June 2, 2023

Siemens Healthcare Diagnostics Inc.
Mey Vasquez
Regulatory Affairs Professional
511 Benedict Avenue
Tarrytown, NY 10591

Re: K221801
Trade/Device Name: ADVIA Centaur® Anti-Müllerian Hormone (AMH)
Regulation Number: 21 CFR 862.1092
Regulation Name: Anti-Müllerian Hormone Test System
Regulatory Class: Class II
Product Code: PQO
Dated: March 4, 2023
Received: March 7, 2023

Dear Mey Vasquez:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. Although this letter refers to your product as a device, please be aware that some cleared products may instead be combination products. The 510(k) Premarket Notification Database located at https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfpmn/pmn.cfm identifies combination product submissions. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801 and Part 809); medical device reporting (reporting of medical device-related adverse events) (21 CFR

803) for devices or postmarketing safety reporting (21 CFR 4, Subpart B) for combination products (see https://www.fda.gov/combination-products/guidance-regulatory-information/postmarketing-safety-reporting-combination-products); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820) for devices or current good manufacturing practices (21 CFR 4, Subpart A) for combination products; and, if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to https://www.fda.gov/medical-devices/medical-device-safety/medical-device-reporting-mdr-how-report-medical-device-problems.

For comprehensive regulatory information about medical devices and radiation-emitting products, including information about labeling regulations, please see Device Advice (https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance) and CDRH Learn (https://www.fda.gov/training-and-continuing-education/cdrh-learn). Additionally, you may contact the Division of Industry and Consumer Education (DICE) to ask a question about a specific regulatory topic. See the DICE website (https://www.fda.gov/medical-devices/device-advice-comprehensive-regulatory-assistance/contact-us-division-industry-and-consumer-education-dice) for more information or contact DICE by email (DICE@fda.hhs.gov) or phone (1-800-638-2041 or 301-796-7100).

Sincerely,

Paula V. Caposino -S

Paula Caposino, Ph.D.
Acting Deputy Director
Division of Chemistry
and Toxicology Devices
OHT7: Office of In Vitro Diagnostics
Office of Product Evaluation and Quality
Center for Devices and Radiological Health

Enclosure

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Food and Drug Administration

Indications for Use

Form Approved: OMB No. 0910-0120
Expiration Date: 06/30/2023
See PRA Statement below.

510(k) Number *(if known)*
K221801

Device Name
ADVIA Centaur® Anti-Müllerian Hormone (AMH)

Indications for Use *(Describe)*
The ADVIA Centaur® Anti-Müllerian Hormone (AMH) assay is for in vitro diagnostic use in the quantitative determination of anti-Müllerian hormone (AMH) in human serum and plasma (lithium heparin) using the ADVIA Centaur® XP system.

The measurement of AMH is used as an aid in the assessment of the ovarian reserve in women presenting to fertility clinics. This assay is intended to distinguish between women with AFC (antral follicle count) values > 15 (high ovarian reserve) and women with AFC values ≤ 15 (normal or diminished ovarian reserve).

This assay is intended to be used in conjunction with other clinical and laboratory findings, such as AFC, before starting fertility therapy. This assay is not intended to be used for monitoring women undergoing controlled ovarian stimulation in an Assisted Reproduction Technology program.

Type of Use *(Select one or both, as applicable)*

☒ Prescription Use (Part 21 CFR 801 Subpart D) ☐ Over-The-Counter Use (21 CFR 801 Subpart C)

CONTINUE ON A SEPARATE PAGE IF NEEDED.

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510(k) Summary of Safety and Effectiveness

Introduction: According to the requirements of SMDA 1990 and 21 CFR 807.92, the following information provides sufficient details to understand the basis for determination of substantial equivalence.

The assigned 510(k) Number: _____ K221801_____

1. Date Prepared

June 1, 2023

2. Applicant Information

Siemens Healthcare Diagnostics Inc.
511 Benedict Avenue,
Tarrytown, NY 10591 USA

Contact: Mey Vasquez
Regulatory Affairs Professional
Phone : (862) 213-8409
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3. Regulatory Information

Assay

Full Product Name	ADVIA Centaur Anti-Müllerian Hormone (AMH)
Abbreviated Product Name	ADVIA Centaur AMH
Trade Name	ADVIA Centaur® Anti-Müllerian Hormone (AMH)
Common Name	Anti-Müllerian Hormone Test System
Classification Name	Anti-Müllerian Hormone Test System
Definition	An Anti-Müllerian hormone test system is an in vitro diagnostic device intended to measure anti-Müllerian hormone in human serum and plasma. The test is intended to be used as an aid of assessing ovarian reserve in women.
FDA Classification	Class II

Review Panel	Toxicology
Product Code	PQO
Regulation Number	21 CFR 862.1092

4. PREDICATE DEVICE

Name of Device: Access AMH

510(k): K170524

5. ASSAY PRINCIPLE

The ADVIA Centaur AMH assay is a sandwich immunoassay using direct acridinium ester-based chemiluminometric technology. Two monoclonal anti-AMH antibodies are employed in the assay. The first antibody in the Lite Reagent is a mouse monoclonal anti-AMH antibody labeled with acridinium ester. The second antibody is a biotinylated mouse monoclonal anti-AMH antibody coupled to streptavidin-coated magnetic particles in the Solid Phase.

A direct relationship exists between the amount of AMH present in the patient sample and the amount of relative light units detected by the system. Dose concentration results (ng/mL) are calculated based on a 2-point calibration from a pre-defined master curve.

6. DEVICE DESCRIPTION

Material Description
ADVIA Centaur AMH ReadyPack® primary reagent pack **Solid Phase** 22.0 mL/reagent pack Streptavidin-coated paramagnetic microparticles (~0.15 mg/mL) with biotinylated mouse monoclonal anti-human AMH antibody (~2 µg/mL) in buffer; sodium azide (< 0.1%); blocker (bovine); surfactant; preservatives
ADVIA Centaur AMH ReadyPack® ancillary reagent pack **Ancillary Reagent** 10.0 mL/reagent pack Mouse monoclonal anti-human AMH antibody labeled with acridinium ester in buffer (~0.6 µg/mL); sodium azide (< 0.1%); blocker (bovine, murine); stabilizers; surfactant; preservatives

AMH CAL
2.0 mL/vial (1 vial of Low and High AMH CAL) After reconstitution, low and high levels of AMH antigen (bovine) in defibrinated human plasma; sodium azide (< 0.1%); preservatives

7. INTENDED USE/ INDICATIONS FOR USE

The ADVIA Centaur® Anti-Müllerian Hormone (AMH) assay is for in vitro diagnostic use in the quantitative determination of anti-Müllerian hormone (AMH) in human serum and plasma (lithium heparin) using the ADVIA Centaur® XP system.

The measurement of AMH is used as an aid in the assessment of the ovarian reserve in women presenting to fertility clinics. This assay is intended to distinguish between women with AFC (antral follicle count) values > 15 (high ovarian reserve) and women with AFC values ≤ 15 (normal or diminished ovarian reserve).

This assay is intended to be used in conjunction with other clinical and laboratory findings, such as AFC, before starting fertility therapy. This assay is not intended to be used for monitoring women undergoing controlled ovarian stimulation in an Assisted Reproduction Technology program.

8. Special Conditions for Use Statement

For Prescription Use

9. COMPARISION OF TECHNOLOGICAL CHARACTERISTICS WITH THE PREDICATE DEVICE

Item	**Candidate Device**	**Predicate**
	ADVIA Centaur® Anti-Müllerian Hormone (AMH)	**Beckman Coulter Access AMH (K170524)**
Intended Use	The ADVIA Centaur® Anti-Müllerian Hormone (AMH) assay is for in vitro diagnostic use in the quantitative determination of anti-Müllerian hormone (AMH) in human serum and plasma (lithium	The Access AMH assay is a paramagnetic particle chemiluminescent immunoassay for the quantitative determination of anti-Müllerian hormone (AMH) levels in human serum and lithium heparin

Item	Candidate Device	Predicate
	ADVIA Centaur® Anti-Müllerian Hormone (AMH)	**Beckman Coulter Access AMH (K170524)**
	heparin) using the ADVIA Centaur® XP system. The measurement of AMH is used as an aid in the assessment of the ovarian reserve in women presenting to fertility clinics. This assay is intended to distinguish between women with AFC (antral follicle count) values > 15 (high ovarian reserve) and women with AFC values ≤ 15 (normal or diminished ovarian reserve). This assay is intended to be used in conjunction with other clinical and laboratory findings, such as AFC, before starting fertility therapy. This assay is not intended to be used for monitoring women undergoing controlled ovarian stimulation in an Assisted Reproduction Technology program.	plasma using the Access Immunoassay Systems as an aid in the assessment of ovarian reserve in women presenting to fertility clinics. This system is intended to distinguish between women presenting with AFC (antral follicle count) values > 15 (high ovarian reserve) and women with AFC values ≤ 15 (normal or diminished ovarian reserve). The Access AMH is intended to be used in conjunction with other clinical and laboratory findings such as antral follicle count, before starting fertility therapy. The Access AMH is not intended to be used for monitoring of women undergoing controlled ovarian stimulation in an Assisted Reproduction Technology program.
Indications for Use	Same as Intended Use (Candidate)	Same (for Predicate)
Similarities		
LoB	0.010 ng/mL	≤ 0.01 ng/mL
LoD	0.020 ng/mL	≤ 0.02 ng/mL

510(k) Summary

Item	Candidate Device	Predicate
	ADVIA Centaur® Anti-Müllerian Hormone (AMH)	**Beckman Coulter Access AMH (K170524)**
LoQ	0.043 ng/mL	≤ 0.08 ng/mL
Measurement	Quantitative	Same
Technology	Chemiluminescence	Same
Operating Principle	1-Step Sandwich immunoassay	Same
Sample type	Plasma (lithium heparin) and Serum	Same
Standardization	Traceable to an internal standard manufactured using highly purified material	Same
Clinical Cut-Off	1.77 ng/mL to distinguish women with an antral follicle count (AFC) >15 or ≤ 15.	Same
Intended Use Population(s)	Women presenting to fertility clinics	Same
Differences		
Calibration	2 levels	6 levels
Assay Range	0.043–24.0 ng/mL	0.08 – 24 ng/mL
Hook Effect	No hook effect up to 1151 ng/mL	No hook effect up to 1000 ng/mL
Sample Volume	100 µL	20 µL
Detection Antibody	Mouse monoclonal anti-human AMH antibody labeled with acridinium ester in buffer	Mouse monoclonal anti-AMH antibody conjugated to alkaline phosphatase in MES buffer

Item	Candidate Device	Predicate
	ADVIA Centaur® Anti-Müllerian Hormone (AMH)	**Beckman Coulter Access AMH (K170524)**
Capture Antibody	Monoclonal mouse anti-human AMH antibody (~2 µg/mL) labeled with biotin bound to streptavidin magnetic particles (~0.15 mg/mL) in buffer	Mouse monoclonal anti-AMH antibody bound to para magnetic particles in buffer
Precision (Total CV)	≤ 10% CV for concentration ≥0.100 ng/mL	≤ 10% CV for concentration ≥ 0.16 ng/mL

10. PERFORMANCE CHARACTERISTICS DATA

10.1. Detection Capability

The limit of blank (LoB), limit of detection (LoD), and the limit of quantitation (LoQ) were determined as described in CLSI protocol EP17-A2.

The ADVIA Centaur AMH assay has an LoB of 0.010 ng/mL (0.071 pmol/L), an LoD of 0.020 ng/mL (0.143 pmol/L), and an LoQ of 0.043 ng/mL (0.307 pmol/L).

10.2. Precision

Precision was determined in accordance with CLSI Document EP05-A3.[22] Testing was performed using 2 instruments and 3 reagent lots. Samples were assayed in replicates of 2 with 2 runs per day using a 20-day protocol.

The following results are representative of the performance of the assay:

			Repeatability		Within-Laboratory Precision		Reproducibility (Total Imprecision)	
Sample	N[a]	Mean (ng/mL)	SD[b] (ng/mL)	CV[c] (%)	SD (ng/mL)	CV (%)	SD (ng/mL)	CV (%)
Serum A	480	0.112	0.0032	2.9	0.0036	3.2	0.0049	4.4
Serum B	480	0.193	0.0046	2.4	0.0053	2.7	0.0066	3.4
Serum C	480	0.969	0.0205	2.1	0.0236	2.4	0.0240	2.5
Serum D	480	3.60	0.092	2.6	0.107	3.0	0.115	3.2
Serum E	480	6.71	0.156	2.3	0.198	3.0	0.224	3.3
Serum F	480	6.93	0.158	2.3	0.177	2.6	0.206	3.0
Serum G	480	16.2	0.34	2.1	0.40	2.5	0.52	3.2
Serum H	480	16.4	0.37	2.3	0.42	2.6	0.47	2.9
Control 1	480	0.955	0.0252	2.6	0.0284	3.0	0.0312	3.3
Control 2	480	4.75	0.120	2.5	0.135	2.8	0.140	2.9
Control 3	480	14.1	0.33	2.3	0.37	2.6	0.41	2.9

[a] Number of measurements.
[b] Standard deviation.
[c] Coefficient of variation.

10.3. Reproducibility

Reproducibility was determined in accordance with CLSI Document EP05-A3. Samples were assayed in triplicate in 2 runs per day for 5 days using 3 sites and 1 reagent lot. The following results are representative of the performance of the assay:

			Repeatability		Between-Run		Between-Day		Between-Site		Reproducibility	
Sample	N[a]	Mean (ng/mL)	SD (ng/mL)	%CV	SD (ng/mL)	%CV	SD (ng/mL)	%CV	SD (ng/mL)	%CV	SD (ng/mL)	%CV
Serum A	90	0.199	0.0041	2.1	0.0027	1.4	0.0000	0.0	0.0025	1.3	0.0055	2.8
Serum B	90	1.01	0.025	2.5	0.000	0.0	0.016	1.6	0.007	0.7	0.031	3.1
Serum C	90	3.73	0.058	1.6	0.039	1.0	0.000	0.0	0.033	0.9	0.077	2.1
Serum D	90	6.96	0.105	1.5	0.158	2.3	0.000	0.0	0.071	1.0	0.203	2.9
Serum E	90	17.0	0.31	1.8	0.31	1.8	0.00	0.0	0.06	0.4	0.44	2.6
Control 1	90	1.01	0.022	2.2	0.017	1.7	0.005	0.5	0.008	0.8	0.029	2.9
Control 2	90	4.87	0.080	1.6	0.046	0.9	0.090	1.8	0.034	0.7	0.134	2.8
Control 3	90	14.4	0.30	2.1	0.17	1.2	0.17	1.2	0.00	0.0	0.38	2.6

[a] Number of measurements.

10.4. Linearity

Linearity testing was performed in accordance with CLSI Document EP06-A. The ADVIA Centaur AMH assay is linear for the measuring interval of 0.043–24.0 ng/mL (0.307–171 pmol/L).

10.5. Assay Comparison

Assay comparison was determined with the Passing-Bablok regression model in accordance with CLSI Document EP09c-ed3.

The assay is designed to have a correlation coefficient of ≥ 0.950, a slope of 1.00 ± 0.10, and an intercept of ± 0.035 ng/mL

Specimen Type	Comparative Assay (x)	Regression Equation	Sample Interval	N[a]	r[b]
Serum	commercial AMH assay	y = 1.04x - 0.032 ng/mL (y = 1.04x - 0.228 pmol/L)	0.080–22.0 ng/mL (0.571–157 pmol/L)	120	0.994

[a] Number of samples tested.

[b] Correlation coefficient.

10.6. Specimen Equivalence

Specimen equivalency was determined with the weighted Deming regression model in accordance with CLSI Document EP09c-ed3.

The assay is designed to have a correlation coefficient of ≥ 0.950, a slope of 0.90–1.10, and an intercept of ± 0.035 ng/mL.

Tube (y) vs. Serum (x)	Regression Equation	Sample Interval	N[a]	r[b]
Gel-barrier tube (serum)	y = 1.00x + 0.003 ng/mL (y = 1.00x + 0.021 pmol/L)	0.110–19.7 ng/mL (0.785–141 pmol/L)	88	0.997
Plasma, lithium heparin	y = 1.08x - 0.004 ng/mL (y = 1.08x - 0.029 pmol/L)	0.110–19.7 ng/mL (0.785–141 pmol/L)	88	0.997

[a] Number of samples tested.

[b] Correlation coefficient.

10.7. Interferences

Hemolysis, Icterus, Lipemia (HIL)

Interference testing was performed in accordance with CLSI Document EP07-ed3. The following substances do not interfere with the assay when present in serum at the concentrations indicated.
Bias due to these substances does not exceed 10% at an AMH concentration of 0.719–0.944 ng/mL (5.13–6.74 pmol/L) and 6.13–6.68 ng/mL (43.8–47.7 pmol/L).

Substance	Substance Test Concentration
Hemoglobin	1000 mg/dL (10.0 g/L)
Bilirubin, conjugated	66.0 mg/dL (783 µmol/L)
Bilirubin, unconjugated	39.0 mg/dL (667 µmol/L) [a]
Lipemia (Intralipid)	2000 mg/dL (20.0 g/L)

[a] At concentrations ≥ 40 mg/dL, there is statistically significant (>10% bias) interference for unconjugated bilirubin. At 40 mg/dL, the following bias was observed: 10.6% bias at 6.79 ng/mL AMH and 11.4% bias at 0.936 ng/mL AMH.

Other Substances

Interference testing was performed in accordance with CLSI Document EP07-ed3 and EP37-ed1. The following substances do not interfere with the assay when present in serum at the concentrations indicated.

Bias due to these substances does not exceed 10% at an AMH concentration of 0.782–1.38 ng/mL (5.58–9.85 pmol/L) and 5.86–7.49 ng/mL (41.8–53.5 pmol/L).

Substance	Substance Test Concentration	Substance	Substance Test Concentration
Acetaminophen	20 mg/dL (1324 µmol/L)	Human IgG	2500 mg/dL (25.0 g/L)
Acetylcysteine	15.0 mg/dL (920 µmol/L)	Human IgM	500 mg/dL (5.0 g/L)
Acetylsalicylic Acid (Aspirin)	65.0 mg/dL (3608 µmol/L)	Ibuprofen	50.0 mg/dL (2425 µmol/L)
Ampicillin sodium	100 mg/dL (2693 µmol/L)	Levodopa	2.00 mg/dL (101 µmol/L)
L-Ascorbic acid	3.00 mg/dL (170 µmol/L)	Levothyroxine	0.020 mg/dL (0.258 µmol/L)
Biotin	0.350 mg/dL (14.3 µmol/L)	Metformin hydrochloride	200 mg/dL (12,076 µmol/L)
Cefoxitin sodium salt	250 mg/dL (5563 µmol/L)	Methyldopa	2.00 mg/dL (83.9 µmol/L)
Cholesterol	500 mg/dL (13.0 mmol/L)	Metronidazole	20.0 mg/dL (1168 µmol/L)
Cyclosporine	0.500 mg/dL (4.16 µmol/L)	Phenylbutazone	40.0 mg/dL (1296 µmol/L)
Doxycycline hyclate	5.00 mg/dL (48.7 µmol/L)	Rheumatoid Factor	1000 IU/mL
Folic acid	0.040 mg/dL (0.906 µmol/L)	Rifampicin	6.00 mg/dL (73.2 µmol/L)
Gonapeptyl (Triptorelin acetate)	0.010 mg/dL (0.073 µmol/L)	Theophylline	10.0 mg/dL (555 µmol/L)
Heparin	500 U/dL	Total Protein	12.0 g/dL (120 g/L)
Human IgA	1800 mg/dL (18.0 g/L)	Uric acid	25.0 mg/dL (1487 µmol/L)

10.8. Cross-Reactivity

Cross-reactivity was determined in accordance with CLSI Document EP07-ed3. Cross-reactants were tested at anti-Müllerian hormone concentrations of 0 ng/mL (0 pmol/L) and 0.924–1.05 ng/mL (6.60–7.50 pmol/L).

Cross-reactant	Cross-reactant Concentration	Cross-reactivity (%)
Activin A	100 ng/mL (7.69 nmol/L)	≤ 0.1
		≤ 0.1

Cross-reactant	Cross-reactant Concentration	Cross-reactivity (%)
Activin B	50.0 ng/mL (3.91 nmol/L)	≤ 0.1 ≤ 0.1
Activin AB	50.0 ng/mL (1.94 nmol/L)	≤ 0.1 ≤ 0.1
Follicle stimulating hormone	500 mIU/mL	Not Detectable [a] 0.2
Inhibin A	100 ng/mL (3.57 nmol/L)	≤ 0.1 ≤ 0.1
Inhibin B	100 ng/mL (3.08 nmol/L)	≤ 0.1 ≤ 0.1
Luteinizing hormone	500 mIU/mL	Not Detectable [a] 2.9
TGF b-1	65.0 ng/mL (5.08 nmol/L)	≤ 0.1 ≤ 0.1

[a] FSH and LH were expressed in biological activity units (mIU/mL). The observed analyte dose change was reported as percent dose bias to control sample. Bias does not exceed 10%, and is therefore considered insignificant.

10.9. Stability

The on-board stability of the ADVIA Centaur AMH reagents was determined to be 70 days with a calibration interval of 28 days.

The ADVIA Centaur AMH calibrators when reconstituted were determined to be stable at 2-8°C and ≤ -20°C for 90 days.

10.10. High Dose Hook

High AMH concentrations can cause a paradoxical decrease in the RLUs (high-dose hook effect). In this assay, no hook effect was observed up to 1151 ng/mL (8218 pmol/L).

10.11. Expected Values

Samples were collected prospectively from apparently healthy subjects. The 90th reference interval was determined by calculating the 5th and 95th percentiles of the distribution of values.

The 95th reference interval was determined by calculating the 2.5th and 97.5th percentiles of the distribution of values.

Group	N[a]	Median ng/mL (pmol/L)	90% Reference Interval ng/mL (pmol/L)	95% Reference Interval ng/mL (pmol/L)
Females (18–25 years)	209	4.70 (33.6)	1.28–11.8 (9.14–84.3)	1.02–15.6 (7.28–111)
Females (26–30 years)	122	3.80 (27.1)	0.843–8.81 (6.02–62.9)	0.520–10.0 (3.71–71.4)
Females (31–35 years)	123	2.70 (19.3)	0.772–8.07 (5.51–57.6)	0.676–10.2 (4.83–72.8)
Females (36–40 years)	126	1.59 (11.4)	0.156–6.13 (1.11–43.8)	0.079–8.66 (0.564–61.8)
Females (41–45 years)	152	0.493 (3.52)	< 0.043–3.47 (< 0.307–24.8)	< 0.043–4.46 (< 0.307–31.8)
Females (46–50 years)	121	0.083 (0.593)	< 0.043–1.33 (< 0.307–9.50)	< 0.043–1.89 (< 0.307–13.5)
Females (51 years and older)	139	< 0.043 (< 0.307)	< 0.043–0.134 (< 0.307–0.957)	< 0.043–0.277 (< 0.307–1.98)

[a] Number of samples tested.

As with all in vitro diagnostic assays, each laboratory should determine its own reference interval for the diagnostic evaluation of patient results. Consider these values as guidance only.

10.12. Clinical Sensitivity and Specificity

A multi-center clinical study consisting of women who presented to fertility clinics for evaluation was used to correlate AMH serum concentration to antral follicle count (AFC). Data were analyzed from 533 women at 11 sites across the United States using the ADVIA Centaur XP systems. The participants ranged in age from 22–45 years, with a mean age of 34.4 years. The Body Mass Index (BMI) ranged from 16.0–39.9 kg/m^2, with a mean BMI of 26.84 kg/m^2. The AFC result was determined by transvaginal ultrasound and included follicles 2–10 millimeters in diameter. The AFC and AMH data were collected between day 2 and day 4 of the same menstrual cycle.

Clinical sensitivity and specificity were determined in accordance with CLSI Document EP12-A2. The sensitivity, specificity, Positive Predictive Value (PPV), and Negative Predicative Value (NPV) were calculated and are shown below.

Parameter	N[a]	Estimate	95% Confidence	Interval
Sensitivity	283	90.5% (256/283)	(86.47, 93.36)	
Specificity	250	52.0% (130/250)	(45.82, 58.12)	
PPV	376	68.1% (256/376)	(63.21, 72.59)	
NPV	157	82.8% (130/157)	(76.13, 87.90)	

[a] Number of measurements.

A subgroup analysis by subject age (< 35 years of age vs. ≥ 35 years of age) using results of the clinical data (n=533) was performed. The clinical study had 270 subjects evaluated who were < 35 years of age and 263 subjects who were ≥ 35 years of age. Differences in clinical performance were observed between subjects < 35 years of age and ≥ 35 years of age. The likelihood of a subject with a result > 1.77 ng/mL having high ovarian reserve was higher in subjects < 35 years of age and the likelihood of a subject with a result ≤ 1.77 ng/mL having normal/diminished ovarian reserve was higher in subjects ≥ 35 years of age.

	Females <35 years of age	Females ≥ 35 years of age
Prevalence by Age (AFC > 15)	67.4%	38.4%
PPV	73.6% (67.47, 78.88)	59.7% (51.71, 67.27)
NPV	65.1% (50.17, 77.58)	89.5% (82.50, 93.88)

*PPV and NPV are dependent on prevalence

11. CONCLUSION

Comparative testing of the ADVIA Centaur® Anti-Müllerian Hormone (AMH) assay is substantially equivalent in principle and performance to the Predicate Device – Access AMH assay cleared under 510(k) K170524.