 here to help me out by asking some follow-up questions,
- 8 as they see fit, and so I'll be turning to them.
  - 9 And with that, I would like to ask you each
- 10 to introduce yourselves and the office that you're
- 11 with. If you push the little button.
- DR. KAZANDJIAN: My name is Diko Kazandjian.
- 13 I'm a Medical Officer for the lung team in Division of
- 14 Oncology Products II.
- DR. MISKALA: My name is Paivi Miskala, and
- 16 I'm a Study Endpoints Reviewer in the Office of New
- 17 Drugs.
- DR. MULLIN: Theresa Mullin, Director of the
- 19 Office of Strategic Programs, and, like Sara, I'm not a
- 20 medical expert, so I'm in listening mode for what I can
- 21 understand.
- 22 DR. KEEGAN: Patricia Keegan. I'm the

- 1 Division Director of Oncology Products II.
- DR. BLUMENTHAL: Hi. I'm Gideon Blumenthal.
- 3 I'm the Lung Cancer Team Leader in Division of Oncology
- 4 Products II.
  - 5 DR. MALIK: Hello. I'm Shakun Malik. I am
- 6 the Medical Officer and the Scientific Liaison for 7 Thoracic Oncology in the Division of Oncology DOP II,
- 8 and I also continue to have my clinic while working for
- 9 the FDA. So I am a clinician as well.
- 10 DR. LE: Hello. My name is Robert Le. I'm
- 11 the Medical Officer of the FDA Center for Biologics
- 12 Evaluation and Research, Office of Cellular, Tissue,
- 13 and Gene Therapy.
- DR. EGGERS: Thank you very much.
- Panelists, we'll get to you in a minute.
- 16 So as part of the facilitated discussion, we
- 17 really are going to try to get to everyone who wants to
- 18 contribute today, and this discussion is, as I said,
- 19 different, it's more I'll be asking follow-up questions
- 20 and looking for you to raise your hand to contribute,
- 21 and so we're going to ask that you, in your comments,
- 22 try to stick to the question that's asked. You'll have

1 plenty of time to make other statements and provide 2 your perspective on other aspects of the condition as

3 well.

- There may be topics that are not relevant to 5 our discussions today that you may want to raise, and 6 again we have that Public Comment Period, so if there 7 is something that you want to make a statement about,
- 8 find the registration table and sign up for that at the
- 9 break and we'll accommodate those conversations as well
- 10 because we really want to stick to the two topics that
- 11 we're discussing today. And we really want to focus on
- 12 understanding the common ground regarding those topics.
- 13 So, for example, specific treatments may be raised, and
- 14 that's appropriate, that's good, but we're not going to
- 15 spend too much time on any particular treatment.
- 16 Instead, we're going to look for what it is about
- 17 treatments in general, what can we learn about
- 18 patients' perspectives on treatments in general?
- 19 Participant feedback is very important to
- 20 this meeting, and we have some evaluation forms at the
- 21 registration table. It's completely voluntary, but we
- 22 benefit from your feedback on this meeting and the

- 1 preparation for the meeting and what you liked and what 2 you think could be improved. That will help us as we
- 3 continue on our future meetings of this sort.
  - And above all, respect and courtesy for one 5 another is important, and so raise your hand to speak
- 6 and I'll do my best to get to everyone. Keep side
- 7 conversations to a minimum. If you have to take a
- 8 phone call, take it outside. And, again, feel free to
- 9 leave anytime. If you have to use the restroom or get
- 10 something to drink, that's all available outside.
- 11 With that, I think that is the end of sort of
- 12 the ground rules and the format. We're going to try a
- 13 few -- can I advance them? Okay. I'm going to let
- 14 Pujita advance them because I can't do multiple things
- 15 at once. We're going to practice with the clickers,
- 16 and on the web you should have polling questions up.
- 17 And the reason that we have these quick clicker
- 18 questions is really to provide us an indication of
- 19 who's in the room and what perspectives are generally
- 20 in the room. These are not survey questions, they're
- 21 not going to be used for any scientific purposes, and
- 22 they're completely voluntary for your answering, but

- 1 they do give us a sense of who's in the room.
- 2 So the first one is an easy one, and that is,
- 3 where do you live? So if you're in the room, you press
- 4 1 if you live within the D.C. Metropolitan area, and
- 5 you press 2 if you live outside of the D.C.
- 6 Metropolitan area.
- 7 (Answering question.)
  - 8 DR. EGGERS: Okay. And then we're going to
- 9 advance and see the results. Okay, so we have about an
- 10 equal split of local and outside. And for those of you
- 11 who have traveled from outside of the metro area, a
- 12 special to us, we very much appreciate your commitment,
- 13 we appreciate everyone's commitment, but if you
- 14 traveled through those thunderstorms yesterday, we are
- 15 especially grateful.
- 16 Okay, how about the next one? Have you ever
- 17 been diagnosed as having lung cancer? 1 for yes; 2 for
- 18 no.
- 19 (Answering question.)
- 20 DR. EGGERS: Okay. We have -- I'm going to
- 21 do some math in real time. We have about 10 people --
- 22 I believe, if my math is correct -- who are living with

- 1 lung cancer. That's great. We really want to hear
- 2 from you. And the representatives here, the loved 3 ones, caretakers, and advocates, we want to hear from
- 4 you as well.
  - 5 Do we happen to have the responses from the
- 6 web participants?
  - 7 MS. FURIA-HELMS: Yes. On the web, we have
  - 825 people that have not been diagnosed, and 22 people
- 9 that have.
- DR. EGGERS: Okay, great, this is wonderful.
- 11 Okay.
- 12 What we're going to ask for in the remaining
- 13 polling questions is that it really focuses on
- 14 patients, people living with it answering the
- 15 questions. I know we don't have very big numbers, but
- 16 it still gives us a sense of who is in the room. And
- 17 if you're here representing someone directly, if you're
- 18 a loved one and you're representing someone who is not
- 19 here, you can think about how they would answer the
- 20 questions, too, and answer those questions as well
- 21 because what I will say is, as I mentioned, for those
- 22 too ill to travel, we don't have their voice directly

- 1 here today, and so the panel's experiences may not
- 2 reflect the full spectrum of the experiences with lung
- 3 cancer, and so we want to acknowledge that, and I will
- 4 say, as an example, we had one gentleman who was
- 5 supposed to be on the panel today who at the last
- 6 minute was too ill to travel, and we just want to
- 7 acknowledge that, and we hope he's participating by the
- 8 web so we can still hear his voice, but those of you
- 9 who are loved ones with someone, then please answer the
- 10 questions as well.
- Okay, we'll move on to the next question.
- 12 What is your age?
- 13 (Answering question.)
- 14 DR. EGGERS: Okay. We have a very nice
- 15 spread, primarily with the most prevalent being those
- 16 in your sixties.
- 17 Okay, we'll go on. And are you male or
- 18 female?
- 19 (Answering question.)
- DR. EGGERS: Okay. This may not be exactly
- 21 representative of the men, so the men in the room,
- 22 we're going to be calling on you a lot today.

		38
1	DR. EGGERS: You didn't know you were getting	
2	yourself into that; did you?	
	Okay, do we have one more or a couple more?	
	4 Okay. What is the length of time since your	
	5diagnosis? Less than 1 year ago, 1 to 2 years ago, 2	
6	to 5 years ago, more than 5 years ago, or if you're not	
7	sure.	
8	(Answering question.)	
	9 DR. EGGERS: More than 5 years ago. I think	
10	that also I'll look to my colleagues that also	
11	may not be reflective of the entire population, so I	
12	just want to point that out, that we are talking with	
13	more survivors and more with long-term stable condition	
14	today in the room.	
15	Okay. Which of the following best describes	
16	your current condition? Your cancer has localized and	
17	has not spread outside your lungs; your cancer has	
18	spread when I get nervous, I can't say a word, help	
19	me metastasized to the rest of your body; your	
20	cancer is currently in remission; or you're not sure.	
21	(Answering question.)	
22	DR. EGGERS: Okay. So we have a pretty good	

- 1 split of the folks in the room. At least we're
- 2 representing every perspective with that in that
- 3 regard.
- 4 Okay. All right. That's it for the first
- 5 questions. Those polling things are hopefully not too
- 6 bad. And on the web, hopefully you were able to work
- 7 that as well.
- Panel #1 Comments: Topic 1
- 9 DR. EGGERS: Now I'm done talking. I don't
- 10 want to hear me, so I'm going to ask my panelists to
- 11 introduce themselves right now. We have four
- 12 panelists, patient panelists, who will be speaking, or
- 13 patient or patient representatives.
- 14 MS. SANDT: Good morning. Lorren Sandt, with
- 15 the Caring Ambassadors program.
- 16 MS. WARMERDAM: Hi. Susan Warmerdam, partner
- 17 at the American Lung Association.
- MS. SKAMBIS: I'm Kathleen Skambis. I'm a
- 19 volunteer with the American Lung Association and a
- 20 cancer -- we're both cancer patients.
- 21 MS. ROSS: Sheila Ross, with the Lung Cancer
- 22 Alliance and also a survivor.

40 1 DR. EGGERS: Okay, great. So I'm going to ask each of the panel participants to give three to four minutes of remarks that answer the questions that 4 are raised for this morning's discussion. They're on the back of your sheet, and to summarize them here, it's really what symptoms that you've experienced 7 because of your lung cancer, and which ones have the most significant impact, and are there specific 9 activities that are important to you but you can't do it all or as fully as you would like because of your 11 lung cancer? 12 Now, the women up here do not experience the disease currently as severely as others, so I've asked 13 them to either think about what worries them most about 15 their condition or what they understand from their 16 peers, the people that they talk to every day who do 17 more acutely feel the symptoms today, if they can share 18 that. So they are free to talk about whatever that 19 resonates with them about this, and I'll ask you to --20 let's see, are we starting with Lorren? 21 MS. SANDT: Sure. 22 DR. EGGERS: Great.

41 MS. SANDT: Thank you. I just want to say my 1 name is Lorren Sandt. I'm the Executive Director of the Caring Ambassadors Program, and I am going to be speaking on behalf of someone living with Stage IV lung 5 cancer, and I am totally humbled by people living with lung cancer and what you go through every day, and it's an honor to be able to sit up here and represent people 8 living with lung cancer. 9 So I'm going to talk today about a young lady named Kim. She was diagnosed 2 years ago in May of 10 2011, and I asked her to tell me what it was like to 11 12 live with lung cancer, and here is what she wrote. "Living with lung cancer is no easy task. 13 It's difficult to decipher which is more difficult, the 15 physical challenges or the mental challenges. I've 16 been asked to comment on what it's like to live each 17 day living with my terminal disease. Honestly, I feel 18 like my life is better summarized on a monthly basis. 19 Each day can vary greatly. Is it a doctor appointment 20 day? 21 scan day? day before a doctor appointment 22 day? a day of total rest and relaxation? A day of the

- 1 thought of me dying before age 40 leaves me
- 2 immobilized, weeping in bed, and tightly grasping a
- 3 heating pad. In a month's time, I go through all of
- 4 these in a typical day and then some.
- 5 "I'll run you through a Wednesday. This
- 6 particular Wednesday is a scan day, a day my cancer is
- 7 checked up to see if it's shrinking, staying the same,
- 8 or growing. The morning looks like any other morning.
- 9 I wake up before 8:00 a.m. to the smell of fresh-brewed
- 10 coffee. I have a cup while I make my morning protein
- 11 smoothie. For the most part, I eat a very consistent
- 12 diet in hopes to eliminate GI issues that are often a
- 13 problem.
- "As a former morning person, my AM's are
- 15 slow. After a smoothie is made, I plop myself back down
- 16 into bed with my computer and two bottles of pills.
- 17 First down is the anti-nausea pill, 30 minutes later is
- 18 my daily targeted chemo pill. Once I feel like my
- 19 stomach is settled, at least 1 hour after the nausea
- 20 pill, I begin to prepare for my day. I dress head to
- 21 toe in cotton, give myself my daily blood thinner shot,
- 22 pack a light daypack. Today I will perform my new

- 1 version of a triathlon. I'm going to have scans, blood 2work, and EKG. I'm even going to add a quick stop at
- 3 the pharmacy for good measure.
  - 4 "I arrive on time for a 10:00 a.m. check-in
- 5 for scans. First is the quick CT of my lungs and 6 abdomen. Thankfully, the needle went in trouble-free 7 and my blood work was able to be drawn from the same
- 8 injection point. Next is the MRI. This image is 9 peskier, clocking in at 45 minutes. Once scans are
- 10 complete, I venture up a few floors to get my EKG. I
- 11 did not get a latte this time before my EKG, I know it
- 12 will show my abnormally slow heart rate because of that
- 13 and the side effects of my targeted therapy, but, oh,
- 14 well.
- "After 2 hours of actually doing things at my
- 16 Care Center and 2 hours of waiting time, my only stop
- 17 left is a quickie at the pharmacy. I need to exchange
- 18 my full sharps container for my daily blood thinner
- 19 shots for an empty one. Finally, I'm ready to leave.
  - "I make it home without too much frustration
- 21 after navigating the parking lot. I'm hungry, need to
- 22 eat before nausea kicks in. I ate a nice salad and

- 1 drank some herbal tea. Naptime it is. Me, laptop, and
- 2 cat are ready for afternoon snuggles. Tomorrow I'll be 3 getting the results of the scans, but I can't help but 4 to begin to think about it now. Finally, I'm able to 5 catch my required 2-hour nap. The short snooze gives 6 me the boost I need to visit with my sweetie when he
- 7 gets home from work. We'll chat briefly and then
- 8 decide where to go out to dinner. It's a night to
- 9 celebrate, and all the running around has made me
- 10 unable to spend a drop of energy on what to make for
- 11 dinner. I could ask my sweetie to do it, but I would
- 12 rather save him for when I'm too ill to prepare my
- 13 meals.
- 14 "Since the blood work has already been taken
- 15 earlier, I can have a glass of wine and not fear that
- 16 my liver counts will poorly reflect such indulgence.
- 17 After returning home from a great meal with meaningful
- 18 conversation, we'll end the night with an easy 8-block
- 19 walk. Now, I'm ready for bed. I dress in bed clothes,
- 20 prepare my evening drug doses. I've learned the hard
- 21 way to take them when I still have food in my stomach.
- 22 Anti- nausea pill down, antidepressant down, 30 minutes

45 later targeted chemo down. I am now officially ready for bed, or put, ready to lay in bed and think of all the possible outcomes of my scan today. It's difficult to sleep. Some days are better, some days are worse." 5 Thank you. 6 DR. EGGERS: Thank you very much, Lorren. And I'm going to ask Susan? 7 MS. WARMERDAM: Gosh, how do I follow that? I can relate to a lot of that. Sixteen months ago at 9 47, I was diagnosed with Stage IV lung cancer as a 10 never smoker, and it spread to my adrenal gland into 11 the lymph nodes in my chest and abdomen and tested 12 positive for the EGFR gene, which is something 13 completely beyond my control and completely unrelated 15 to smoking. 16 Last February, a chest x-ray for just a 17 common cough was what exposed the mass in my lung, and 18 a month later I started on a daily targeted oral chemo 19 treatment and an early Phase II clinical trial which has since been unblinded. 20 21 I didn't really have any prediagnosis symptoms except maybe, in hindsight, an annoying and

- 1 lingering cough that my doctor had diagnosed, or
  2 misdiagnosed, as an allergy, and insomnia. These lack
  3 of symptoms and lack of early detection screenings are
- 4 why 84 percent of those with lung cancer already are at 5 such an advanced stage like myself by the time we're 6 diagnosed. My doctor said I had had the cancer in my
- 7 body for 5 to 7 years.
  - 8 Since I had started treatment, the physical 9 side effects that most negatively impact my life are
- 10 the fatigue and the what us cancer patients call "chemo
- 11 brain." I try to keep as much normalcy in my life as
- 12 possible and continue like I'm not sick, but these pose
- 13 challenges at work. I still work full-time, and my
- 14 inability to sometimes process and remember things get
- 15 in the way. Getting up in the mornings, like early
- 16 morning meetings like this and getting ready with my
- 17 new routines to take care of myself and then making it
- 18 through a day of work without escaping into the lady's
- 19 room stall for a quick catnap.
- 20 The visual side effects that I had
- 21 experienced like losing 40 percent of my hair, the eye
- 22 infections, and a monstrous looking facial skin rash

- 1 had an impact on my daily life because I could see
- 2 them, and every time I looked in the mirror, I saw a
- 3 sick person, and it was always a reminder that, oh,
- 4 yeah, I still have Stage IV lung cancer.
  - 5 We have an image in our mind of what a sick 6person looks like, and because my tumors are invisible
- 7 and I look healthy, people tend to forget that I'm 8 sick, and even those that know that I am, they forget 9 or think that I'm cured, and it really feels like they
- 10 just don't care anymore.
- 11 And the emotional and psychological symptoms,
- 12 it's difficult managing dying with living -- I don't
- 13 really know how else to phrase that -- balancing the
- 14 limited time that we have to do great things while
- 15 managing work and the daily chores, just to keep things
- 16 together because sometimes just keeping it together is
- 17 surviving.
- 18 And telling people I have lung cancer is like
- 19 wearing a sign. There is an implicit judgment with the
- 20 stigma that lung cancer is a smoker's disease, and
- 21 since people's perceptions matter to me, I feel I need
- 22 to explain I was never a smoker to validate that I did

1 not do this to myself and that they can get it, too.

- Being on Tarceva, or erlotinib, and with my

  3 drastic changes in lifestyle, I miraculously am not

  4 living with symptoms that prevent or limit me from

  5 doing any activities. I'm very fortunate to live my

  6 life like I did before treatment, just scan to scan
- 7 now. However, though I don't have physical limitations
- 8 today, there are things within my control that I choose
- 9 not to do or to do differently. They may be perceived
- 10 as an inconvenience to some, but for me, they're
- 11 lifestyle choices.
- 12 Tarceva is keeping my cancer at bay, but I
- 13 will inevitably build up a resistance to the drug and
- 14 my cancer will begin to progress again. So I worry
- 15 about things like suffering, I worry about the added
- 16 risk from the excessive radiation that I'm getting that
- 17 could cause another cancer. I'm worried about running
- 18 out of time to do everything that I want to do. And,
- 19 again, I worry about building up a resistance to the
- 20 Tarceva. I'm just waiting in the wings hoping and
- 21 praying every single day for that Tarceva, as I call
- 22 it, rescue drug. I can deal with having lung cancer

49 and living with a chronic illness, I just need to know 2 that there is a drug out there without a resistance that will allow me to live a normal life expectancy, like diabetes and AIDS. And, lastly, my perspective on currently 5 available treatments is there are none, for me anyways. Since there aren't other treatment options out there for me, I've made drastic lifestyle changes that are within my control, that I consider treatments, and I participated in a clinical trial for which I hope to be 10 11 able to comment on later because I know I'm probably getting close to my 4 minutes -- right, Sara? 12 13 UNIDENTIFIED FEMALE SPEAKER: She waved you 14 on. 15 MS. WARMERDAM: What does that mean, you 16 waved me on? 17 UNIDENTIFIED FEMALE SPEAKER: She said go on, 18 keep on going. 19 DR. EGGERS: (Off mic.) 20 MS. WARMERDAM: Oh, okay. And I know Sean 21 had already talked about the statistics, so I won't even reiterate those, but I'm just asking the FDA to

- 1 understand the severity and actually everyone, the
- 2 severity of a lung cancer diagnosis. For me and other 3 lung cancer patients that are diagnosed at my stage,
- 4 Stage IV, there is only a 3 percent chance that we will
- 5 survive 5 years, and according to that statistic, I'll
- 6 be dead in 3-1/2 years, so I'm asking you to please act 7 with some urgency like it was you and your family or
- 8 your family member that had received the same
- 9 diagnosis.
- DR. EGGERS: Thank you, Susan.
- 11 And now I'll go with Kathleen.
- 12 MS. SKAMBIS: Hi. I'm Kathleen Skambis. I'm
- 13 a very, very lucky lung cancer survivor, and I'm here
- 14 for myself, but also I'm a member of a lung cancer
- 15 support group, and I just will tell you what I did. I
- 16 sent these discussion questions to a number of people
- 17 and I got back written answers to the questions from
- 18 eight different people, all of whom I know well. So
- 19 I'm going to tell you a little bit about myself, and
- 20 then I'm going to try to synthesize their comments so
- 21 that you'll get an idea of the wide range of ways that
- 22 people deal with lung cancer and the different types

51 and how it affects their lives. I was diagnosed in May of 1999, I was 41 years old. I had lung cancer in both my lungs. I had no symptoms. I had forgotten to get the flu shot because I was getting married. I got the flu on my 5 honeymoon. I had a chest x-ray, and I had lung cancer 6 in both my lungs. I'm a trial lawyer, I'm married to a trial lawyer, we know how to research. At the time, the Mayo Clinic retrospective said that people with what I had, bronchioloalveolar carcinoma in both of 10 their lungs had a zero percent chance of survival for 5 11 12 I just decided that that was a small sample. And they had a difficult time staging my lung 13 cancer because I didn't have lymph nodes where I was 15 supposed to have lymph nodes, and I did have 16 chemotherapy, six rounds of chemotherapy, with all the 17 usual side effects. I still have some permanent 18 neuropathy. That's the only -- I'm missing a third of 19 my lungs, but that's come back, that lung function has 20 principally come back. They say I can't go to high altitude places; that's such a small thing. 21 22 Let me tell you a little bit about some of

1 the other people and I'll go in order of diagnosis.

- 2 My friend Bill was diagnosed in May of '99.
- 3 He had a persistent dry nonproductive cough and a golf 4ball size tumor in the back wall of his lung. They
- 5 tried to take his lung out. They couldn't do that
- 6 because the tumor was wrapped around the pulmonary 7 artery. He had 6 weeks of chemotherapy, 7 weeks of
- 8 chemotherapy and radiation. His only remaining symptom
- 9 is that he has, as I understand it, is that he has a
- 10 dry persistent cough and some postnasal drip. We are
- 11 very lucky. Really, he has no limitations or views
- 12 himself as having no limitations on his life.
- 13 My friend Shelly, in May of 1998, had a
- 14 violent outbreak of ulcerative colitis on her legs. It
- 15 was biopsied and she had a chest x-ray and it was
- 16 determined that she had lung cancer. She had her lung
- 17 removed, she had chemotherapy, radiation, and she has
- 18 shortness of breath. She also has COPD, she takes
- 19 oxygen, but she views herself as having no real
- 20 limitations. I know that's not entirely true. She
- 21 can't climb stairs; she can't be as active as she would
- 22 like to be.

My friend John was diagnosed in August of 1 2005. His one and only symptom was a tumor on his arm and on his buttock, and when those were biopsied, they were lung cancer. He had the lumps removed. He had to have one of them removed twice. He had radiation and chemotherapy, and he is now on -- I know there's a fancy name for this type of drug, but I can't remember it -- Tarceva, and he had side effects from that 9 medication, but they are controlled, and he would be here today, but he is currently hiking the Pacific 10 Crest Trail as a benefit for lung cancer and to raise 11 12 awareness. My friend Gail was diagnosed in 2010. 13 had a really bad cough and they did a chest x-ray. 15 turns out the cough was completely unrelated to lung 16 cancer, she had severe acid reflux, but it found her lung cancer. She had surgery and chemotherapy. She 17 18 believes that she has no lingering symptoms, although 19 she feels fatigued and doesn't know -- she has no signs 20 of lung cancer remaining and believes the fatigue is 21 residual from her lung cancer. 22 My friend Pat was diagnosed in November of

- 1 2012. She had it inside her left lung, the middle of
- 2 her left lung, and outside in the pleural effusion of
- 3 her chest cavity. She is on a different targeted
- 4 treatment, oral treatment, and she specifically listed
- 5 some side effects that she can't do. Because of her --
- 6 and I think this is important to know as you look at
- 7 this -- everyone said if you are treated for lung
- 8 cancer, it very quickly becomes impossible to tell the
- 9 difference for a patient between the difference between
- 10 your symptoms of lung cancer and the side effects of
- 11 your treatment. So that all gets mixed together. So
- 12 Pat has shortness of breath, voice hoarseness and
- 13 fatigue, and she has some side effects from her
- 14 treatment. She can't swim, she gets out of breath
- 15 walking on uneven terrain, and she has to sit a lot to
- 16 relieve the side effects of the swelling in her leg.
- 17 All of these people who have these side effects are
- 18 extraordinarily grateful to be having these side
- 19 effects and have these treatments available, and I
- 20 think that's really important for you guys to know.
- I want to end with my friend Lisa, who was
- 22 there for me when I had lung cancer in 1999. She was

- 1 diagnosed in August of 2011. She had a large tumor in
- 2 her right lung and multiple bilateral nodules
  - 3throughout both of her lungs, it was inoperable. She
- 4 is also on Tarceva. The large tumor has shrunk. The
- 5 rest of the cancer has diminished. She had some pretty
- 6 significant side effects from Tarceva, but she says she
- 7 doesn't seem to be as physically strong, she lost
  - 8weight, and she's not sure if that's from having lung
- 9 cancer or if that's from the side effects.
- But I want to read you this. Throughout her
- 11 statement, she talks about not being physically strong,
- 12 but in response to the question about activities that
- 13 keep you from doing things, she wrote this: "I am able
- 14 to do everything I have always done. I sleep very well
- 15 and continue to work every day as an interior designer.
- 16 I am very physically active and continue to stay active
- 17 through cycling and power walking every day. I just
- 18 finished cycling through Holland," where they carried
- 19 all of their gear on their bicycles, "and went
- 20 approximately 200 miles on a bike." Lisa is a little
- 21 older than I am. "Earlier this year, I rode in the
- 22 "Horrible Hundred," which is a 100-mile bike ride

- 1 through the hills of Clermont, Florida. This was done
- 2 in 1 day." I can't read what I wrote because I copied
- 3 it over. "I would say I don't feel as strong as I
- 4 would have normally felt prior to the diagnosis. My
  5 physical activity is very important to me, and I will
  6 not allow cancer to take that away from me. Focusing
- 7 on something else helps me not to dwell on what is
- 8 going on in my body, and I refuse to let it define me."
- 9 And that sums up what I would say everyone I
- 10 know -- and I know a lot of people who have lung cancer
- 11 -- they're determined fighters who want options.
- 12 Thank you.
- DR. EGGERS: Thank you very much, Kathleen.
- 14 And, finally, Sheila.
- MS. ROSS: Thank you, Sara. I would just
- 16 like to thank FDA for holding this council. I'm with
- 17 Lung Cancer Alliance, an advocacy organization right
- 18 here in
- 19 Washington, D.C. And we basically do two
- 20 things: try to change policy, and patient support,
- 21 live on-staff patient support. So in doing the policy
- 22 work, we work frequently with FDA, and I just want to

- 1 say once again you have such a wonderful committed 2 staff, it's a pleasure to work with you, it really is.
- And when I was driving over here, I kept
  4 thinking of Patty Delaney, who actually she was at FDA
  5 for quite a while, and she actually started the Office
- 6 of Liaison for patients and patient advocacy groups.
- 7 She died a few years ago of cancer, but she was 8 wonderful. So every time I come here I think of Patty.
- 9 In any event, on with this. I think an
- 10 interesting thing about lung cancer is that it really
- 11 has few symptoms, or if they have any, they're very
- 12 nebulous. The first time that I was diagnosed with lung
- 13 cancer, I was 49 years old, and my only symptom was a
- 14 pain in my shoulder, which I thought was from some kind
- 15 of exertion or maybe I was sleeping a bad way.
- 16 In any event, I was actually diagnosed by
- 17 stethoscope; I think that's very rare these days. But
- 18 that was treated surgically, and I was fine for quite a
- 19 while. I was told after that surgery, just get a blood
- 20 test and a chest x-ray every year, you're fine, and I
- 21 did that, of course, faithfully. But I kept feeling
- 22 weaker and weaker and coughing more, and the technician

kept saying, "But the chest x-ray is clear, there is no 2 problem, " and then one day when I was babysitting my 3 grandchildren, I literally started hemorrhaging, and then I finally got a CAT scan, and it showed that the right lung, what was left of it, was completely blocked, the right bronchus, and the tumor was starting to spread into the left bronchus. I think I was 7 8 probably Stage V. 9 But by the good graces of a surgeon who was brave enough to take it on, they were able to remove 10 11 the right lung, patch up the hole in the left bronchus, and here I am. I'm very grateful to be here. 12 came true so hard yesterday. If I'm a little shell-13 shocked today, it's because I'm a little tired. 15 the great pleasure yesterday of being all day at the 16 Naval Academy watching my grandson be inducted into the 17 Academy as a plebe, and it was so thrilling to walk 18 into the alumni hall where he dropped off at 8:00 in 19 the morning, and then see him come back out at 6:00 no 20 longer my grandson, his hair gone and white uniform, 21 completely transformed, and I thought, wow, I'm so

happy to see this because that second surgery was 13

- 1 years ago, and I am just so lucky and fortunate.
  - 2 And I think part of the thing that keeps me
- 3 going is becoming a strong advocate and out there
- 4 fighting for other people so that people can be 5 diagnosed early with this wonderful screening ability
- 6 of CT scans to find it early, and new attention to lung 7 cancer, we had legislation passed in January of this
- 8 year that's going to make NCI focus more on lung
- 9 cancer. And we have, of course, targeted therapies and
- 10 molecular testing. We are really at the turning point
- 11 for lung cancer, we're really there.
- 12 So back to symptoms, very briefly. Since we
- 13 do patient support services, I spoke with Maureen
- 14 Rigney, who is director of those services, and we were
- 15 both kind of surprised at how very nebulous the
- 16 symptoms are. The most common one I think is fatigue,
- 17 and Maureen mentioned cachexia, which is just like a
- 18 general wasting, your muscles waste, your skin wastes,
- 19 your skin sags, you just feel tired, and as you said,
- 20 these symptoms morph right into -- they stay with you,
- 21 I mean, even when you're treated, even post-treatment,
- 22 they just don't go away. So it would be wonderful if

- 1 drug companies could start targeting particularly
- 2 cachexia, see what's going on there, how they can help
- 3 patients with that.
- 4 And the last thing I'll mention because it's
- 5 a symptom that people don't like to talk about, but I
- 6 had it with both cases of cancer, and most people I
- 7 talk to have it, and that's depression. In fact, I
- 8 think it should be a symptom of lung cancer and defined
- 9 as a symptom, and it certainly should be treated. I
- 10 never got around to treating my depression until months
- 11 after I finished chemo and radiation, surgery, chemo,
  - 12 and radiation, and then finally someone said, "Oh, you
- 13 might be depressed," you know.
- 14 Yeah, okay, and it was wonderful to get that
- 15 treatment and to be able to change that. And so I
- 16 definitely encourage depression as a symptom.
- 17 Thank you.
- DR. EGGERS: Thank you very much, Sheila.
- I am going to save follow-up questions from
- 20 the panel, and then we'll get into the large-group
- 21 discussions, but we might have some follow-up questions
- 22 for you from my colleagues.

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1	And I was going to start this large-group	
2	facilitated discussion part by asking for a raise of	
3	hands about whether the experiences are shared up here	
4	by those of you in the room. But I'm going to start	
5	with a different one, and that is, how many people in	
6	the room felt inspired by the stories that were shared	
7	today of the courage and the strength?	
8	(Show of hands.)	
9	DR. EGGERS: And I think we should give a	
10	round of applause for that.	
11	These are inspiring stories. But as I say	
12	that, I don't know if they are typical, if they are the	
13	typical stories of everyone. And so now I want to ask	
14	for a raise of hands in the room of how many of you	
15	heard yourself in at least one of the experiences that	
16	was shared.	
17	(Show of hands.)	
18	DR. EGGERS: Okay. And how many have	
19	experiences that are different than what was shared	
20	above?	
21	(Show of hands.)	
22	DR. EGGERS: Okay. And on the web, I'm going	

1to make a call out to the folks on the web, too, that
2 you also share your experiences, maybe not through the
3 webcast in full detail I think I forgot to mention
4 that we have a public docket that is opened, and this
5 is very important. I should have mentioned this. If
6 you go to our meeting webpage, there is a link that you
7 can click on to submit your full comments, just like
8the ladies shared up here today, you can submit your
9 own comments to that docket, so those on the web and
10 those here, please submit your comments, and as you
11 hear the discussion today and it brings up some point
12 that you think is important, share that as well. We
13 read all of those comments and they are as important as
14 what we hear today, so I just wanted to say that.
15 Large-Group Facilitated Discussion: Topic 1
DR. EGGERS: And now I am going to start off
17 with a question that I think will be a good discussion
18 question that will start our discussion, and I think
19 we'll follow up on a few things that were mentioned
20 here today. So can we go to the next question? I know
21 this is extremely small writing. We had a lot of
22 symptoms that we wanted to put up here. So if you're

- 1 experiencing these or if you have a loved one who is
- 2 experiencing symptoms of lung cancer -- and I know it's 3 hard to tease out the side effects of treatment, and
- 4 that's okay if you blur those together, it doesn't
- 5 matter.
- 6 Of all the symptoms you experience because of
- 7 your lung cancer, which have the most significant
  - 8 impact on your daily life? And you can choose up to
- 9 three symptoms. So pain, such as chest pain or
- 10 shoulder pain; shortness of breath, wheezing, or other
- 11 breathing difficulties; coughing or coughing up blood
- 12 or phlegm; loss of appetite or weight loss; voice
- 13 hoarseness or difficulty speaking; fatigue or lack of
- 14 energy; depression or anxiety; other side effects of
- 15 your cancer treatments; or other symptoms that are not
- 16 mentioned. And let's allow the folks who are not
- 17 feeling symptoms at this point right now, since this is
- 18 just for discussion, if you want to put the ones that
- 19 worry you the most even if you don't experience them.
- 20 (Answering question.)
- DR. EGGERS: And I know we don't give much
- 22 time, so we don't have to hold you that these are your

64 exact top three. We'll give a few more minutes -- a few more seconds. (Answering question.) DR. EGGERS: All right. Let's move on. Okay, now I have to see the numbers here. And we also are asking the folks on the web. But let's start with those in person. It looks like there is the whole 7 range of symptoms, and there is quite a bit of other side effects. And interesting no one in the room has 10 anything that's not on this list, so I think we can 11 stick to this list. So the most prevalent is the fatigue or lack of energy and the second most is the 12 shortness of breath, wheezing, or other breathing 13 difficulties. 14 15 Can I ask what's on the web just as the top 16 ones that are raised? 17 MS. FURIA-HELMS: It's very similar with 18 fatigue and lack of energy as the most and shortness of 19 breath coming in second. 20 DR. EGGERS: Okay. So let's start with the 21 fatigue or lack of energy. We heard comments up here 22 in the front. I just want to see, does anyone have an

- 1 experience that they want to share about how fatigue or
- 2 lack of energy affects their life or how they
- 3 experience it?
- 4 Yes. We have Montessa?
  - 5 Oh, and someone will be coming around with 6 microphones. And while she's getting that ready, if
- 7 you can state your full name just for the public
- 8 record. This meeting is being transcribed and the
- 9 public record will be up on our website.
- 10 MS. LEE: Okay. My name is Montessa Lee,
- 11 with the National Lung Cancer Partnership. I was
- 12 diagnosed when I was 28 years old, so I'm not in active
- 13 treatment now, but I can tell you that the fatigue was
- 14 the worst part of any of the side effects, and there
- 15 was one point where I couldn't walk from my apartment
- 16 over to a neighbor's apartment to ask for a ride, it
- 17 felt like I was lifting up weights just to walk there
- 18 as well as the shortness of breath. And I had small
- 19 cell lung cancer, so a little bit different than
- 20 anybody on the panel, but the fatigue was absolutely
- 21 horrible.
- 22 DR. EGGERS: Does anyone want to follow up

66 with that, on that? 2 Yes, Denise. MS. HOGAN: Hi. My name is Denise Hogan. have been cancer-free for almost three years. While surgery was fine, I was up and running in 5 days, but 5 with the chemotherapy, I spent the entire -- out of 90 6 days, I had maybe 10 good days. I went every day to 7 the oncology office, came home and slept, came off the 9 couch, went to bed, all I did was sleep, and like she 10 said, I couldn't -- I had no energy to do anything. 11 It's very debilitating. 12 DR. EGGERS: Okay. Yes, Stephanie. MS. HANEY: This strikes me because I 13 specifically remember a story, and, again, that 15 crossover between whether it's treatment related or 16 disease related, when I was going through the 17 traditional chemo, now 5 years ago, my daughter was 2 18 years old, my youngest daughter, and my fatigue was 19 very severe, and I remember the whole thing, "Mommy, 20 can you pick me up? Mommy, can you pick me up?" and I 21 was just so tired, and I would sit down and I would hold her in my lap, and I would get, "Mommy, can you

67 pick me up?" And I specifically remember the first 2 time she noticed after the traditional chemo was over when she had this epiphany, "Mommy, you can pick me up!" And it made such a difference to her, and so that was a big impact for me, was that I was disappointing her. 7 DR. EGGERS: Thank you. 8 9 Does anyone else want to share their experience with fatigue? 10 11 Yes, John. You can stay seated. 12 MR. RYAN: Yeah. My name is John Ryan. 13 2 months into this and in Day 12 of my first chemo cycle. My doctor said the people that stay most active 15 do better in this, and I knew that fatigue was an 16 How do I stay with active with fatigue? 17 So in my last 2 weeks, I have been taking naps, 18 sleeping well at night, and trying to get exercise when 19 I felt best to do that, and then set aside time for a I commend those that try and live a normal daily 20 21 routine working and sneaking naps wherever to make it. And so the fatigue has been overwhelming in terms of

- 1 overarching how the day would work, but working
- 2 exercise and meals when I was feeling well and then
- 3 paying back the "fatigue god" to get better for the
- 4 next cycle was what we've been dealing with lately.
- 5 Thank you.
- DR. EGGERS: Does anyone up here on the panel 7 want to talk more about your fatigue? You shared it
- 8 very well.
- 9 MS. WARMERDAM: So one of the other ladies I
- 10 interviewed really talked about fatigue and really was
- 11 frustrated that she can't do everything she used to do,
- 12 and the shortness of breath and fatigue are both part
- 13 of that. And while she still goes to the gym every
- 14 day, it's not in the same way. And she still plays
- 15 golf every day, but she can't walk, she's got to ride.
- 16 And those kind of things really are getting to her
- 17 because that's what she loves to do, and she's retired
- 18 now.
- 19 But another young lady who has got two kids,
- 20 it's been a real struggle, and I can relate to your
- 21 story of picking up the kids, of just how difficult it
- 22 is to have two young children and living with lung

- 1 cancer and taking care of them and having the energy to
- 2 take care of them. And you take some of that from your
- 3 kids.
- 4 DR. EGGERS: So I think what I'm hearing is
- 5 that even if you're not bed bound with fatigue, even if
- 6 it's not debilitating, even if you can go to work and
- 7 you can take care of your children and your
- 8 grandchildren and you can do your outside activities,
- 9 it doesn't mean it's not a significant impact on your
- 10 life. Is that perspective shared?
- 11 (Heads nodding.)
- DR. EGGERS: Okay, I see a lot of head
- 13 nodding. Okay.
- 14 I'm going to ask my colleagues if they have
- 15 any specific questions about fatigue or how it's
- 16 experienced that they want to ask.
- 17 (No audible response.)
- DR. EGGERS: Okay. We'll move on. I want to
- 19 get a little bit at the shortness of breath, wheezing,
- 20 or other breathing difficulties that have been
- 21 mentioned. Would anyone here in the room like to follow
- 22 up on something they heard or their own experience with

70 1 shortness of breath, wheezing, and its impact on daily life? 3 Yes? MS. ADKINS: Hi. I'm Donna Adkins, and I'm with National Patient Advocate Foundation, but I'm more 6here today as a mother and caregiver of a daughter who was diagnosed at age 26 with lung cancer. cancer-free from her surgery and deals with the chronic 9 fatique. She's a registered nurse. It impairs her job on a daily basis. She still has a little bit of 10 11 wheezing, but I also wanted to mention -- and I forgot to do it when you did your poll, but one of her biggest 12 issues is chronic pain from the surgery. 13 She's been through physical therapy, they've given her bone 15 stimulators, they can't get rid of her pain. 16 DR. EGGERS: And how does she experience this pain? What kind of pain is it? Can you give some 17 18 specific examples of the --19 MS. ADKINS: After the surgery, her diaphragm 20 is not aligned anymore. She has one rib that they broke in half when they did the surgery and it has 21 never come back together. So it sort of floats in

1there. The bone stimulator was to promote the growth
2 of that rib. So it's the pain from just that rib not

- 3 being in place. She has pain in her side. Her muscles
- 4 ache all the time. As a nurse, lifting patients is
- 5 very difficult for her at times. I do have to say that 6 she works a full-time job as a hospice nurse, so she 7 has not let this get her down, but when she gets home 8 in the evening, that's her day, that's her day, she's 9 done. The fatigue, everything, has taken its toll on
- 10 her.
- DR. EGGERS: Okay. Thank you.
- 12 Anyone else want to follow up on shortness of
- 13 breath or even the pain that was mentioned?
- 14 Yes, Amy.
- MS. COPELAND: I'm Amy Copeland. I work for
- 16 Lung Cancer Alliance with Sheila, but I also want to
- 17 talk on behalf of caregivers. I was a caregiver for my
- 18 mother for many years, who had lung cancer, and one of
- 19 the most difficult things for her was the pain. She
- 20 was a landscape designer, and she lived for her job,
- 21 she loved her job, it was very active. Because of
- 22 peripheral neuropathy from the chemotherapy she went

72 through, she had a lot of numbness in her feet, which caused her one day to fall, and because of the radiation that she had done to hip metastases, she also had fairly brittle bones, so she ended up with a really odd fracture in her hip because of this, and luckily we 5 were able to find an orthopedist at a really well-known 6 cancer center that was willing to even come near her 7 and kind of wire her back together in this really intricate surgery, but it definitely had kind of an 10 outcome on her ability to work through that pain, and that was really difficult for her because in a lot of 11 12 ways, especially as her progression continued, work was really what kept her going, and to not be able to do 13 that really brought her down in a major way. So the 15 pain and fatigue were really significant parts of her 16 experience. 17 DR. EGGERS: Thank you very much, Amy. 18 Anyone else have their most -- maybe a 19 symptom or impact that hasn't been mentioned yet that's most significant? 20 21 Karen. 22 DR. ARSCOTT: Thank you. I'm Karen Arscott.

- 1And I've had the fatigue, crawling up the steps, the
- 2 shortness of breath, the cough, but the one thing that
- 3 I had that hasn't been mentioned yet was kind of
- 4 interesting. Prior to my diagnosis seven years ago, I
  5 had my right hand -- and I'm right-handed, and I'm a
  6 physician, my right hand started to become dusky, and
- 7 actually became almost claw-like. And I was going
- 8 through the workup for Raynaud's, I had three EMGs and 9CVs. I had multiple workups to try to find out what
- 10 was happening to my hand.
- I didn't really think about the fact that I
- 12 had a nagging cough, especially as a professor, I was
- 13 teaching, I would have to stop talking when I was
- 14 teaching to take a drink of water and to try to get it
- 15 back together so that I could -- and really I thought
- 16 it was allergies or something. I had no risk factors
- 17 whatsoever for lung cancer, so it never even occurred
- 18 to me.
- 19 In the meantime, I was just going through
- 20 this workup for my hand. And finally I had vascular
- 21 studies and finally they did an MRI of my brachial
- 22 plexus, and they found a nodule in my right upper lobe

- 1 which was only 15 millimeters. It did light up and it
- 2 was lung cancer, it was Stage IA. When I had my 3 resection, 16 hours later, my hand was relieved. The 4 nodule wasn't anywhere near by brachial plexus, they 5 think that it was probably a paraneoplastic syndrome
- 6 associated with it.
  - 7 I can say that losing the ability to use my
- 8 right hand was -- I was trying to teach myself to write
- 9 with my left hand. It was just doing everyday things,
- 10 and that I had my right hand back. I'm going to be on
- 11 Panel 2, so I'll talk a little bit more about my
- 12 recurrence then, but that's a symptom that I've done
- 13 some research, and there have been other people who
- 14 have had some paraneoplastic syndromes. But the thing
- 15 is that it never even occurred to anybody, including
- 16 myself, that there might be a cancer behind it, which
- 17 was kind of interesting.
- 18 Thank you.
- DR. EGGERS: Thank you, Karen.
- 20 Anyone else about a symptom that they feel?
- 21 Go ahead, Lorren.
- 22 MS. SANDT: Just briefly, I think you guys

- 1 need to take this as a new definition, "scanxiety." I
- 2 don't think I have to tell you what that means.
- 3 DR. EGGERS: Thank you very much.
- We're going to be talking a bit about the 5 downsides of treatment in the next topic, but I think 6 since we're exploring that a little bit more now, I'm 7 going to ask a question about one of the side effects
- 8 of treatment, and I think it was Susan who talked about
- 9 the chemo brain. Because we don't have as much mental
- 10 symptoms, cognitive symptoms, up here, although I did
- 11 hear it from up here in the panel, and so I was
- 12 wondering, does anyone else want to explain what Susan
- 13 means by "chemo brain" or any other mental cognitive
- 14 issues?
- MS. HOGAN: I hope it's "chemo brain."
- 16 The doctor said it takes five years, but I
- 17 just find my memory isn't as sharp as it used to be,
- 18 and, you know, I walk into a room to do something and
- 19 then I forget why I was there, which happens anyway,
- 20 but it seems to be more frequent now. But he said it's
- 21 usually five years and you see the difference.
- 22 DR. EGGERS: Okay. So even five years after

		76
1	treatment, and you have been	
2	MS. HOGAN: Well, I'm three years, so I'm	
3	giving it two more years. I'm going to use it for the	
4	next two years.	
5	DR. EGGERS: Use the excuse.	
6	MS. HOGAN: "It's my 'chemo brain,' I swear."	
7	DR. EGGERS: Anyone else want to follow up on	
8	these cognitive issues?	
9	We'll go with Sheila and then we'll go back	
10	here.	
11	MS. ROSS: Actually, it's longer than five	
12	years. Yeah.	
13	DR. EGGERS: Sheila, though, in all	
14	seriousness, you have noticed a difference, more than	
15	you might attribute to just	
16	MS. ROSS: Just regular aging?	
17	DR. EGGERS: Becoming more distinguished?	
18	MS. ROSS: That's a nice way of putting it.	
19	No, I think that there is definitely I was never as	
20	sharp again after chemo, never, and even factoring in	
21	aging and whatnot. I don't know what it is.	
22	And just to go back to the pain, I really	

1think it's wrong that there hasn't been a better pain 2 medication developed. Everyone who goes through that surgery is in tremendous pain like your daughter. I don't mean the VATS surgery. Fortunately we have the new VATS for particular lung cancers, depending on the position in the lung, which is wonderful. A friend of 7 mine just had that and she was out of the hospital in 24 hours and walking up a hill the next day, but for the regulars, what I call "slash-and-burn" surgery, 10 it's painful. I mean, that scar is 13 years ago, and 11 it still hurts. So I just don't understand why there can't be better pain management for lung cancer 12 13 patients. It's wrong. 14 DR. EGGERS: Well, let's save that for the 15 next topic. We'll revisit that. But I think it's 16 important, so bring it back up if I don't mention it. 17 I think Pat has a follow-up question? 18 DR. KEEGAN: Either in this session or in maybe the next panel session because as we're listening 19 to a lot of the discussion about fatigue, it sounds 20 like the fatigue of concern is a treatment-related 21 22 fatigue more so than a manifestation of the lung

1 cancer, the underlying lung cancer, and I just want to

- 2 make sure if that's the case, that we clarify it in our
- 3 future comments because I think the way we would
- 4 develop tools to approach evaluation of that would be
- 5 different, so if in the next session or in this session
- 6 you could elaborate on that because it's important to
- 7 us to know which it is so that we get the right kind of
- 8 tool to look at that.
  - 9 DR. EGGERS: Okay. I know we have a comment
- 10 back here -- and we'll get to you, Montessa -- but let
- 11 me follow on Pat's question and ask one. Can anyone
- 12 distinctly tell the difference? I mean, are you able
- 13 to describe the pain -- and we'll ask this for the
- 14 folks on the web, you can put it in your comment box --
- 15 describe the pain that you would say, "I can tell this
- 16 is not treatment related." Because I think Kathleen is
- 17 going to make the point that it's very difficult to
- 18 tell, she made that point earlier, but if you can,
- 19 elaborate on what that feels like and what you
- 20 experience with that. Okay?
- 21 UNIDENTIFIED FEMALE SPEAKER: The pain?
- 22 DR. EGGERS: The fatigue that you can say,

- 1 "This is really because of my lung cancer, and I don't
- 2 think it's because of my treatment." Okay?
  - 3 MS. LEE: Since I have the mic, I think my 4 fatigue definitely was from the chemotherapy or the
- 5 radiation. Now, that I don't know which because I had 6 radiation and chemotherapy at the same time. But I 7 couldn't sleep; before I was diagnosed, I could not
- 8 sleep. Now, that could have been due to the pain 9 because at the time they found the tumor, it was 15
- 10 centimeters, and it was probably pressing on something,
- 11 I couldn't breathe and I couldn't sleep, but after
- 12 that, the extreme fatigue and low blood pressure, all
- 13 of that, it is a fine line, but I thought some of it
- 14 was probably due to the treatment.
- DR. EGGERS: Well, we'll move on from that
- 16 topic, but I'll put a plug in for the docket that if
- 17 you can really address this topic in the docket, or the
- 18 advocates in the room and listening, if you can think
- 19 about what your constituency, what they experience,
- 20 what your peers experience, about fatigue that you
- 21 think is attributed to the lung cancer.
- 22 Montessa, did you have a comment about

80 cognitive? 2 Yeah. I was going to tell her it doesn't go away after five years, because I was diagnosed in -- it gets better, but I totally have to 5 write everything down. 6 DR. EGGERS: So I think, Paivi has a question. 7 8 DR. MISKALA: No, I had a similar comment to 9 fatigue as it relates to pain. I think we've heard 10 some patients describe that pain is related to surgery 11 versus the underlying disease, and I would be interested in hearing from you further as well. 12 DR. EGGERS: So in the interest of time -- I 13 think we're going to go to the break soon -- but we'll 15 put another plug in for the docket to really talk about 16 the pain that you think is attributed to your lung 17 cancer separate from the treatment itself. 18 We are almost ready to go to a break. 19 think I'm going to look to Pujita for confirmation of that? Right? And what I want to do before we close 20 21 this discussion, this is going to bleed into the next 22 discussion, but I want to see if anyone has anything

- 1 that they wanted to bring up as a symptom of something
- 2 that they experienced because of the lung cancer before
- 3 we go to a break that maybe hasn't been raised.
- 4 Yes. Go ahead.
- 5 MS. WARMERDAM: I'm actually not even sure if 6it is related, but Montessa had actually mentioned it,
  - 7 so I thought I would also. Probably five years before
- 8 I was diagnosed, I was dealing with insomnia, sometimes
- 9 where I wouldn't fall asleep for two days in a row
- 10 literally, and in hindsight, I consider that a symptom
- 11 because -- and I don't know if there is any science
- 12 behind it, but my cancer had spread to my adrenal
- 13 gland, and so for me, it kind of told me that maybe
- 14 that was a symptom.
- DR. EGGERS: Okay. If you feel comfortable
- 16 raising your hand that you think that not just fatigue
- 17 but sleep problems, insomnia, has been an issue for
- 18 you, any raise of hands?
- 19 (Show of hands.)
- DR. EGGERS: Okay. We have some hand raises,
- 21 about five hand raises here. Okay, thank you.
- 22 Well, I think we're going to take a 15-minute

- 1 break. I want to thank you all so far for a great
- 2 conversation and dialogue, and the panelists, I want to
- 3 thank you again. When we come back from the break, if
- 4 I could ask the folks who are on Panel 2 to work their
- 5 way up to the panel with your tent cards.
- 6 Thank you.
- 7 And I'll put a reminder, if you want to do a
- 8 public comment, sign up for that at the registration
- 9 table.
- 10 (Whereupon, a brief recess was taken.)
- DR. EGGERS: Okay, as you make your way to
- 12 your seats, I'm just going to make an announcement
- 13 about the Open Public Comment. We've had five people
- 14 register. I'm going to ask a favor of them. If the
- 15 five folks who have registered, if you can keep your
- 16 comments to 3 minutes, then we can extend the
- 17 discussion that we're going to have, which is going to
- 18 be a really rich discussion on how you think about
- 19 decisions regarding cancer treatments, we can extend
- 20 that just a bit if we need to, and if that conversation
- 21 comes to a natural close, then we would still be able
- 22 to end a little bit early for lunch. So as you're

- 1 thinking about your public comments, please 3 minutes.
- Well, building on the great discussion we've
- 3 had so far -- and again I want to thank everyone who is
- 4 so courageously sharing your experiences -- we're going
- 5 to move into Topic 2, but before we do that, we are
- 6 going to summarize some of the comments that we've
- 7 heard on the web that maybe we haven't heard that
- 8 haven't been mentioned here yet.
- 9 MS. VAIDYA: Thank you, Sara.
- 10 So we have someone from the web who wants to
- 11 provide a gentle reminder that irrespective of smoking
- 12 histories, everyone deserves to live and to be treated
- 13 as deserving to live.
- 14 Participants on the web share similar
- 15 symptoms presented in the room, including fatigue,
- 16 shortness of breath, lack of concentration, memory
- 17 retention, and neuropathy. A different symptom
- 18 mentioned includes side effects from a drug which
- 19 results in drop in testosterone level. It was also
- 20 mentioned that nutrition and physical exercise have
- 21 helped with side effects. Web participants also feel
- 22 there is a need to also address emotional side effects

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1	which have not been addressed here.	
2	Thank you.	
3	DR. EGGERS: Thank you, Pujita.	
4	Panel #2 Comments: Topic 2	
5	DR. EGGERS: So we're going to move into	
6	discussion Topic 2, which is really the perspective on	
7	current approaches to treating lung cancer, and we did	
8	talk a lot about the symptoms of those, and we can	
9	expand upon that, too. I think we're going to hear	
10	some from the panels, but we'll move into talking about	
11	how you really get into making those treatment	
12	decisions and what you think about and how you weigh	
13	different considerations and what's important to you.	
14	So this is going to be a very exciting discussion.	
15	We have some great panel participants up	
16	here. They represent patients and patient advocates.	
17	So I'll let you introduce yourselves because I don't	
18	think we have them in order here. So if you could just	
19	state your name and if you want to state what	
20	affiliation you are with or who you associate with,	
21	feel free.	
22	MS. HOGAN: Good morning. My name is Denise	

- 1 Hogan. I work for ALA. I'm part of Power Against 2 Tobacco. And I have been free of cancer for close to
- 3 three years.
- 4 DR. EGGERS: Can everyone hear Denise? Is
- 5 everyone hearing? Okay.
- 6 MS. HOGAN: Is it on? No? Did you hear me?
- 7 Can you hear me now?
- 8 DR. ARSCOTT: Hello. My name is Dr. Karen
- 9 Arscott. I'm a physician, and I have been free of
- 10 cancer symptoms for 6 years now, and I am a professor
- 11 at a medical school, and I am a member of Lung Cancer
- 12 Alliance as a patient advocate.
- MR. RYAN: My name is John Ryan. I'm at the
- 14 front end of this simply as a cancer patient. Nine
- 15 weeks ago today I didn't know anything about it. I'm
- 16 just finishing my first chemotherapy phase.
- 17 MS. FULD NASSO: Hello. My name is Shelley
- 18 Fuld Nasso, and I'm Senior Director of Policy for the
- 19 National Coalition for Cancer Survivorship, and we
- 20 advocate on behalf of cancer patients in terms of
- 21 quality of care.
- 22 MS. HANEY: My name is Stephanie Haney. I am

- 1 a lung cancer survivor. I was diagnosed at Stage IV
- 2 about 5-1/2 years ago.
- 3 DR. EGGERS: Thank you very much.
- 4 So we've asked the panelists again to prepare
  - 53 to 4 minutes of remarks, and once we hear that, time
- 6 permitting for the panel discussion, we'll see if there
- 7 are any follow-up questions, but then we'll move into
  - 8the large-group facilitated discussion. And again the
- 9 questions are on the back of your agenda, but basically
- 10 we want to understand your thoughts on the cancer
- 11 treatments you are currently undergoing or have
- 12 undergone in the past to help reduce or control the
- 13 spread of your lung cancer, as Sean described those
- 14 today, what supportive care treatments you're taking to
- 15 help or improve or manage the symptoms that you talked
- 16 about earlier today, what you're thinking about your
- 17 overall goals for treatment and how you weigh
- 18 importance specifically of prolonging your life versus
- 19 improving your symptoms, and what you really take into
- 20 account when you do that, when you think about those
- 21 two goals, and what other factors you take into account
- 22 when making decisions about using treatments.

87 So with that, I will stop talking and turn it 1 over to Denise to begin. 3 Thank you, Denise. MS. HOGAN: Okay. Good morning again. 5 you to the FDA for having us. I was diagnosed with Stage II non-small cell lung cancer. It was five 6 centimeters. My local doctors wanted to do radiation 7 and chemo. The American Lung Association directed me to a doctor in New York City who insisted that we take 10 it out right away. I was very lucky it didn't go 11 anywhere, it just stayed in my lung, but as a 12 precaution, we did three months of chemotherapy. The surgery, of course, is no walk in the 13 park, but compared to chemotherapy, chemotherapy 15 totally disabled my life. I have numbness from the 16 surgery, but I feel so lucky, I don't have any bad side 17 effects. I mean, my breathing -- I can't do a stair 18 climb, but that doesn't keep me from doing stairs. 19 Nothing has stopped me from doing what I used to do, I 20 just might not do it as fast as I used to do it. 21 was ever in need of doing chemotherapy again, I don't 22 think I would do it. It affected me physically and

- 1 mentally because I couldn't accept that it was killing
- 2 everything else. If there were any cancer cells that
- 3 it was attacking, it was also attacking my bones and my
- 4 blood and I just -- my quality of life -- there was no
- 5 quality of life, and I did it once, but I'm also
- 6 convinced that I'll never have cancer again.
- 7 Cancer has not consumed my life. I had it, I
- 8 had it taken out, I had treatments, and in my opinion,
- 9 I don't have it, and I don't say I'm in remission, I
- 10 just don't have cancer anymore. I would like very much
- 11 for the stigma of lung cancer -- is it me? There is
- 12 such a stigma. I was an ex-smoker. I had stopped
  - 13 smoking for 11 years, and the first thing everyone says
- 14 is, "Did you smoke?" I don't think any other cancer
- 15 people ask a question, you know, "How did you get it?"
- 16 If I didn't smoke, the first thing I would say to
- 17 people is, "I got lung cancer and I never smoked." I
- 18 think it's an unnecessary question for someone to ask.
- 19 It puts the smoker, the ex-smoker, in a position where
- 20 they feel people are looking down on them like they
- 21 caused their own illness.
- 22 When I started smoking, no one told me that

- 1 there was a cancer of lung cancer, and it's an
  2 addiction just like any other addiction. So I hope
- 3 eventually the stigma comes off of it. And I hope
- 4 there is more open dialogue about lung cancer because
- 5 most people think that you die immediately, you know,
- 6 if you have lung cancer, you're going to die, and to me
- 7 that's not the case.
- I had wonderful doctors, I had wonderful
- 9 family support, which you have to have a lot of support
- 10 around you, but there is a financial burden that -- I
- 11 mean, I was going to the oncology office every single
- 12 day to be hydrated, so I had to pay a copay. My bill
- 13 was \$5,000 just for copays, and that plays on your
- 14 mind, especially when they're asking for more money.
- So there are a lot of things that are going
- 16 on besides -- for me, I just felt like I was dead, I
- 17 felt like I didn't have any life. I was so happy after
- 18 surgery. I mean, I came home, I went for a walk, I
- 19 resumed, you know, but the chemo just completely -- and
- 20 as I said before, I don't know if I would ever do it
- 21 again because the quality of life is far more important
- 22 to me.

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1	Thank you.	
2	DR. EGGERS: Thank you very much, Denise.	
3	We'll go on with Karen.	
4	DR. ARSCOTT: Okay, so I was first diagnosed	
5	7 years ago. And I am no longer under any treatment	
6	for my lung cancer. With my initial diagnosis, as I	
7	said before, I was a Stage IA, it was a supposedly	
8	incidental finding, although I probably had the	
9	paraneoplastic syndrome associated with it which helped	
10	find it. I had a surgical resection.	
11	Being a physician, and my husband is a	
12	physician, we did a lot of searching to try to find out	
13	whether I should receive adjuvant chemotherapy or	
14	radiation at that time, and I had two opinions, and	
15	along with the literature, agreed that I should have	
16	been a surgical cure and did not require any further	
17	treatment. So I was on the every-4-month CAT scan at	
18	that point, which is another point that I would like to	
19	make a little bit later in the follow-up treatment of	
20	lung cancer, which is sadly it varies from person to	
21	person.	
22	So I was on an every-4-month follow-up, which	

- 1 I'm very grateful for because 12 months after my
- 2 surgery I had a completely clean CAT scan, 4 months
  3 later I had a 2 centimeter nodule, lymph node, in my
  4 mediastinum, so I had a mediastinal recurrence and it
- 5 was a skip metastasis, which is very rare, but I had a 6skip metastasis to my mediastinum, and now I'm a 3A.
- 7 When that happened, I knew that I was in for the fight
- 8 of my life, and I looked at my doctor and I said, "Hit
- 9 me with everything you have. I'm 48, I'm healthy," at
- 10 that point I was going to spinning class regularly, and
- 11 I was in very, very good shape, and I just said, "Hit
- 12 me with everything you have, " and he said, "We're going
- 13 to hit you with everything including the kitchen sink,"
- 14 because, along with this panel, my treatment options
- 15 were very, very limited at that point.
- 16 So this is 6 years ago. And although
- 17 targeted therapy was around at that point, I couldn't
- 18 really get anybody to check me for any of the
- 19 biomarkers because I was a IIIA, I wasn't a IV, and I
- 20 did eventually talk them into it, and I am epidermal
- 21 growth factor receptor- positive because I said if this
- 22 ever recurs a third time, I want to be able to start

- 1 treatment immediately and not have to wait for the
- 2 results to come back.
- 3 So what they hit me with was 12 weeks of 4 carboplatin and Taxotere. I followed with a second
- 5 thoracotomy mediastinal resection, and then I had 7-1/2
- 6 weeks of radiation and cisplatin. So they did hit with 7 me with everything. And I was prepared mentally for 8 the fight, and I did fairly well until the radiation
- 9 and chemo combined were pretty hard. I'm going to say
- 10 that after that I started to fight my way back, and 11
- 11 months after I concluded treatment I walked my first
- 12 marathon. I used to run. I don't run anymore, I can't
- 13 because of the shortness of breath and such, but I do
- 14 walk, and since that time I've walked four marathons
- 15 and six half marathons all with Team Lung Love with
- 16 Lung Cancer Alliance. I just feel that I have to do
- 17 that for all the people who can't participate like
- 18 that. Is it easy? No, it's hard, but you know what?
- 19 I walk with my husband and my sister, and they give me
- 20 encouragement, and I feel that I'm better for it, it
- 21 gives me a lot of opportunity to reflect and to talk,
- 22 and I'm glad that I'm able to do that.

- 1 I would like to comment on -- so for the FDA
- 2 and for anybody out there, I think that we have a
- 3 couple issues, first of all, treatment options.
- 4 Currently targeted therapy is for late stage. IIIA 5 does not fall into late stage, you have to be IIIB or
- 6 IV. There really isn't that much research for early
- 7 stage. I'm not sure. There are side effects, I
  8 understand that, the chemo is very hard, and there are
  9 side effects for it. However, I would like to know if
- 10 I am epidermal growth factor receptor-positive, should
- 11 I have continued on any targeted therapy? I don't know
- 12 because there isn't research. So I think that would be
- 13 one thing I would like to comment on.
- 14 The other thing I would like to comment on is
- 15 the follow-up. Again, I was very fortunate in that my
- 16 doctor chose to do every-four-month CAT scans. I have
- 17 known people who were on the six-month, and when they
- 18 went back for their six-month scan, already had
- 19 metastasis to the other lung.
- 20 And we are treating the tumor marker positive
- 21 as if it's the old-fashioned type of -- lung cancer has
- 22 changed over the years. As a physician, I'll tell you

it is not the old-fashioned lung cancer, it is new. 2 There is a more aggressive style of lung cancer. hitting 20-year-olds, 30-year-olds, 40-year-olds, and it's very, very aggressive, and so if we continue to do follow-up care as if it's the old-fashioned lung 6 cancer, we are going to have people develop metastasis 7 in six months, and they're going to be Stage IV before we have any option to treat them. So we need to consider follow-up. 10 I have met people who are getting follow-ups at 1 year out after surgery for Stage IA. It's 11 12 inexcusable, but I have to say that as a physician, the medical community is as ignorant to the facts as the 13 general population. I have met many physicians and 15 nurses who feel the same way as the general population, 16 that they don't understand lung cancer, they don't 17 understand the stigma attached to lung cancer, and also 18 this will take me into my next comment about smoking 19 and lung cancer. 20 When I received my call from my nurse case 21 manager from my insurance company after my first

surgery, the first question out of her mouth was, "How

- 1 should we begin your tobacco cessation program?" That
- 2 was the first thing she said to me. And I said, "Well,
- 3 you can start it any way you want, but I never smoked,"
- 4 but don't talk about that anyway.
- 5 So as a physician, I can say that I'm opposed
- 6 to smoking, I'm not opposed to smokers. I feel that
- 7 you have to help them. Most people begin smoking in
- 8 their teenage years, when they're 15, 16, they get
- 9 their first job, and they want to be with their other
- 10 coworkers and such, and so they take their smoking
- 11 breaks, and they go out, and they become addicted very,
- 12 very fast, and, you know, although at 18 we think we
- 13 know everything, and at 20 we're sure we know
- 14 everything, most of us in this room will say that we
- 15 really don't know anything until we're in our thirties,
- 16 and so by the time somebody hits 30, if they've been
- 17 smoking for 20 years, they have a significant smoking
- 18 history. It is not their fault that they became
- 19 addicted as teenagers to this. The tobacco industry
- 20 created this to become an addiction product.
- 21 So we need to think about this. I had this
- 22 discussion with some physicians recently about smoking,

- 1 and I said, "You don't realize that 60 percent of
- 2 people with lung cancer are those who already quit
- 3 smoking," and so, as physicians, we're giving our
- 4 patients advice and telling them, "You quit smoking and
- 5 all will be rosy," and then we're not following up with
- 6 any screening or testing. That is inexcusable. So we
- 7 have people who have quit, we have people who are still
- 8 smoking, and we have never-smokers, and we need to
- 9 treat them all equally. We need to do early screening.
- 10 Everybody deserves early diagnosis and adequate
- 11 treatment whether they are smokers or non-smokers, and
- 12 that's what I would like to say.
- Thank you.
- DR. EGGERS: Thank you, Karen.
- Can we move to John, please?
- 16 MR. RYAN: Yeah, good morning. My name is
- 17 John Ryan. As I said earlier in my intro, I had no
- 18 visibility to this 9 weeks ago. I went into an
- 19 emergency room at my doctor's direction due to a self-
- 20 induced coughing up of about a teaspoon of blood and
- 21 phlegm. The emergency room did their normal checks,
- 22 and my x-ray showed nothing. If it wasn't for a

- 1 radiologist who said, "We need a C scan," I would still
- 2 be wandering around in the dark on this.
  - In the ensuing weeks, I was informed by very 4 capable oncologists saying that, "You're in Stage IV.

    We can treat you. We cannot cure you. This will kill
- 6 you. And depending on how lucky you are with our
- 7 pathology, if you have some positive mutations, you get
- 8 to go oral at directed. If that's not the case, we
  9 need to get moving into chemotherapy." I had my first
- 10 chemotherapy injection last Monday.
- 11 And after reading everything that the Cancer
- 12 Institute put out about side effects -- it was a very
- 13 detailed account about all the side effects with
- 14 chemotherapy -- I was energized to the nines waiting
- 15 for everything to hit. In fairness to the process, the
- 16 advances that were made on treating my situation where
- 17 I have had this spread to a rib and they're looking at
- 18 major bone strengthening things through injections of
- 19 bone enhancement, I'm taking a medication for that,
- 20 getting an overkill on everything that could make you
- 21 avoid the "bucket brigade" of 30 years ago with nausea
- 22 and vomiting, taking B-12 to offset maybe the fatigue,

- 1 folic acid. I didn't decide I was going to take this,
- 2 the team did, and here we are on Day 12.
  - It is my greatest concern as a patient, and, 4believe me, and my family, since you can't cure, what
- 5 are the options for treatment? I went through a double 6-- or a second opinion verification through Bethesda 7 and then Vanderbilt with Dr. Powell, and my family is
- 8 at peace knowing that they both concluded that I didn't 9have positive EGFR or ALK and that where I am is where
- 10 I need to be. I see evening news marketing of great
- 11 things that are happening at the Cancer Center on the
- 12 genomes, the directed. Research has put us to the
- 13 Foundation One, so we would like to see that product.
- 14 I asked both oncology teams in Tennessee and Bethesda,
- 15 would that product today, of me and my genetic
- 16 molecular profile be helpful to you today as a
- 17 potential assistance on what treatments might augment
  - 18 my first-line or second-line and beyond? And both said
- 19 yes. My discussions here would suggest, with others,
- 20 would suggest that we're not ready to do that because
- 21 although you may have a lot of matchable pairs, so what
- 22 are the possibility links to viable clinical trials

- 1 that may help? So my voice in the dark is be sensitive
- 2 to the patient that's out there that is gripping for 3 access to the viable treatments that are available to
- 4 enhance the life and make the best shot for the finish.
- 5 Thank you.
- 6 DR. EGGERS: Thank you, John.
- 7 We'll move with Shelley next?
- 8 MS. FULD NASSO: Thank you. And I want to
- 9 thank the FDA for hosting this meeting and for
- 10 listening to patients and patient advocates and their
- 11 perspectives about to help inform the drug review and
- 12 approval process. We really appreciate your listening
- 13 to us, and I just want to thank all the patients who
- 14 have shared their stories here today.
- 15 I'm not a lung cancer patient, but my
- 16 organization advocates for patients of all types of
- 17 cancer for quality care. But I want to share the story
- 18 of my father-in-law, who made a different decision from
- 19 what we've heard today. He was diagnosed very recently
- 20 with small cell lung cancer. He has made the decision
- 21 not to undergo any treatment, any disease-directed
- 22 treatment. And he and his wife are both very at peace

- 1 with this decision. He turned 79 last month, or as he
- 2 likes to say, he's in his 80th year, and he has 3 advanced emphysema. He has lost a significant amount
- 4 of weight in the last year and can't keep weight on
- 5 despite his best efforts. He is frequently out of
- 6 breath and tires easily. He lives in rural central
- 7 Texas and would have to travel about three hours to
- 8 Austin or Dallas for treatment.
- 9 He told me he doesn't want to spend the money
- 10 and the time undergoing treatments that may or may not
- 11 help reduce his cancer burden but will certainly make
- 12 him feel worse and will not address his emphysema. He
- 13 would rather enjoy his peaceful life for as long as he
- 14 can. As his disease progresses, he will have
- 15 supportive care to alleviate his symptoms and ensure he
- 16 is comfortable. It is not one single factor, but the
- 17 combination of factors, the effectiveness of the
- 18 treatments, the side effects, the cost, the
- 19 inconvenience, and his overall health status that
- 20 influenced his decision.
- 21 That said, if there were treatments that were
- 22 likely to save his life, he probably would go through

- 1 the treatment, but knowing what he has in front of him,
- 2 he's made this choice, and after contemplation and
- 3 discussion with his doctor. But the truth is it wasn't
- 4 a terribly difficult decision for him. He is a man who
- 5 knows what he wants and this is what he wants. So it's
- 6 not the right choice for everyone, but it is the right
- 7 choice for him.
  - 8 Another example of a gentleman who worked
- 9 with NCCS for several years after he was diagnosed with
- 10 lung cancer in his twenties, and his name is Dan Wigger
- 11 (ph), and I didn't have the pleasure of knowing him,
- 12 but I've heard so much about him from my colleagues.
- 13 He just had an insatiable appetite for life and was
- 14 willing to try anything, and he went through five lines
- 15 of treatment, very difficult treatment, especially at
- 16 the end. He was engaged to be married. He wanted to
- 17 do whatever he could to help cancer patients, and
- 18 that's why he worked for NCCS through his entire
- 19 treatment.
- So while we can never know what we would do
- 21 until we are faced with that decision, I think that I
- 22 would probably take the route that Dan did. I have

- 1 three young children, and if I were diagnosed, I would
- 2 do anything to try to be there for them. But I think 3 that my father-in-law and Dan are probably extreme 4 examples of where the decision is a little bit more
- 5 clear-cut. It wasn't a hard decision for my father-in-
- 6 law, and I don't think it was a hard decision for Dan
- 7 to do whatever he could. But for other patients, the 8 decision may not be so straightforward, and I think
- 9 that's where the tradeoffs that are discussed in this
- 10 panel and that have been discussed earlier become so
- 11 important.
- 12 All patients that are diagnosed with lung
- 13 cancer need to clearly understand the short- and long-
- 14 term goals of treatment and whether the treatment is
- 15 curative or palliative. If the goal is not curative
- 16 because of the disease burden and limited treatment
- 17 options, patients need to understand the risks and
- 18 benefits of whatever choice they make.
- 19 The treatments chosen by lung cancer patients
- 20 should follow an episode of clear communication and
- 21 shared decision making with their physicians. That
- 22 should result in a clearly communicated written

- 1 treatment plan that addresses the following questions:
- 2 If cure is possible, what are the late and long-term
- 3 effects of treatment? And we've heard a lot about some
- 4 of those effects of treatment today. If cure is not
- 5 likely, is there a clinical trial that might offer an
- 6 increased benefit over a currently available treatment?
- 7 If cure is not likely, will chemotherapy or other
- 8 modalities help delay tumor progression and relieve
- 9 symptoms? And then, does the physician understand what
- 10 quality of life means to the patient? And which of the
- 11 possible treatment options might best preserve those
- 12 qualities of life?
- 13 And I think that last question is really
- 14 important. It's often suggested that cancer patients
- 15 have an exceptionally high tolerance for treatment side
- 16 effects, but they have to be considered with respect to
- 17 that individual's preferences. And this may sound
- 18 obvious, but it's really not obvious. We hear
- 19 countless stories of people, like the piano teacher,
- 20 who despite talking to his physician about his
- 21 profession, went through a treatment regimen that
- 22 resulted in peripheral neuropathy and compromised his

- 1 ability to do what he loved and what his profession
- 2 was, which was teaching piano.
- So as the range of treatment options
- 4 increases as new drugs are being developed, the
- 5 comparison of different treatment options and the 6 potential for benefit and the risks are critical for
- 7 patients to understand. And we know that the FDA is
- 8 working to develop a benefit- risk framework that will 9help patients be able to see the different treatment
- 10 options compared against each other. And we think this
- 11 is helpful and important for patients because patients
- 12 need to understand and be able to make what's the best
- 13 treatment choice for them.
- 14 So thank you.
- DR. EGGERS: Thank you very much, Shelley.
- And, finally, we have Stephanie.
- 17 MS. HANEY: Thank you. My name is Stephanie
- 18 Haney, as I said. My life since lung cancer has been
- 19 relatively easy in comparison to many lung cancer
- 20 patients. I'm about five and a half years into this
- 21 journey, and except for some pain in my right side that
- 22 led to this two-year search for a source, I've been

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1 symptom-free. I was diagnosed at Stage IV, so common practice dictated that my only option was drug 3therapies, no surgery, no radiation. And I'm clearly 4 blessed that those drug therapies have had a positive impact in my case. I live and have lived since the start with essentially stable disease and no symptoms. 6 That all being said, those therapies did not 7 come without a price. I had traditional chemo, which I thought might kill me all on its own, and that was 10 without nausea or vomiting, that was all the other 11 things, bone pain and that kind of thing. It was the most difficult time in my life, and I thought the end 12 was near. Tarceva came with the expected side effects: 13 red and rashy face and diarrhea for 3 years. Now I'm 15 on Xalkori because I have the ALK mutation, so it was 16 interesting that both of those drugs worked for me. 17 Interestingly, it doesn't appear that I really have 18 side effects at all. I'm so grateful that I happen to 19 be chemo-responsive and will just have to string 20 therapy upon therapy together as one wears out its 21 usefulness.

I've dealt with issues such as frequent

- 1traveling to appointments. For instance, I almost
- 2 missed "Trick-or-treating" with my then 2- and 4-year-3 old daughters early in this process, and it was so
- 4 devastating because then I assumed my time would be so 5 short, I wasn't sure I would be there for the next 6 Halloween. Lots of miles on the car and lost work 7 hours, research, blood work that has transformed my
- 8 beautiful firm veins into illusive, invisible rolling
- 9 strings that require steps of prep with every stick,
- 10 and piles of paperwork rivaled only by the IRS are
- 11 nothing if they will keep me going. But I'm willing to
- 12 pay any price to stay alive. It's easy for me because
- 13 I'm young and otherwise healthy, and I have two little
- 14 girls. There are so many more like me than most might
- 15 know. I would love to have more aggressive treatments
- 16 that would really whack this cancer back. I would
- 17 endure any amount of bone pain and utter exhaustion,
- 18 painful acne, or three more years of diarrhea,
- 19 surgeries, hospitalizations, whatever it would take.
- 20 I'm a single mother with two young daughters, and I
- 21 will do what I must to fulfill that responsibility.
- The reality is this: there were few

- 1 decisions to be made in regard to treatment. In fact,
- 2 I'm not sure I made any really. There are few
  3 tradeoffs for me because there are so few treatments
- 4 available, maybe four to six options. I mean, some are
- 5 similar to others, so once you use one, you kind of 6 rule another one out, and that's if you can live that
- 7 long. So, again, I've been fortunate that so far
- 8 stringing together these therapies is working.
- 9 And don't think that I'm one to just blindly
- 10 accept what my doctor says because I did do a lot of
- 11 research, but when it came down to it, only having drug
- 12 therapy options, I wasn't choosing between apples and
- 13 oranges but apples and apples, so I took my trusted
- 14 doctor's advice without much question.
- Risks associated with the medication are
- 16 irrelevant because they all have very serious side
- 17 effects. We are monitored closely and will die without
- 18 it anyway. I'm on my third therapy to try to hold the
- 19 inevitable off, and I know what two drugs will follow
- 20 this. Beyond that, I'm not sure if there will be more
- 21 options. That's my only concern: what happens when I
- 22 use everything up? We'll string together what is out

- 1 there. If the next big thing comes out before I die,
- 2 I'll string that one on, too. There aren't really
- 3 choices for me. I just hope that there will be enough
- 4 options that work to get more years of parenting in.
- 5 If treatments were more reliable and had longer impact,
- 6 there would be decisions to make, but with the
- 7 exception of some of the newer targeted therapies that
- 8 may fit one patient better than another, we're just
- 9 trying to make it through.
- 10 I did also want to comment on something that
- 11 was said earlier about drugs with small benefit, and
- 12 I'm always sensitive to that idea because basically to
- 13 me -- and I'm not a statistician or a scientist -- what
- 14 that means, you know, if they say it's 2 months overall
- 15 survival, that's still an average, and so for some,
- 16 that drug may have worked wonderfully, and for others,
- 17 of course, it didn't work at all, and then you go off
- 18 it. So I'm sensitive to drugs that fall off quickly
- 19 because their overall survival was minimal when, in
- 20 fact, probably for some they might have been a very
- 21 powerful drug.
- 22 And I think that's it. Thank you.

DR. EGGERS: Thank you, Stephanie.  And I want to thank all the panelists. I  mean, as with the first panel, it takes a lot of  courage. This is a tough subject, and I think we	
3 mean, as with the first panel, it takes a lot of	
4 courage. This is a tough subject, and I think we	
5 should applaud these panelists, too, for their courage.	
6 So thank you.	
7 Large-Group Facilitated Discussion: Topic 2	
8 DR. EGGERS: And I'm going to start with the	
9 second question I asked to start the last facilitated	
10 discussion, which is, how many of you here in the	
11 audience saw your own experiences in at least one of	
12 the experiences shared here today?	
13 (Show of hands.)	
DR. EGGERS: Anyone who is going to have a	
15 completely different experience?	
16 (Show of hands.)	
DR. EGGERS: Okay. So there were a lot of	
18 common themes that were talked about, and a lot of	
19 we talked about the "obvious" decisions I'll put the	
20 "obvious" in quotes we talked about the very hard	
21 decisions, may not do it again, the decisions that why	
22 you might, despite everything, why you might decide	

- 1 that the end is near and you want to continue as best 2 you can knowing that. We talked about the lack of 3 options and the limited options and the not having 4 much, many, choices, and so I think we're going to
- 5 follow up on all of those.
- 6 But to put it in context, I would like to ask
- one polling question, so if you can get your clickers 8 out, and on the web if you can answer this polling 9 question, too, and that is: Have you ever undergone
- 10 any of the following cancer treatments to help reduce
- 11 or control the spread of your lung cancer? And include
- 12 your current treatments. So chemotherapy, radiation
- 13 therapy, surgery to remove the tumor or any part of the
- 14 lung; targeted drug therapies, something else; or if
- 15 you have not undergone any cancer treatments; or if
- 16 you're not sure. And choose all that apply. I think
- 17 that button works. I think you can choose more than
- 18 one.
- 19 (Answering question.)
- 20 DR. EGGERS: Okay. It looks like folks are
- 21 done. Okay, if we can move on. So it looks like we
- 22 have a wide range of perspectives, a little bit of

- 1 everything except no one here has not undergone any
- 2 treatments, and I think that that is important to
- 3 acknowledge, that the discussion here today may not be
- 4 fully representative of the whole population, so
- 5 especially for those of you on the web or for the 6advocates or when you talk to your peers to submit to
- 7 the docket those perspectives.
- 8 Okay. And on the web, can we just know what
- 9 the common was? Or were they all generally mentioned?
- 10 MS. FURIA-HELMS: All very similar in
- 11 response with the most being chemotherapy.
- DR. EGGERS: Okay. So we want to talk about
- 13 some of those, and I'll turn to my colleagues at some
- 14 point to make sure that we've covered sort of the major
- 15 benefits you see and the downsides you see of these
- 16 treatments. And I suppose we'll take each one in turn.
- 17 Let's start with chemotherapy, understanding
- 18 that we talked a lot about this in the first
- 19 discussion, so if there is something -- we don't need
- 20 to elaborate on specific things from that, but maybe if
- 21 you think about these treatments that you're on, what
- 22 might be surprising to FDA to know about that you see

112 as a benefit of a particular treatment? And it can be not just how effective that treatment is, but other aspects of the treatment that you think are very beneficial, and similarly the downsides. So with chemotherapy, is there anything that anyone would like 5 to highlight as the real -- a benefit or a good thing 6 about the chemotherapy generally speaking? 7 8 Yes? 9 MS. SKAMBIS: Well, I mean, the obvious benefit of chemotherapy is it keeps the cancer from 10 11 recurring or it shrinks the tumor, so you have to mention that. 12 13 DR. EGGERS: Point taken. 14 Let's move on to --15 Yes, go ahead, Karen. 16 DR. ARSCOTT: I would just like to comment. 17 So the chemotherapy -- and, again, I had a significant 18 amount -- in my research and what I believed was 19 drinking a lot of water -- and even though I was 20 nauseous, so whenever I wasn't nauseous, which wasn't 21 often, I would just drink as much water as I could, and 22 so although I had two platin agents, I never bumped my

- 1 BUN and creatinine, and I think that that had a lot to
- 2 do with the fact that I didn't maybe have as much
- 3 trouble with -- even though I had very significant
- 4 chemotherapy, I didn't have -- and it's impressed upon
- 5 patients as much.
- 6 I talk to a lot of patients about making sure
- 7 that they drink water whenever they're not sick, and I
- 8 think that that's something that should be brought out,
  9 that I think that it's very, very important, and that
- 10 tea and coffee and soda and such is not the same, and
- 11 that we really should be asking our patients to drink a
- 12 lot more water when they're getting these very toxic
- 13 agents.
- 14 DR. EGGERS: Okay. Are there any downsides
- 15 to the treatment that haven't been mentioned that you
- 16 think might be surprising to FDA about chemo that you
- 17 want to highlight here?
- 18 Yeah, Montessa?
- 19 MS. LEE: I know they probably know this, but
- 20 cisplatin, the hearing loss, because I had terrible
- 21 ringing in my ears, and they actually had to switch me
- 22 to carboplatinum because of the -- and I still have

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   some ringing in my ears at times from the cisplatin.
              DR. EGGERS: Is the ringing in the ears -- we
   didn't mention that as a symptom -- if you feel
   comfortable raising your hand, has anyone experienced
   that as well?
 6
               (Show of hands.)
              DR. EGGERS: Okay. Oh, I'm sorry, Denise.
             MS. HOGAN: I don't have the ringing in my
9
   ears, but I have lost hearing.
10
              DR. EGGERS: Hearing, okay.
11
             MS. HOGAN: Yeah. And I wasn't aware of it
   until just recently.
12
              DR. EGGERS: Anything else about the
13
   downsides or about chemotherapy that you want to
15
   highlight?
16
               (No audible response.)
17
              DR. EGGERS: My colleagues, do you have any
    specific questions about that?
19
              Yeah, Shakun.
20
              DR. MALIK: No, I don't have a question, I
21
   just wanted to follow up a comment on Karen. She had
   raised the question that, you know, I don't know
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- 1 whether I should have mentioned the targeted therapies
- 2 or not, and that there has been nothing done about it,
- 3 I just wanted to mention that there is going to be NCI-
- 4 driven protocols where they are going to actually
  - 5 patients who have had resected lung cancer and will be
- 6 checked with a targeted -- if they have targeted -- you
- 7 know, abnormalities, then they will be given a
- 8 maintenance therapy, so that is coming.
  - 9 I also wanted to mention that, again on your
- 10 comment, is that there had been a long delay in the
- 11 research for lung cancer, and that delay has been
- 12 because of the stigma that has been attached to it for
- 13 many years. There was really decades nothing going on
- 14 in the research, and we don't have survivors, so we did
- 15 not have any going to the Hill and asking for research
- 16 money.
- 17 And then I started working for lung cancer
- 18 patients. I remember that a few years ago that even my
- 19 colleagues would say, "Well, we don't feel sorry for
- 20 your patients because they did it to themselves, " but
- 21 it really took a while for people to realize that there
- 22 are 20 percent of the patients who have never smoked,

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1 and as you mentioned, more than 60 percent have quit

- 2 smoking and they develop lung cancer.
  - 3 So, again, I am very happy and we are all
- 4 from FDA very happy that now that we do have research
- 5 going on and we do have a lot of focus on lung cancer,
- 6 so what your question is that it will be hopefully
- 7 shortly answered.
- B DR. EGGERS: Yes, Lorren.
- 9 MS. SANDT: One perspective from one of the
- 10 patients was that she had gone through two rounds of
- 11 chemo before her mutation changed and she finally got
- 12 that genetic test that made a difference, and now she's
- 13 completely clear after Stage IV, so the genetic testing
- 14 is really important, that it maybe happens before
- 15 people go through all those rounds of chemo and make
- 16 that happen, although the cost of that is for future
- 17 discussion.
- DR. EGGERS: The cost will be outside the
- 19 scope of our discussion today.
- 20 Let's talk about the targeted therapies and
- 21 see if you want to comment on your thoughts, your
- 22 experiences, perspectives, on those for those of you

117 who have tried those. We heard some from the panel, but I know others out here have done that. Do you want to raise any what you've seen as maybe less obvious of the benefits of those targeted therapies for you? MS. WARMERDAM: I would say probably the 5 biggest benefit is that the side effects probably 6 aren't as bad as traditional chemo except that there is no end date. We're on targeted chemotherapy every day basically for the remainder of our lives or until we stop responding to that drug. So it's not where 10 11 chemotherapy ends and then our energy comes back and we don't have diarrhea anymore, you know. 12 So I just wanted to point that out. I don't know how many people 13 realize that it's an ongoing treatment. 15 DR. EGGERS: Thank you. Thank you, Susan. 16 Anyone else want to make any comments about 17 the targeted therapies? 18 (No audible response.) 19 DR. EGGERS: Okay. Any follow-up questions? 20 (No audible response.) 21 DR. EGGERS: Okay. Let's take anything about treatments because I want to make sure we get on to

118 Anything about treatments that you would other topics. like to say? So we have Kathleen and then over there. MS. SKAMBIS: Myself and the people that I represent, several of them have said that they would --6 decisions about what kind of treatments that you're 7 going to make change depending on how the treatment affects you, depending on whether it's functional and whether it's shrinking the tumors, and that has happened not so much with these people who responded 10 11 but people who we have known who have lost their struggle. And various people, the side effects differ, 12 even with the same chemotherapies. Some people will 13 have horrible neuropathy, and some people won't have 15 any neuropathy, and the fatigue, and that all varies. 16 And one of the things they wonder and one of 17 the things we all think would be beneficial is in 18 addition to typing the tumor, is it so that you know 19 how the particular tumor is going to respond to the 20 chemotherapy agent, is it possible to get other genetic 21 information so that you have a better idea of what the

side effects are going to be for these various

- 1 chemotherapies so that you can make a decision before
- 2 you suffer some of these horrible side effects? And
- 3 that is a focus of research and a focus of medication
- 4 that people would very much like to see.
- 5 DR. EGGERS: Okay. And can you state your
- 6 name?
- because I've forgotten it.
- 8 MS. ADKINS: Thank you. It's Donna. And I 9 would like to address the surgery to remove the tumors.
- 10 In our case, our daughter that was 26, because doctors
- 11 were not educated and because of her young age of being
- 12 diagnosed, they were taking her lung. Because I am
- 13 adamant about getting second opinions and we got that
- 14 from Mayo Clinic, her lung was saved, and they removed
- 15 just the tumor. Her outcome of life at age 26 is very
- 16 different with them just removing the tumor, while she
- 17 has chronic pain and other issues, versus what her
- 18 outcome would have been if they would have taken her
- 19 entire right lung.
- 20 And so I think the type of surgery and
- 21 education and not again looking at the fact that
- 22 because she was not a smoker and because she was so

- 1 young that this was not a possibility for her.
  - 2 Education and just understanding that this disease is
- 3 hitting more and more young people every day. She has
- 4 met online through chats several other women who at the
- 5 same age have this same diagnosis with no explanation.
- 6 There is not a precursor for her having an atypical
- 7 type of cancer. She didn't smoke, she wasn't around
- 8 any chemicals, there is nothing there. And so I think
- 9 doctor education and also patient education to
- 10 understand what is right for the patient when it comes
- 11 to the surgery and removal of the tumor.
- DR. EGGERS: Thank you, Donna. We'll be
- 13 getting into more of the considerations on decision
- 14 making, so you'll have plenty of time to do that.
- 15 Andrea, do you have something about
- 16 treatment?
- 17 MS. FERRIS: Andrea Ferris from Longevity
- 18 Foundation. So I'm here both as a patient advocate but
- 19 also as a caregiver. My mother passed away 5 years ago
- 20 from lung cancer, and her treatment decisions were
- 21 largely driven by the doctor, but she did participate
- 22 in clinical trials. And I think John mentioned, and,

- 1 Stephanie, you did as well, many of our members that we
- 2 represent similar to yourselves have very, very similar 3 stories, where they're willing to undergo anything to
- 4 make it to that next treatment.
  - I was having a dialogue during the break. I 6think that this has somewhat changed since crizotinib
- 7 has been approved because you do see people who have
  - 8 been through multiple lines of therapy and then all of
  - 9 a sudden they were tested for a mutation and now their
- 10 lives have transformed. So this has inspired people
- 11 who are undergoing treatments and survivors to hang on
- 12 until that next one because they, too, might have that
- 13 mutation or that gene, and so I think that the tradeoff
- 14 between what you're willing to endure in order to reach
- 15 that silver bullet, that dynamic has changed in recent
- 16 years, and so just take that into consideration as well
- 17 when doing the whole risk-benefit tradeoffs of what
- 18 really is a benefit and what really is a risk.
- 19 The other thing with what is the clinical
- 20 trial paradigm. You know, many people talk about you
- 21 can't enroll patients in clinical trials. Well, when
- 22 85 percent of your patients are diagnosed Stage IV with

- 1 brain mets, you know, metastases, they don't qualify.
- 2 So how can we change? because there is great medicine 3 going on out there. I mean, we've seen now 12 known 4 mutations have drugable targets if you have one of
- 5 them, and if you don't have a mutation, there are 6immunotherapies coming out. There is a lot of great
- 7 science out there for lung cancer that didn't exist 5 8 years ago, but how can we get more patients to have 9 access to that? And is there a way of changing the
- 10 clinical trials -- and this might be a topic for
- 11 different discussion -- such that you can enroll high-
- 12 risk patients in a satellite trial that doesn't
- 13 influence the registration trial so that industry is
- 14 more apt to allow these patients onto the clinical
- 15 trial as well?
- DR. EGGERS: Pat, would you like to follow
- 17 up?
- DR. KEEGAN: So I do want to clarify. Often
- 19 the very early trials try and get a homogenous
- 20 population of patients just so they can do the right
- 21 dose-finding studies and determine that, but beyond
- 22 that, there really is no restriction other than that

- 1 which are necessary to be able to address the question.
- 2 So we actually do have trials ongoing with patients
- 3 with brain metastases, and I think that there is really
- 4 no barrier to that other than the barrier of what the 5drug developer might want to do. So there is not any
- 6 regulatory barrier to that.
- 7 MS. FERRIS: Then it's a practice because
- 8 that's very different than many of our constituents are
- 9 faced with, where they're told repeatedly they're not
- 10 eligible. So I think it's a different --
- DR. KEEGAN: No, no, they may not be eligible
- 12 for a particular trial, but that is not because of a
- 13 regulatory barrier, and it may be an educational effort
- 14 that needs to be undertaken. There is no reason why
- 15 those patients can't be studied. I think there is a
- 16 lot more openness, particularly now as we get to some
- 17 of the targeted therapies that we know -- cross blood-
- 18 brain barrier and other places -- to do that. So
- 19 that's not really an issue.
- I also wanted to bring up -- and I don't know
- 21 if he's -- oh, Diko is still here -- that the issue
- 22 about differences in toxicity and side effects and

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1things like that, you know, that there is a focus on

- 2 evaluating patients and how patients handle and 3 metabolize drugs in order to determine whether or not 4 there are optimal ways of dosing them to avoid side
- 5 effects if possible. And there is also a lot of 6 information on drug interactions, which are probably
- 7 even a bigger issue for when patients are exposed to a 8 higher dose than necessary. But one of the things is 9 whether or not people are paying attention to those
- 10 efforts as we try and describe that in product
- 11 labeling.
- 12 So maybe one of the issues that could be
- 13 brought in to the document -- to the docket, rather, on
- 14 this is, to what extent do we need better educational
- 15 efforts to talk to prescribers about looking at those
- 16 aspects of product labeling to make sure that they're
- 17 using drugs optimally? And is there a need to look
- 18 into that to educate further on that so that optimum
- 19 dosing is provided for patients? because I think that
- 20 may be helpful as well.
- DR. EGGERS: Thank you, Pat.
- I can see that the conversation is going

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- 1 quickly into the decision making aspects of it, and 2 that is important. It's important for FDA, and I can
- 3 see that it is very important for you. So I'm going to 4 keep us going and move on so we can get to that topic
- 5 because we have to do these polling questions in order, 6so I have to ask the next one. It's a very important
  - 8 So save your comment, Susan, and we'll come
- 9 back to it.

7 question.

- 10 So we talked about treatments. I think we
- 11 got a lot about the specific good and bad of the
- 12 treatments.
- One thing we wanted to know was -- if we can
- 14 go to the next polling question -- besides your cancer
- 15 treatments, we wanted to just get a sense for what
- 16 other therapies you have taken or are currently taking
- 17 to manage any symptoms that you experience because of
- 18 your lung cancer or because of your lung cancer
- 19 medications: pain medications, steroids, supplemental
- 20 oxygen, breathing exercise or relaxation techniques,
- 21 dietary supplements or other diet changes,
- 22 complementary or alternative therapies, something else

126 1 that's not mentioned, or you're not doing anything to treat symptoms. And for those of you who had more 3 symptoms in the past, think about what you did in the past. (Answering question.) DR. EGGERS: And while you're thinking about 7 this, to foreshadow, we'll highlight just a few of the most important ones, but we would like to know 9 generally, are these therapies helping your symptoms? Are they addressing the symptoms? And then we'll follow up with a question about what symptoms are still remaining that are most significant that you would like 12 13 to see in your experience better managed for yourself. So with that, we'll move on to the results of 14 15 this. It looks like that there is again a wide range, lots of things being taken, particularly pain 17 medications, steroids, breathing techniques, the 18 dietary supplements, and the complementary medicines as 19 well. 20 And on the web, do we have generally the 21 same? different? 22

- 1 MS. FURIA-HELMS: The two top that are neck-
- 2 and- neck is breathing and relaxation and dietary
- 3 supplements, and then following pain medications.
- DR. EGGERS: Okay. So I think we're hearing 5 about a lot of nondrug therapies being tried here.
- 6 Would anyone like to highlight something that hasn't 7been yet mentioned that is really working for them?
- 8 We've talked about water, we've talked about getting
- 9 the rest. Anything else that's really working?
- 10 DR. ARSCOTT: I would just like to comment on
- 11 after my surgery, my second surgery, at that point I
- 12 had read about yoga, and I knew a yoga instructor, who
- 13 -- it was a gentle yoga, not like hot serious yoga, but
- 14 like a gentle yoga. And yoga improves pulmonary
- 15 function, and so I did yoga -- I started yoga three
- 16 weeks postop and did it until I was able to do it on my
- 17 own, and I think that's a beneficial thing for people
- 18 who are undergoing any kind of pulmonary issues. We
- 19 know that yoga improves pulmonary function, but you
- 20 have to be careful that you go to the right yoga
- 21 instructor and that it's someone that you can trust.
- 22 Maybe talk to a lot of different people, but it is

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1	good.	
2	DR. EGGERS: Thank you, Karen. Anyone else?	
3	Lorren?	
4	MS. SANDT: So one patient, the first time	
5	they went through chemo, they did acupuncture after	
6	their chemo, and then the next time around they did it	
7	before their chemo, and they noticed a huge difference	
8	in side effects and how they felt going through	
9	chemotherapy when they did their acupuncture right	
10	before their shot versus after.	
11	DR. EGGERS: And that's for pain management.	
12	MS. SANDT: All of her side effects were	
13	improved.	
14	DR. EGGERS: Anyone else?	
15	Yes, Denise.	
16	MS. HOGAN: I think it's a mind-body	
17	connection. I think I may be in a "Pollyanna" state by	
18	saying I don't have cancer, I'm not going to have	
19	cancer. I think it helps. I also think just the	
20	basics, you know, getting rest, eating properly,	
21	exercise, and just not giving in I've learned to say	
22	no, which has been very hard for me. It's really	

129 taking care of yourself. It's not being selfish, you're taking care of yourself, and people appreciate you more once you do that. DR. EGGERS: Thank you, Denise. 5 Oh, yes, Marie. MS. SMITH: I'm Karen's mother, and I see 6 something that's missing: positive attitude in just 7 8 being happy, as happy as you can be. We're living today, and we're going to get better because she had a 10 positive attitude and worked hard. So I think that's 11 one of the good things. 12 DR. EGGERS: Thank you, Marie. So let's talk about then the symptoms that 13 remain that aren't being addressed as well as you would 15 like in your experience. And on the web, I'm going to 16 put a call out for this, too, if you would like to 17 answer this question, we'll try to summarize this after 18 the public comment period. Is there anything that 19 still remains that you wish you could, in your experience, have had better managed? 20 21 Karen. DR. ARSCOTT: So, yeah, I have a symptom that 22

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1 I still have now that's really a little frustrating to 2me, and I believe it's due to the radiation. I have 3 excessive mucous, and it's produced predominantly if 4 I'm exposed to cigarette smoke, so I have to hold my 5 breath if I'm near smokers, but it's really -- so I was 6 doing a medical mission in Haiti, and there were some other people there, and one of them was smoking outside the sleeping quarters, and in the middle of the night I 9 woke up feeling like I was going to drown. And so I have spoken to my radiation oncologist and different 10 11 people about treatment for this, and he said I could use a steroid inhaler, but it probably really -- and I 12 tried it and it didn't help. 13 14 And so I'm five and a half years out, and I still have this, and people who are around me know that 15 16 if I'm exposed to it, I feel like I can't breathe, I 17 just like literally feel like I'm drowning in mucous, 18 and there doesn't seem to be anything for that. So I'm 19 kind of learning to live with that, but it is a problem that I've talked to other people and they have a 20 21 similar symptom. 22 DR. EGGERS: Okay. Thank you. Anyone else?

131 1 Yes. Go ahead, Sheila. Yeah, I just thought of this, and MS. ROSS: I had forgotten about it, but on the two surgeries I had, they were both on my right side, and they were the same incision, the same everything, the same doctor, 6the same hospital, it was really kind of bizarre, but on both occasions -- and with this surgery, you're like this -- (Indicating.) -- during the three- or four-hour 9 surgery, and on both occasions no one thought to say, you know, your shoulder is going to hurt, and a steroid 10 11 shot will really help. And it was just this old doctor 12 who I happened to meet at a party, actually, and I told him I just couldn't get rid of this pain in my 13 shoulder, he said, "All you need is a steroid shot," 15 and it was like a miracle. So anyone going out for 16 surgery, please tell them to give you a steroid shot 17 afterwards. 18 DR. EGGERS: I see a lot of laughs and head 19 nods. Is this the experience shared by others? 20 (No audible response.) 21 DR. EGGERS: Okay. Anyone want to talk about something that's not being addressed?

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1	(No audible response.)	
2	DR. EGGERS: My colleagues, before we move on	
3	to the considerations on decision making, anything	
4	about these symptomatic treatments that you want to	
5	ask?	
6	DR. BLUMENTHAL: I had a question about	
7	specifically the steroids. Do you ever feel like the	
8	dose of steroids is too high and you would like to	
9	titrate that dose down?	
10	DR. EGGERS: Okay. Lorren, do you want to	
11	explain?	
12	MS. SANDT: Well, it's not much of an	
13	explanation, but, to a T, it was I hate steroids.	
14	DR. EGGERS: Kathleen.	
15	MS. SKAMBIS: Well, and I'll have the	
16	counterpoint to that, which was I don't know if they	
17	could have been lower, and I did have side effects from	
18	them, but I know I, too, threw the kitchen sink with	
19	chemotherapy at my cancer, and they helped me	
20	tremendously with some of the other side effects.	
21	DR. EGGERS: All right. Let's move on to	
22	talk about focusing on that decision making. We've	

- 1 alluded to many points, and we'll be revisiting those.
- 2 So we want to hear your perspective and experience with
  - 3 regard to your decisions, and we heard such courageous
- 4 decisions explained up here. So I'm going to pose a
- 5 general question about when thinking about your -- you
- 6 know what? I'm going to stop there. I'm going to go to
- 7 the polling question because I think we'll get to hear
- 8 all the factors at once, and then we can address this
- 9 tradeoffs question.
- 10 So on the web and in here, this is a very
- 11 important question. There are many factors that go
- 12 into the decision, and we put six up here that FDA is
- 13 particularly interested in understanding how they
- 14 factor into your decisions, so of the following
- 15 factors, which two would you rank as most important to
- 16 your decisions about using treatments to help reduce or
- 17 control the spread of your lung cancer? And as you
- 18 think about it, you've made many decisions and you will
- 19 make future decisions, so you can think about this sort
- 20 of generally as the two factors that would or have or
- 21 are factoring most into your decisions: whether the
- 22 treatment is expected to help relieve the symptoms that

- 1 you experience; whether there is a small but
- 2 significant risk of serious side effects, such as blood
- 3 clots or kidney failure that could lead to
- 4 hospitalization or even death; how long the treatment
- 5 would probably prolong my life, so there we're talking
- 6 about what's expected to happen; how long a treatment
- 7 could possibly prolong my life, so for longer than
- 8 expected; what are the expected side effects of the
- 9 treatment, such as nausea, loss of appetite, et cetera;
- 10 and all sorts of things about how the treatment is
- 11 administered, such as how long the treatment takes, if
- 12 you have to take it for the rest of your life or
- 13 whether it requires hospitalization, doctor visits, et
- 14 cetera.
- 15 (Answering question.)
- DR. EGGERS: I know this is a hard question
- 17 to throw at you. There is no right or wrong answer,
- 18 it's just for discussion purposes.
- 19 All right, so let's go on. How long the
- 20 treatment would probably prolong my life is the most
- 21 raised thing, although they were all mentioned except
- 22 how the treatment is administered and the small but

135 significant risks of serious side effects. Can I ask, Andrea, on the phone what the most common ones were? MS. FURIA-HELMS: The two most common that were equal was how long the treatment would probably 5 prolong my life and how long the treatment could possibly prolong my life for longer than expected. 7 8 DR. EGGERS: Okay. All right. And so we'll keep this in mind. I have a -- Chad, if we go to the 10 next question, will we be able to come back to this one and look at the answers? 11 12 CHAD: (Off mic.) DR. EGGERS: Okay, so we can go back and look 13 at the answers. 15 So then let's ask the next question just so we have the full context. And of those same factors, 17 which one would you rank as least important to your 18 decision about using treatments to help reduce or 19 control the spread of your cancer? 20 Yes, Kathleen. 21 MS. SKAMBIS: Since nobody picked 6, do you want to eliminate 6?

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1	DR. EGGERS: To eliminate well, we have to	
2	leave it so you can just how the treatment is	
3	DR. MALIK: Can I reword this Number 6?	
4	DR. EGGERS: Yes.	
5	DR. MALIK: So instead of saying how long the	
6	treatment is, I would also ask the question whether	
7	it's oral or IV. Will that make a difference? Or	
8	going to the doctor every three weeks to get the IV	
9	treatment versus taking a pill and going home and	
10	coming and seeing the doctor once a month or something	
11	like that. Just keep that in mind when you are	
12	answering that question.	
13	DR. EGGERS: Okay. So let's leave the	
14	question as is, but then we can come back and talk	
15	about what the next one would be for you if that one is	
16	your least important.	
17	(Answering question.)	
18	DR. EGGERS: Okay, we're still getting some	
19	responses. Okay, I think that's the same number we had	
20	last time.	
21	So overwhelmingly Number 6, how the treatment	
22	is administered, although we do have some indication	

137 that the other ones are taken into account, whether the treatment is expected to help relieve symptoms, the risk of side effects -- I'm sorry, the risk of serious side effects, and those expected side effects, the more common ones. 5 Okay. And on the web, Andrea? 6 MS. FURIA-HELMS: Very similar. 8 DR. EGGERS: Okay. All right. 9 So let's go back to those most important ones. We don't need to come back to this finding, but 10 11 can we go back to the previous one? Okay, it doesn't give the findings. 12 There we go. This is all new technology that we're trying out here. 13 14 So does anyone want to explain their 15 response? 16 Yes. MS. SKAMBIS: I'll just say on the forms that 17 I got back, the questions that people answered, they 18 19 did address that they would want to know what the very serious but small likelihood side effects would be, but 20 21 overwhelmingly it had to do with prolonging life or 22 shrinking the tumor, which were kind of equated.

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DR. EGGERS: And was there anything specific 1 about their situation that you would attribute that to, any factors that went most into that judgment? MS. SKAMBIS: It was young people and older people, so, no, but you've mentioned that our experiences in this room are not necessarily reflective 7 of all lung cancer patients, and I think that's true, but I think it's true in large part for the reasons that Marie said, which is most of the people who are 10 participating here and who are in contact with us as 11 survivors or as support personnel are people who do 12 have a good attitude, you know, who do have hope, and so in that sense, it is a nonrepresentative sample. 13 14 DR. EGGERS: Okay. Then I'm not going to ask 15 the question now, but I'm going to seed it in the minds 16 of the advocates to think about as you think about the 17 people who aren't here today, how their experiences 18 might be different. So I'm going to call on the 19 advocates in the room as we go through the remainder of this discussion, and if you can try to pull in and give 20 21 that other perspective of voice as well, the other 22 experiences.

139 What about the tradeoff, any more about the 1 tradeoff, between the importance of prolonging life versus making it as comfortable as possible? MS. SANDT: So with the patients that I talked to, two were very young, one had children, one 5 didn't, and one was older, and really it was about the 6 young lady with children, it was just, "Keep me alive to see my grandchildren," that was her whole goal. She didn't care about anything else, just, "Keep me alive." She could deal with all the side effects, she didn't 10 11 care. 12 DR. EGGERS: Amy? MS. COPELAND: Just to give the perspective 13 of another advocate who we worked with for a long time 15 who unfortunately passed away earlier this year, when 16 she was dealing with her second recurrence, she had 17 surgery her first case of lung cancer, surgery a second 18 time, was going through chemotherapy, third time she 19 was unable to go through surgery again because of invasion of the chest wall, but it was still fairly 20 21 localized, it hadn't spread anywhere else in her body, but she got to the point where the chemotherapy drug 22

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that she was taking was so debilitating that she 2 couldn't get out of bed, she was in so much pain, she couldn't walk, and she and her husband had plans to go on a cruise about a month or two later. So she actually made the choice to go off treatment and go into hospice because her quality of life was so bad that she wasn't 6 7 even going to be able to go on this cruise with her husband, and she came to us at Lung Cancer Alliance and she kind of said, "Is that a bad decision?" and she 10 really questioned that decision because there is so 11 much pressure to do whatever it takes, and she was making this choice because of quality of life, and we 12 reassured her that it was she felt was best for her was 13 the important thing. 15 And the good news is she and her husband --16 she was well enough to go on that cruise, and she and 17 her husband had the most amazing time, and we got to 18 hear about it, but it was really difficult for her to

DR. EGGERS: Thank you very much, Amy.

living, so she had to make that choice.

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make that decision, she had gone through so much, but

she literally could not get out of bed, and she wasn't

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And I'm going to ask Denise also to think 1 2 about this because there is a point that's being made 3 about where maybe the factors were one way before the decision about treatment was made, and those factors shifted while you were on treatment or after you experienced treatment. And Denise raised it and now Amy 7 is raising it. Would anyone else like to follow up on 8 that and share an experience of themselves or someone else who had a similar experience where they discovered that their priorities might be shifting? 10 MS. SKAMBIS: There was another women in our 11 12 group, and I think who was super optimistic, much like the person just described, and did a number of 13 treatments and was determined to beat it, and at some 15 point it wasn't really working, and even though she 16 could have kept trying different treatments, she really 17 lost hope, and I think at some point even the most 18 optimistic among us have faced some sort of reality 19 that tells you -- and when you know that ultimately 20 you're not going to be cured, her decision was to 21 forego treatment as well, and then she gathered her 22 family and went to the beach, and she had a wonderful,

- 1 wonderful last month of life.
- And so, yeah, I think that decisions do

  3 change. And most people who filled out this form and
- 4 said, "Prolonging life is the most important said, but
- 5 then again, I have symptoms I can manage; if I didn't,
- 6 my choice might be different."
- MS. WARMERDAM: Yeah, and I'll kind of 8 piggyback on that a little bit, too, because being on 9 Tarceva, I live a pretty comfortable life right now,
- 10 but I would be willing to be more uncomfortable to
- 11 prolong my life, but it's easy to say. I feel good.
- 12 Until I don't feel good anymore, and then, yeah, maybe
- 13 then my priorities would change, my decisions would
- 14 change.
- DR. EGGERS: Go ahead, Donna.
- MS. ADKINS: I just wanted to bring a point
- 17 that hasn't been said, and that's the patient's
- 18 pressure from family members. I had a friend that died
- 19 5 weeks after diagnosis at age 74. Her children all
- 20 lived out of state, so I took care of her, they came.
- 21 She knew that she was dying, that they didn't catch it
- 22 in time, but yet she still undergone chemotherapy and

- 1 actually had a treatment two days prior to her death
- 2 because she didn't want to disappoint the children, and
- 3 the children wouldn't let her make that decision to
- 4 stop treatment and have a quality of life, and this is
- 5 a woman who volunteered for the American Cancer Society
  - 6 for over 15 years and was a hospice volunteer, so she
  - 7 understood quality versus quantity of life, and she so
  - 8 wanted to stop the treatments, but felt pressured from
- 9 her family not to stop the treatments.
- DR. EGGERS: Thank you, Donna.
- 11 Anyone else?
- 12 Yes, go ahead, Denise. And then we'll go to
- 13 Shelley.
- 14 MS. HOGAN: It does depend on a lot of
- 15 things. My children are in their forties; my
- 16 grandchildren are teenagers. So quality of life, you
- 17 know, I don't have to worry about taking care of
- 18 children anymore. I had the chemo as precaution. They
- 19 told me I had no more cancer, so I was having an
- 20 extremely difficult time taking chemo when I didn't
- 21 have cancer anymore. So it might be different if I had
- 22 cancer and that was the only cure, but I still believe

- 1 in the quality of life and extending someone's life so
- 2 they can lay in bed is not something I would choose.
- 3 DR. EGGERS: Shelley?
- 4 MS. FULD NASSO: I think a couple of the
- 5 points that were raised go to the importance of having
- 6 supportive care along with active treatment, you know,
- 7 from the beginning, and the study by Jennifer Temel and
- 8 others a couple of years ago that showed with Stage IV 9lung cancer patients that having the supportive care,
- 10 while it doesn't mean deciding I'm giving up and I'm
- 11 not going to try to beat this, it was offered alongside
- 12 the active treatment, and it both extended life and
- 13 reduced some of the symptoms and improved the quality
- 14 of life.
- I think, though, to your point, you may have
- 16 this resolved, that I'm going to do whatever I can, but
- 17 at a certain point that calculation may change and
- 18 you've had enough, and I think it's tough when a
- 19 patient doesn't feel comfortable saying to their
- 20 family, "I've had enough and I'm okay, I know what's
- 21 happening, and I'm okay with it," and I think that
- 22 happens too often where patients are having toxic

- 1 treatments in the last few weeks of their life because
- 2 they didn't have that supportive care and that help in
- 3 the decision-making process to understand when to
- 4 transition to more of just a palliative care. And that
- 5 happened, my best friend died last year of kidney
- 6 cancer, and 10 days before he died he said to his
- 7 oncologist -- and he was a physician himself, so he
- 8 understood -- he said to his oncologist, "I think it's
- 9 time for hospice," and his oncologist said, "Well, I've
- 10 never had a patient throw in the towel after just one
- 11 line of therapy," and the man was obviously -- he was
- 12 in the hospital very, very sick and obviously dying,
- 13 and he didn't even get the support from his oncologist
- 14 that it was okay. So he did go, he had a scan a couple
- 15 days later that showed how extensive the cancer was,
- 16 and he went home, and had about a week at home in
- 17 hospice, but he could have had a much more comfortable
- 18 last few months of his life if he had better supportive
- 19 care.
- DR. EGGERS: Thank you.
- 21 From my FDA colleagues, anything about these
- 22 factors that you want to know more about their

146 thinking? (No audible response.) DR. EGGERS: Okay. Let's talk about the one -- so how treatment is administered was the least 5 raised. Is there something else on this list of the 1 through 6 that if you picked that one as the least, 7 what would be your second least? Or for those of you 8 who didn't pick the administration as your least and 9 you want to explain why one of the other factors -- I 10 don't think we get to go back to it now -- but why one 11 of the other factors on this list was not as important 12 to you? MS. FULD NASSO: I would say that I think 13 that how treatment is administered -- I mean, I think 15 people are willing to do whatever it takes, but if we had treatments that were a little easier to administer, 17 and especially I think in the case of my father-in-law, who I said lives in a rural area, and getting to treatment would be very challenging for him. If he had 20 the option of an oral medicine that he could take from 21 home, he might be more likely to consider it. So I do think it would be a factor for him, but I think because

147 there are a lot of factors at play, I think part of it is your proximity to a medical center where you can get the treatment that you need. DR. EGGERS: What about the small but 5 significant risk of serious side effects? Anyone want to comment on their thinking about that? 6 7 (No audible response.) DR. EGGERS: What about the difference between probably prolong my life versus possibly 10 prolong my life? Has anyone put -- was that a consideration to them, that difference between what's 11 I know we heard about it on a panel, between 12 what's expected and what possibly could happen and how 13 you thought about that? 15 (No audible response.) 16 DR. EGGERS: Okay. Then I think let's move 17 on unless anyone has anything else to say about these 18 factors in their decision making. We have a couple 19 scenarios that we would like to put up and explore, and this is how FDA thinks about these types of things. 20 21 Can we go on to the next slide? One more 22 slide.

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There are a couple of scenarios, and we're 1 2 just putting these up just to get your thoughts and 3 your reactions to these types of scenarios. We're not 4 looking for decisions to be made. But getting your thoughts will be helpful in getting your perspective as FDA thinks through these decisions. And so the first scenario is that there is a 7 It's a chemotherapy drug being developed for 9 patients with metastatic non-small cell lung cancer studied in a clinical trial comparing the standard of 10 care chemo plus Drug X versus just standard of care 11 And the clinical trial showed that the addition 12 of Drug X prolonged survival on average by 2 months. 13 The median survival was 12 months for Drug X plus standard of care versus 10 months on standard of care 15 16 alone. In addition to the toxicities related to the 17 standard of care chemo, patients treated with Drug X 18 had more diarrhea and rash and had more rare but 19 serious toxicities such as liver injury and lung 20 inflammation. 21 Is this a clear scenario? Are there any 22 questions about the scenario?

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1	(No audible response.)	
2	DR. EGGERS: Any first reactions, just things	
3	that come to mind as you see this, as you hear it?	
4	Lorren, I see you shaking your head. So can	
5	we	
6	MS. SANDT: Yeah. Two months longer with	
7	potentially rare or serious side effects? It's not	
8	enough of a tradeoff.	
9	DR. EGGERS: Anyone else want to follow on	
10	this?	
11	Yes.	
12	MS. PHANG: I just think that when my liver	
13	function went up on Tarceva, they dropped the dose	
14	down, so sometimes you can make a decision taking	
15	something and they can make an adjustment that you	
16	don't have to have it be so clear-cut.	
17	DR. EGGERS: Thank you, Ruth.	
18	Any other thoughts?	
19	Stephanie?	
20	MS. HANEY: Yes, but half the patients got	
21	more than that 2 months, so some of them might have	
22	gotten 3 years.	

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1	DR. EGGERS: Okay. Anyone want to follow up
2	on anything else?
3	Kathleen?
4	MS. SKAMBIS: I'm with Stephanie.
5	DR. EGGERS: Yeah. Okay. Do you want to
6	explain more about this? Any other thoughts about this
7	to expand upon that?
8	We'll let Diko ask a follow-up question.
9	DR. KAZANDJIAN: I'm sorry. So I just want
10	to add along with those patients that may have lived 3
11	years longer, some of those patients actually died of
12	liver failure and inflammatory lung disease, so
13	something just to keep in mind. And, of course, if you
14	don't have that, you're happy and you're glad that you
15	took the medicine, but if you had that side effect
16	and this was brought up a bunch of times we can't
17	predict that unfortunately.
18	DR. EGGERS: So what's your thinking about
19	all of this, about how these tradeoffs?
20	Kathleen.
21	MS. SKAMBIS: Well, and I could get hit by a
22	car crossing the street or I could choose to jump out

- 1 of an airplane because I think that's something that I
- 2 want to experience before I die, and my chute might not
- 3 open. I mean, there are those -- for me, if I'm
- 4 needing that extra 2 months of life for the hope of
- 5 another drug in the future or I'm thinking I'm going to
- 6 be in the smaller sample that's going to be longer, I
- 7 would look at the statistics, I would look at the
- 8 studies, but I would probably make that tradeoff.
- 9 DR. EGGERS: Andrea?
- 10 MS. FERRIS: I'm just going to piggyback off
- 11 of that. I think the thing, at least for a lot of our
- 12 constituents, is you're already facing a fatal disease
- 13 anyway, so you're going to die. It's not like you have
- 14 the option of living a healthy life but then you may
- 15 die of liver failure; your choice is dying of lung
- 16 cancer or liver failure or perhaps being in the 3-year
- 17 bucket.
- 18 DR. EGGERS: We have Karen. Well, first,
- 19 Karen, let's let Pat ask a follow-up, please.
- DR. KEEGAN: So actually, because the staff
- 21 worked this up, this is actually sort of a typical
- 22 situation for us, and one that usually would be thought

to be a positive scenario for Drug X, but I guess what

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- 2 might be helpful would be to know what would you want
  3 to know about the additional toxicity? I mean, that's
  4 the typical issue: you add another drug, you get a
  5 little bit more toxicity, but maybe you get a little
  6 bit more efficacy. But what things might you want to
  7 know about that toxicity? For instance, does it
  8 require you to be hospitalized? What about that might
  9 influence your decision? Because I think maybe, as
  10 presented, it isn't coming through. But are there
  11 certain things that we should be asking that are
  12 important to patients that might have changed, whether
- DR. EGGERS: We'll let Karen go first.

things should we be collecting?

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- DR. ARSCOTT: So I agree completely with
- 17 Andrea. So the thing is that, are you going to die of

you said, "Yeah, this is okay," and what of those

- 18 lung cancer or are you going to die of one of these
- 19 toxicities? You know, the thing is that you already
- 20 have something very serious. The chemotherapies, the
- 21 standard of care of chemotherapies, have very, very
- 22 serious side effects also. You could die from any one

153 of those. But here I was, I had a 14 percent 5-year survival, you know, 6 years ago, and so I looked at that and I just said, okay, I'm one of the 14 percent, you know, and that was my attitude. You know, I'm not one of the 86 percent, I'm going to be one of the 14 percent. Now, I'm fortunate that I was. 8 wouldn't have been, but to me, I look at it, there is no question to me that I would go for it because, 10 again, it's that positive attitude. 11 And, you know, you deal with what you're 12 given in life, and that I agree none of us are quaranteed tomorrow in any way, whether you have lung 13 cancer or not, and so, you know, now, if I was 93 years 15 old or 100 years old, maybe I would have a completely 16 different attitude, but where I am right now in my 17 life, I would say, "You know what? Hit me, you know, 18 give it to me, because maybe I'll be in that 1 percent 19 that gets 3 years without any side effects." 20 DR. EGGERS: Okay. Anyone want to follow up? And thinking also of Pat's question. 21 22 Stephanie, were you going to say something?

154 I was just going to say one of 1 MS. HANEY: the things I would want to know is, how will those risks be monitored? So if it's possible for liver injury, does that mean then I have blood tests for liver function, however? I mean, I'm sure some of those things you see coming, maybe some you don't, maybe some just occur and you're gone, but how is it 8 monitored? How would you know if one of those things was developing? 10 DR. EGGERS: Sheila? 11 MS. ROSS: Thank you. This is a great question because so many patients face this. It shows 12 the importance of having patient-friendly information 13 on the range of possibilities from taking this drug or 15 adding this drug to the regimen, and that information 16 is very hard to come by. Just your comment there about 17 the patients who had liver problems, as a side effect, 18 they died, I didn't know that, and I try to keep up 19 with all the information on these drugs. But it has to 20 be clearly spelled out. And the other missing piece of 21 information for late-stage lung cancer patients that's very important to them is, how much will it cost?

155 Because at this point they've drained their resources, their families' resources, they have to know. Who is going to tell them? Is that FDA's job to say how much it costs? I know you're going to say no. 5 Who is going to tell them? I mean, this is a difficult area. 6 7 DR. EGGERS: Andrea? MS. FERRIS: Just to follow on to the 8 question of, how will it be monitored? I guess another 9 key question would be, is it irreversible or is it 10 reversible if you stop treatment? And what does that 11 12 look like? Is it permanent damage or otherwise? MS. SKAMBIS: Well, and back to one of the 13 points I made earlier, is there any way to know given 15 my larger genetic makeup whether it's more likely to 16 work for me? 17 DR. EGGERS: Did you have your hand up? 18 UNIDENTIFIED FEMALE SPEAKER: No. 19 DR. EGGERS: Anyone else on this scenario? 20 (No audible response.) 21 DR. EGGERS: I'm going to see if my colleagues have -- we want to get to our public

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- comment, and I want to see first, do you have any other 2 follow-up questions about anything being asked today 3 about the factors or anything else that you want to make sure gets asked? And while they're seeing that, I'm going to make a point about the docket. The docket on our 7 website will be open for the next month, and we are looking into a way that we can get it to stay open for a following month, so until the end of August. 10 have some time to put your thoughts together, but we 11 really encourage you to contribute to the docket, especially if you're on the web and there are things, 12 or you are advocates and there are perspectives that 13 are really important to share that we haven't heard 15 today. 16 Pat. 17 DR. KEEGAN: That's what I was going to ask, that if there is anything after you leave the meeting 18 19 and then you say, "Oh, I really wish I brought this 20 up," if you could put it in the docket, then it will be

DR. EGGERS: Especially on the things that

available for us to review as you maybe think further.

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157 you think might be surprising or gray areas, things that FDA might not know about. Kathleen. 3 MS. SKAMBIS: I know there are people 5 listening to this who have no idea what a docket is. DR. EGGERS: What a docket. Okay, let me 6 explain. 7 8 Let's see if I can do it. Very fair point. The docket is, if you go on our website, there is going 9 10 to be a link, and that will take you to the docket, and what the docket is, it's a vehicle, it's a bucket that 11 you can submit -- anyone in the public can submit a 12 comment, a Word document, you can upload a Word 13 document, when you do that, it will be submitted to the 15 docket, as we call it, and it will come to FDA. 16 might also, depending on some factors about personal 17 information being conveyed, it might also be available 18 on the website for others to see. 19 So it's your chance to make a public 20 statement that FDA looks at and that others might also 21 be able to look at, and we will take all of those 22 comments when the public docket closes, when that

158 1 comment period closes, and we will incorporate those into our summary report here. MS. SKAMBIS: Question, which is, this 4 meeting has spurred a lot of interesting thought and 5 discussion. Is the recording of this meeting going to be available for other people maybe to listen to before they make their comments in the docket? DR. EGGERS: The slides will be up and the 9 webcast recording will be up. The slides will up, it takes maybe a day or two. The webcast recording will 10 take a little bit longer. Don't quote me, but it may 11 be a week or more for that webcast recording to be up. 12 And eventually the transcript of this meeting will be up. That takes a little bit longer, too. 15 We have Kim in the back. 16 Any other thoughts? Anything that is really 17 relevant to the topics that we're discussing about the 18 decision making that you would like to raise? 19 Susan? 20 KIM: Sara? 21 DR. EGGERS: Oh. I'm sorry. 22 KIM: Could I just ask a question about the

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Can people submit links to video testimony if they put a video on YouTube, can that URL be submitted for people who have a hard time putting things on paper? 5 DR. EGGERS: Yes, I believe they can. embed that link into your comments, either into the 6 Word document that you can upload or if you don't have very much to say, you just maybe have a link, you don't even have to upload a document, you can go right to the 10 webpage, and in the little comment box, I believe 11 that's there, you can make your comment and perhaps 12 upload your document. Thanks, Kim. 13 Susan. 14 MS. WARMERDAM: I don't know if this is an 15 appropriate time, I think it is, to bring up about 16 clinical trials that I didn't get to talk about on the 17 panel, but I entered into a clinical trial the same 18 time I started Tarceva, which was the only option for 19 me to enter into that trial, and, of course, I was 20 expecting it to be the miracle drug; unfortunately, it 21 was not. And I also found it interesting, too, my

doctor just told me last week that only 3 percent of

- 1 cancer patients are in clinical trials. Is that a
- 2 pretty accurate number?
- 3 (No audible response.)
- MS. WARMERDAM: Yeah? I was fortunate that 5the hospital where I'm being treated is just a short 6cab ride away from where I work, but I often wondered 7how I would have managed it if I needed to travel 8 further than that during a full-time workweek because 9 each appointment was several hours long and a lot of
- 10 times more than once a week. So besides the time
- 11 commitment, my biggest concern was the exposure, the
- 12 unnecessary extensive exposure, to radiation during
- 13 that trial, radiation that my doctor would not have
- 14 exposed me to had I not been on the trial.
- So I guess it's more of a question maybe.
- 16 Can the trials be more, quote/unquote, "personalized"
- 17 where maybe not everybody needs -- I was getting a CT
- 18 of the chest and a CT of the abdomen and pelvis every 6
- 19 weeks, and my doctor said that she didn't or wouldn't
- 20 have ordered the CT of the abdomen and pelvis, that it
- 21 was not necessary, and the CT of the abdomen and pelvis
- 22 is -- I don't know how many of you know this, I did

- 1 this in my research, it's like 20,000 millisieverts,
- 2 which is like getting 200 chest x-rays in a row every 6
- 3 weeks in addition to the radiation from the chest x-
- 4 ray. That put me at a calculation I found on the web,
- 5 I don't know if this is that accurate, but at a 94
- 6 percent chance of developing an additional cancer just
- 7 from that radiation from the clinical trial.
- 8 So a little bit of input even from my doctor
- 9 was about trials needing to be or having fewer
- 10 roadblocks, you know, for time commitment, maybe having
- 11 blood draws where they can get them closer to their
- 12 homes or having the follow-up appointments on the phone
- 13 rather than having to travel into the office.
- 14 And then also removing the blanket or the
- 15 restrictions that prevent every hospital to be able to
- 16 enter in any trial that they have qualified patients
- 17 for.
- But just going back a little bit, is that
- 19 possible to have a clinical trial that is more
- 20 personalized where your doctor maybe would have more
- 21 input if there was something that could be done
- 22 differently? Because not everybody is the same.

162 DR. KEEGAN: That's true that not everyone is 1 2 the same, and I think that there can be flexibility in discussions about a clinical trial, but the clinical trial is, not to be too crass about it, but essentially an experiment, and so in order to do it right, there has to be some level of standardization. So I think 7 probably what really needs to be done is a discussion of what's essential and what's not essential and working that through. So some things will be essential that it be standardized in order to be able to draw 10 some valid conclusions at the end. A lot of that is 11 12 driven by what the expectations and goals of the trial are, and other things are not as essential. 13 14 So I think we're constantly striving towards 15 what is nonessential, what could be addressed in a 16 different way, and I think that each trial, each set of 17 drugs, each condition, is going to be different in that 18 regard, and so it almost has to be done on a case-by-19 case basis looking at what the trial and the drugs are -- what questions they're asking, what are the 20 21 essential things that need to be done? So I think there is flexibility. 22

- 1 there is certainly flexibility on the Agency's part.
- 2 There can be flexibility on the part of commercial drug
- 3 manufacturers, although to some extent there is also a 4 little bit of rigidity because once they have a well-5 established system, they kind of like to continue it
- 6 on, you know, it decreases errors and things like that
- 7 if they continue it forward.
  - 8 So we have to work through those tensions, 9but certainly our goal, and I think even everybody's
- 10 goal, is that you only do what is necessary to answer
- 11 the questions, the important questions, and so I think
- 12 that's part of what we're asking, is always, what are
- 13 those important questions? You know, there are people
- 14 who would say in a large simple trial, all you really
- 15 need to know is who died and when they die, and then
- 16 you would have to do no studies, you know. But
- 17 oftentimes people don't think that's enough
- 18 information, and a lot of times in cancer people really
- 19 do want to know what's happening to their tumors as
- 20 well as how long they're living.
- 21 So it's that kind of tension, but there are
- 22 likely some issues of flexibility that can always be

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1	discussed in any clinical trial.	
2	DR. EGGERS: Thank you, Pat.	
3	MS. WARMERDAM: Thank you.	
4	DR. EGGERS: Oh, go ahead, Shakun.	
5	DR. MALIK: I just wanted to make a follow-up	
6	comment, is that with the targeted therapies, so more	
7	and more clinical trials in a way will be personalized,	
8	so people who have that specific target, so the trials	
	9 are being done for that population. I mean, the CAT	
10	scan thing Pat already discussed.	
11	But the other thing is that your point that,	
12	can these trials be done in all the hospitals? So I	
13	think not from all over the places including NCI has	
14	apportioned community-based clinical trials, so I think	
15	that we will be seeing more and more of the community-	
16	based, not just the academic-based, clinical trials.	
17	DR. EGGERS: So with that, I think we're	
18	going to have to close the facilitated discussion. Is	
19	it something do we have one really quick thing?	
20	MS. SANDT: Just really quickly, if a	
21	clinical trial is going to do testing for mutations,	
22	then the patients deserve that information. To hide	

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- 1 that from the patients, which has happened several
- 2 times, is completely unacceptable, to not tell them
- 3 what their mutation is.
- DR. MALIK: Yeah, I agree. I agree.
- 5 MS. SANDT: Thank you. Open Public Comment
- 6 DR. EGGERS: So I want to thank -- my portion

7 is almost done of the meeting. We're going to go into

- 8 an Open Public Comment in a minute, but I want to
- 9 sincerely thank, on behalf of my colleagues, your
- 10 discussion today and your continuing discussion in the
- 11 docket. After the public comment, we will see if there
- 12 are any comments on the web that haven't been raised.
- 13 So I thank you also on the web.
- 14 And with that, we're going to move into the
- 15 Open Public Comment period, and we're not going to use
- 16 timers or anything, and I think we'll just stay where
- 17 you are. So there are five people. If your comment has
- 18 already been made, you can decline to do the comment.
- 19 We just ask that you really stick to 3 minutes, and
- 20 I'll nudge you along if you go over 3 minutes, we don't
- 21 have to have any timers, and if you can, state if you
- 22 have any affiliation and you want to state that, please

166 do so as part of your comment. So we have in this order: Susan Warmerdam, James Phang, Kim McCleary, Raymond Powers, and Donna Adkins. 5 So we'll start with Susan. Do you still have a comment to make? 6 7 (No audible response.) 8 DR. EGGERS: Okay. 9 Because there aren't a lot of MS. WARMERDAM: treatments out there for me, I've kind of taken it upon 10 myself to do some other things within my control that I 11 feel -- and I guess that's the main thing, is I feel 12 that they're helping, whether that be helping my 13 cancer, helping my immune system, helping my attitude. 15 I mean, I've done everything from renewed my faith to 16 holistic practices, putting water filters on every sink 17 and shower head in my home, and air filters, and air 18 filtering plants, and electromagnetic field protectors, 19 I could go on and on, but I think most drastically what 20 I've changed that I feel has made the biggest difference is my diet. I've moved to a primarily plant-21 based diet with an occasional fish protein, and while I

167 realize you're not the part of the FDA, I just had a question, if any research you know of is being done in relationship to cancer and food, for example, like the safety and labeling of foods? DR. EGGERS: I'm not sure if my colleagues 5 will be able to answer that now, but it's on the public record, and if information can come out, if we can 7 8 address that, we will follow up with you directly. your question is out there on the public record. 10 Is there any other part of your comment? That's it. 11 MS. WARMERDAM: 12 DR. EGGERS: Thank you, Susan. We have James. James is here. 13 14 DR. PHANG: Thank you. I'm James Phang. 15 actually with the NCI and basic research, so it's been 16 a rather different perspective, and I think that -- and 17 also Ruth's situation was somewhat different because 18 the initial diagnosis was thyroid cancer, and in fact 19 it was only after the thyroidectomy that the tissue 20 reports, histology and special stains and so forth came back to say that this was a metastatic lesion from a 21 22 primary in the lung. And so you can see that we really

- 1 went through some rollercoaster responses in terms of
- 2 the options that were open to us from a follicular
- 3 initial diagnosis of follicular thyroid cancer, which
- 4 would be cured by thyroidectomy and then ablated
- 5 radioiodine therapy, to one of non-small cell lung
- 6 cancer. So it was quite a change.
- 7 And so our physician at the NCI, when she --
- 8 you know, very excitedly, both of us having a little
- 9 insomnia, e-mailed us at 4:00 a.m. to tell us that we
- 10 actually had the exon 19 deletion mutation, EGF
- 11 receptor. I mean, so we then knew that there was a
- 12 targeted therapy that worked.
- And so that's why we're going through what
- 14 you mentioned, wondering when the next drug will be
- 15 available and whether or not she will have the mutation
- 16 which will be responsive that conveys resistance to
- 17 erlotinib. And so we're just very delighted that
- 18 basically we're at this phase after having had the
- 19 rollercoaster of sort of emotional responses to what
- 20 was going on.
- DR. EGGERS: Thank you, James.
- 22 Kim, Kim McCleary, in the back.

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MS. McCLEARY: Thank you. My name is Kim 1 2McCleary. I'm an independent advocate who has worked in the patient-focused health policy and research area 4 for 22 years, and I would like to thank the FDA, and particularly Dr. Mullin, Admiral Kweder, Dr. Woodcock, Sara, Andrea, Graham, and the whole team for this 7 series of patient-focused drug development workshops and their efforts to understand the real-world context of conditions selected for these workshops by creating 10 a multilayer dialog with patients and their advocates. 11 I've been part of the process consultation 12 meetings to shape the format for these workshops and also participated in planning meetings for the ME/CFS 13 workshop that opened the series and served on a panel 15 at that meeting providing data from a survey conducted 16 of 1,400 ME/CFS patients. I also viewed the webcast of the HIV workshop 2 weeks ago, so today is my third 17 18 workshop. And I would like to offer a couple of 19 observations of themes that are emerging across the three that have been conducted so far. 20 21 First is just to commend the FDA for their consistent respect and compassion for the patients

- 1 sharing their experiences and for drawing out the
- 2 patient experiences through the questioning and the
- 3 format. It's just been really great over the three
- 4 conducted so far. Also for providing ways for patients
- 5 to participate in person, live on the web, with the
  - 6recorded archived recordings of the webcast, and then
  - 7 through the docket, even though most people don't know
  - 8 what a docket is. And the transcript of the meeting,
- 9 the workshop report; it's just almost every format that
- 10 you could hope for, the FDA has made that available.
- 11 Second is striking to me, the prominence of
- 12 disabling fatigue is a life-impacting symptom, whether
- 13 it's primary to the condition or a consequence of
- 14 treatment or both. That was certainly a feature at the
- 15 chronic fatigue syndrome meeting and at the HIV
- 16 meeting, and we heard a lot about it this morning, and
- 17 I expect you'll hear about fatigue from the narcolepsy
- 18 patients who will be here in September. This strikes
- 19 me because having spent 22 years in chronic fatique
- 20 syndrome ME/CFS research, I know how poor the
- 21 measurement tools are for measuring fatigue, and it
- 22 seems that maybe there is a way through C-Path or some

- 1 of the other FDA partnerships to help better measure
- 2 fatigue like we do with fever and blood sugar, and
  - 3 maybe mobile health apps or wearable technologies like
- 4 a PPT (ph) will give us new tools to be able to do that
- 5 more sensitively since this dimension seems to cross so
- 6 many diagnostic categories.
- 7 Another common theme across the three patient
- 8 groups is the prevalence of comorbidities in the face
- 9 of serious disease. The aging process, immediate
- 10 treatment effects, long-term treatment consequences,
- 11 and chronicity of disease all create new health
- 12 conditions that complicate care and create new burdens
- 13 for the individual patient and their caregivers. It
- 14 also creates challenges for treatment sponsors in
- 15 studying the safety and efficacy of new therapies.
- 16 And, finally, in each of the three conditions
- 17 highlighted so far the patients are taking a number of
- 18 medications with some using multiple medications at one
- 19 time and others who go serially through different
- 20 medications. Drug interactions, serial treatment
- 21 effects, and treatment resistance all need to be better
- 22 understood in these conditions as regulatory decisions

172 are being made. Again, thank you for this important series and the enhancements you've made with each of the three workshops so far. That's impressive on its own, but as somebody who has been to dozens of federal meetings 5 over two decades, it's particularly impressive. 6 7 So thank you very much. DR. EGGERS: Thank you, Kim. 9 We have Raymond Powers? Raymond Powers, 10 second chance? 11 (No audible response.) 12 DR. EGGERS: Okay. Then we will go on to Donna Adkins. 13 Donna, if you can just raise your hand so we 15 16 MS. ADKINS: And I'll be brief. Most of that 17 I wanted to say has already been said, but I greatly 18 appreciate what the FDA is doing and want to say thank 19 you on behalf of our family and all of the patients 20 that are out there that you are looking at this and to bring some awareness, that in 1984, when my father died 21 22 of lung cancer and we were in the hospital, cancer was

- 1 such a hush word at that time that the nurse would not
- 2 tell me my father's lung cancer had come back. I knew
  - 3it had. He had his lung removed 2 years ago, prior to
  - 4that, so we knew what he was dying of, the doctor had
- 5 told me what was happening with him.
- 6 So I'm very appreciative that in 2013 we have
- 7 come this far, that the very cancer that killed my
- 8 father, my mother-in-law is now a 7-year survivor, so I
- 9 thank you for all of your efforts that you have done in
- 10 making that happen and just ask as we move forward that
- 11 you continue to look at drug therapies that help the
- 12 patient based on their own diagnosis and more
- 13 personalized.
- In the case of our daughter at age 26, there
- 15 is not a drug out there that will address her pain.
- 16 Flexeril is not the drug that she needs. Cymbalta is
- 17 not the drug that she needs. But yet every day she has
- 18 pain, she cannot sleep because of the pain from the
- 19 thoracotomy. So at age 26, they're looking at her as
- 20 though she is age 50 and trying to give her drugs that
- 21 are not addressing it. So look at drugs that are more
- 22 personalized, more personalized medicine, for the

174 patient because everyone is different, everyone's body is different, and how that they're going to respond. 3 And just the other thought would be more 4 transparency. We know that they have her tumor, that they're doing research on her tumor in three different universities, but we will never know those outcomes, and as a mother and as my daughter, we would both -- as a nurse, her being a nurse, would like to know the 9 outcomes. What did they find out from her tumor? it going to help a patient down the road? Is there 10 11 something that gives us the answer as to why she received this type of cancer? The not knowing I think 12 for patients is very hard when you can't put your 13 finger and say, "Well, this is why I was diagnosed with 15 this disease." You know, was it something that 16 somebody else is going to be able to change later so 17 that they don't have the diagnosis? 18 And again I thank you for the opportunity to 19 be here today and for all that you are doing on behalf 20 of patients. 21 DR. EGGERS: Thank you, Donna. 22 That's it for the Open Public Comment.

175 Pujita, do you want to give some of the web 1 comments that are maybe not what we've heard so far or reiterate other points that we have heard? MS. VAIDYA: Thank you. We have actually received a lot of comments on the web and will not be able to summarize them all. However, when thinking about decision making, web participants feel that 8 quality of life is very important, and this includes the quality of support from a well-informed medical 10 team. 11 We also have someone on the web comment that he would never forego effective treatment due to fear 12 of side effects. 13 14 For Scenario 1, a web participant comments that she would pass on treatment with Drug X because 2 15 16 versus 10 months is not enough time. She would 17 consider the drug if life was prolonged by at least 3 18 years. 19 Another web participant says he would try Drug X since not all patients have the same side 20 21 effects. 22 DR. EGGERS: Thank you, Pujita.

176 I'll put a reminder out that there are 1 evaluation forms so we can get your feedback if you would like to share that. And so if you haven't gotten one, I think they're still at the registration table, and if you have and you want to fill it out, just put 5 it at the registration table as you leave. 6 7 With that, I am going to turn it over to Theresa Mullin to give some final remarks. 9 Thank you, Theresa. Closing Remarks 10 DR. MULLIN: Thank you, Sara. And I want to really begin the closing by thanking you all so much 11 12 and to the patients and advocates who have come and come up here in our panel and to all the others of you 13 who have contributed and just come today. I want to 15 thank you, first of all, for your courage, which is 16 very evident in what you've told us about what you've 17 gone through yourselves and in describing the 18 experiences of others and your generosity both in 19 sharing that with us and giving us your time to come 20 here today. What you have told us about has really 21 provided us with a lot of insight, a lot of very 22 helpful information, and far too much for me to kind of

- 1 fully recap, but I will just go over some of the things
- 2 that I took away from this and heard.
- And to begin with, when we were talking about
- 4 symptoms, and has been pointed out by many, including,
- 5 I guess, Kim McCleary, that fatigue is one of the
- 6 central things you were telling us about, but that also
- 7 getting diagnosed in many cases sounds like it was
  - 8 really kind of a fortunate coincidence, that you had
  - 9 symptoms that were really not very -- didn't point to
- 10 lung cancer and that you kind of accidentally almost
- 11 but happily discovered and were able to start getting
- 12 treatment.
- We also heard that lung cancer is somewhat
- 14 unique in that there is a stigma, that people question
- 15 your lifestyle, that that's a sort of unique aspect of
- 16 lung cancer that's not something that happens when
- 17 other people talk about other cancers and what your
- 18 role your lifestyle may have played, and that it sounds
- 19 that that's just sort of insult and hurt on top of the
- 20 injury and kind of what you're already going through,
- 21 that even that smoking is a highly addictive condition
- 22 or disease itself, and that that can lead to and

- 1 increase the risk of getting lung cancer.
- 2 There was then a lot of discussion about
- 3 treatments. Effectiveness sounds like it just varies a
- 4 great deal, the side effects vary a lot, but some
- 5 experience relatively minor, others, it's fairly
- 6 terrible. Fatigue sounds like the most debilitating
- 7 impact of therapy, it sounds like the biggest sort of
- 8 concern. And that circumstances vary in terms of
- 9 people's willingness to actually tolerate that and how
- 10 you weigh the benefits and the risks that you may be
- 11 exposed to. We've heard that certainly people with
- 12 young children, dependent children, have more
- 13 willingness and they feel that it's worth it that
- 14 they'll just need to tolerate whatever risks if it can
- 15 extend your life to take care of your children and take
- 16 care of your family.
- 17 And in terms of that survey that we did,
- 18 probably prolonging life and possibly prolonging life
- 19 were just very consistently the most important factors
- 20 that you mentioned, relieving symptoms coming in a bit
- 21 much less than that. You weren't as concerned, from
- 22 what we heard from those who responded today, about the

- 1 administration, form of administration. And side
- 2 effects were again not as important if there was a real
- 3 benefit.
  - 4 And related to that, when we asked about how
  - 5 much benefit, there was interest among many of you who
  - 6 responded to that sort of 2 months, but it sounds like
  - 7 the other point that you have made to us is that with
- 8 new treatments you really want a clear understanding of
- 9 what the added benefit might be, and particularly if
- 10 that can be translated into your individual
- 11 circumstances, into looking at perhaps your genetic
- 12 makeup and what your particular risks may be, what side
- 13 effects you may be particularly at risk for so that the
- 14 more clear and the better our information along those
- 15 lines, the more useful it would be to you in making
- 16 decisions, and many other things.
- 17 We look forward to getting the comments from
- 18 our docket and a further analysis of all that you've
- 19 told us today. And I just want to thank you again.
- 20 And I hope you have safe travels back to home and have
- 21 a wonderful weekend.
- Thanks.

		180
1	DR. EGGERS: Since we don't have people	
2	jumping up, I will then officially say that this	
3	meeting is closed, and you are free to go and get your	
4	lunch and head out on your weekend. Thank you again so	
5	much.	
6	(Whereupon, at 12:28 p.m., the Lung Cancer	
7	Public Meeting on Patient-Focused Drug	
8	Development was adjourned.)	
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