Circuit Court for Baltimore City Case No. 24-C-21-004537

## **UNREPORTED\***

#### IN THE APPELLATE COURT

## OF MARYLAND

No. 1266

September Term, 2023

R.B.

v.

NINA HINTING, M.D., ET AL.

Graeff, Arthur, Woodward, Patrick L. (Senior Judge, Specially Assigned),

JJ.

Opinion by Arthur, J.

Filed: January 14, 2025

\* This is an unreported opinion. It may not be cited as precedent within the rule of stare decisis. It may be cited as persuasive authority only if the citation conforms to Maryland Rule 1-104(a)(2)(B).

A woman of about 30 years of age was attempting to conceive a child. Her gynecologist informed her, incorrectly, that her blood tests were normal. In fact, the tests indicated that she suffered from Diminished Ovarian Reserve or "DOR," a condition wherein the quantity or quality of a woman's egg cells decreases more rapidly than those of a typical woman of the same age.<sup>1</sup> In contravention of the standard of care, the gynecologist did not refer the patient for fertility treatment, such as in vitro fertilization.

Eighteen months later, the patient discovered that she suffered from DOR. By then, however, her condition had worsened considerably. She immediately pursued in vitro fertilization and other fertility treatments, but could not achieve a successful pregnancy.

The patient filed suit against the gynecologist and the gynecologist's employer. She alleged that, had she been correctly informed that she suffered from DOR, she would have immediately pursued in vitro fertilization and would, more likely than not, have achieved a successful pregnancy. She named a qualified medical expert who would support her allegations about the breach of the standard of care and causation.

The gynecologist and her employer moved to preclude the expert's testimony under *Daubert-Rochkind*,<sup>2</sup> attacking his opinions on causation. The circuit court granted

<sup>&</sup>lt;sup>1</sup> In this opinion, we use the words "woman" and "women" to refer to persons who are assigned or designated female at birth.

<sup>&</sup>lt;sup>2</sup> Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993); Rochkind v. Stevenson, 471 Md. 1 (2020).

the motion to preclude—and then granted a motion for summary judgment because the patient could not establish a prima facie case without the expert.

The patient appealed. For the reasons stated herein, we shall vacate the judgment and remand the case for further proceedings.

#### FACTUAL AND PROCEDURAL HISTORY

#### A. Background

Nina Hinting, M.D., is a board-certified obstetrician and gynecologist at Sinai Hospital of Baltimore. Dr. Hinting began treating R.B. in 2013, when R.B. was 25 years old.

In 2015, R.B. and her husband began attempting to conceive a child. On August 26, 2015, R.B. consulted Dr. Hinting because she was experiencing "heavy, prolonged uterine bleeding[.]" Although the incident is not documented as a miscarriage in her medical records, R.B. now believes that she suffered a miscarriage at that time. R.B. and her husband continued their attempts to conceive throughout the next year but were unsuccessful.

R.B. returned to Dr. Hinting on August 26, 2016, for a routine annual examination. She expressed concern to Dr. Hinting that she had not yet conceived. Dr. Hinting did not suggest fertility treatment; instead, she encouraged R.B. and her husband to continue their attempts to conceive naturally.

In June of 2017, R.B. became pregnant. On August 17, 2017, however, she experienced a miscarriage and was treated at a hospital. She reported the miscarriage to Dr. Hinting.

R.B. had another visit with Dr. Hinting about two weeks after the miscarriage, on August 30, 2017. At that time, R.B. reported "left lower pelvic pain and a burning sensation internally that had developed acutely." Dr. Hinting did not recommend any fertility treatment to R.B. at that visit.

On April 30, 2018, R.B. again expressed concern to Dr. Hinting about her inability to conceive. According to Dr. Hinting, R.B. "indicated a desire to start the workup for infertility [treatment.]" Dr. Hinting ordered bloodwork to test R.B.'s levels of four hormones that bear on fertility. Pending her receipt of the lab results, Dr. Hinting encouraged R.B. and her husband to "continue trying" to conceive naturally. As part of the lab work-up, Dr. Hinting ordered a test to measure R.B.'s levels of anti-Müllerian hormone ("AMH"), a biomarker<sup>3</sup> used to estimate a woman's existing ovarian reserve.<sup>4</sup> Low levels of AMH are associated with DOR.

The lab tests revealed that R.B. had AMH levels of 0.212 ng/mL,<sup>5</sup> well under the estimated threshold that is indicative of DOR.<sup>6</sup> Nonetheless, on June 7, 2018, Dr.

<sup>5</sup> Nanograms per milliliter. A nanogram is one-billionth of a gram.

<sup>&</sup>lt;sup>3</sup> A biomarker is a "biological molecule found in blood, other body fluids, or tissues that is a sign of a normal or abnormal process, or of a condition or disease." *Biomarker*, NATIONAL CANCER INSTITUTE: NCI DICTIONARY OF CANCER TERMS, https://perma.cc/M8DM-9PX5.

<sup>&</sup>lt;sup>4</sup> See A.C. de Kat, et al., *Back to the Basics of Ovarian Aging: A Population-Based Study on Longitudinal anti-Müllerian Hormone Decline*, BMC MEDICINE 14:151, at 1 (Oct. 3, 2016).

<sup>&</sup>lt;sup>6</sup> Doctors have not yet established a definitive AMH level that would signal a diagnosis of DOR. Studies suggest, however, that a woman has "severe" DOR if she has

Hinting called R.B. and told her—incorrectly—that her blood test results "were normal." Dr. Hinting also told R.B. that, because of her "normal" blood tests, it was best for her to speak with a reproductive endocrinology and infertility specialist for "further [follow-up] and possible treatment." Dr. Hinting prescribed clomiphene citrate, a drug that induces ovulation.<sup>7</sup> Dr. Hinting made no mention of R.B.'s low AMH levels.

R.B. consulted with Shady Grove Fertility Center in November of 2018. The Shady Grove records report the possibility that R.B. had a recent "chemical pregnancy," a miscarriage that occurs before the fifth week after conception.<sup>8</sup> Shady Grove recommended additional blood work. R.B. did not pursue that recommendation.

In November of 2019, R.B. went to an appointment at the Fertility Center of Maryland. The Fertility Center ordered more tests of R.B.'s hormone levels. The results of those tests showed that R.B.'s AMH levels had fallen dramatically, to 0.07 ng/mL. For the first time, R.B. was diagnosed with DOR. The Fertility Center emphasized that R.B. should begin the process of in vitro fertilization (IVF)<sup>9</sup> "immediately" if she wanted to have "any chance" of conceiving a child.

an AMH level of 1.05 ng/mL or lower. Norbert Gleicher, et al., *Anti-Müllerian Hormone* (*AMH*) Defines, Independent of Age, Low Versus Good Live-Birth Chances in Women with Severely Diminished Ovarian Reserve, FERTILITY AND STERILITY, Vol. 4, No. 7, at 2824 (Dec. 2010).

<sup>&</sup>lt;sup>7</sup> *Clomiphene*, STATPEARLS PUBLISHING, https://perma.cc/L2TM-9TM2.

<sup>&</sup>lt;sup>8</sup> Chemical Pregnancy, CLEVELAND CLINIC, https://perma.cc/4V6A-TDAU.

<sup>&</sup>lt;sup>9</sup> In vitro fertilization is "a process whereby (usually multiple) ova are placed in a medium to which sperm are added for fertilization[.]" The early embryo created by that

R.B. began the process of IVF in January of 2020. R.B.'s providers cancelled her first three attempts because of her low levels of estrogen and follicle-stimulating hormone.<sup>10</sup> She began her first full cycle of IVF in March of 2020. The March cycle yielded two embryos, but neither embryo resulted in a pregnancy.

On June 8, 2020, R.B. attempted another cycle of IVF, but R.B.'s medical providers converted the IVF cycle to an intrauterine insemination (IUI)<sup>11</sup> effort because of R.B.'s poor ovarian response. The IUI effort did not result in a pregnancy.

In late July or early August of 2020, R.B. conceived naturally, but again she miscarried. At around that time, R.B. began treatment at the Johns Hopkins Fertility Center because the Fertility Center of Maryland had closed. Johns Hopkins conducted additional diagnostic tests and found that R.B.'s AMH levels had decreased even further, to 0.03 ng/mL. Because of the decreased levels of AMH, R.B.'s providers at Johns Hopkins concluded that IVF would, in all likelihood, no longer benefit R.B. Instead, R.B. underwent four cycles of IUI, none of which resulted in a successful pregnancy.

process is then "introduced into the uterus with the objective of full-term development." Stedman's Medical Dictionary 711 (28th ed. 2006).

<sup>&</sup>lt;sup>10</sup> The follicle-stimulating hormone "acts on the ovaries to make the follicles and eggs grow." *Follicle-stimulating hormone*, NATIONAL CANCER INSTITUTE: NCI DICTIONARY OF CANCER TERMS, https://perma.cc/6SBT-N7X8.

<sup>&</sup>lt;sup>11</sup> Intrauterine insemination involves placing "sperm that have been washed of seminal fluid directly into the uterus to bypass the cervix." Stedman's Medical Dictionary 982 (28th ed. 2006). Converting an IVF cycle to an IUI cycle in "poor responder patients" is a "common and accepted strategy." Kubilay Vicdan et al., *Two successful pregnancies achieved by converting an in vitro fertilization cycle to an intrauterine insemination cycle in five cases with documented premature ovulation*, J. TURK. GER. GYNECOL. ASS'N, Vol. 17, No. 4, at 233-35 (Dec. 2016).

R.B. conceived naturally in late 2021, but this pregnancy ended in another miscarriage. R.B. has not, to date, achieved a live birth.

### **B.** Complaint

On October 19, 2021, R.B. filed a complaint in the Circuit Court for Baltimore City, naming Dr. Hinting and Sinai Hospital as defendants. We shall refer to the defendants, collectively, as "Sinai."<sup>12</sup>

In her complaint, R.B. alleged that, had Sinai "informed [her] that the results of the May 2018 diagnostic bloodwork were abnormal . . . [she] would have immediately sought treatment from a fertility specialist." R.B. alleged that that treatment would have given her "a high likelihood of achieving a successful pregnancy through fertility treatments less invasive than IVF." She claimed that, as a direct and proximate result of Sinai's breach of the applicable standard of care, she "was forced to undergo additional, otherwise unnecessary, medical treatment with a much worse prognosis."

## C. Expert Designation of James Wheeler, M.D.

On February 17, 2022, R.B. designated James Wheeler, M.D., M.P.H., J.D., as an expert in the fields of obstetrics, gynecology, reproductive endocrinology, and psychology. The designation disclosed that Dr. Wheeler would offer three main opinions.

First, Dr. Wheeler would testify that Sinai "breached the applicable standards of care by failing to diagnose [R.B.'s] diminished ovarian reserve and premature ovarian

<sup>&</sup>lt;sup>12</sup> R.B. also named Lifebridge Health and one of Dr. Hinting's colleagues as additional defendants, but she later dismissed them.

failure, failing to properly interpret [R.B.'s] diagnostic test results, and informing [R.B.] that the diagnostic tests [it] ordered were normal when, in fact, they were not, resulting in [R.B.'s] conditions going undiagnosed for the period of May 11, 2018, through November 2019." Second, Dr. Wheeler would testify that "the delay in diagnosis of [R.B.'s] conditions resulted in [R.B.'s] ovarian reserve decreasing significantly and irreparably, resulted in a significantly decreased likelihood that [R.B.] would be able to have a successful pregnancy using her own eggs, [and] required [R.B.] to undergo more invasive and more costly fertility treatments than she otherwise would have needed in the absence of the delay in diagnosis." Third, Dr. Wheeler would testify that, had Dr. Hinting "properly diagnosed [R.B.'s] diminished ovarian reserve at the time that [she] received the bloodwork results showing that diagnosis, [R.B.], more likely than not, would have conceived and maintained a successful pregnancy."

## D. Dr. Wheeler's Deposition

Sinai deposed Dr. Wheeler on October 24, 2022. Once the deposition proceeded to the merits of R.B.'s case, Sinai's counsel asked Dr. Wheeler if he had an opinion as to why, during the three-year period from 2015 through 2018, when R.B. was actively trying to conceive, she was unable to achieve a live birth. Dr. Wheeler initially testified that he could offer only a "differential diagnosis,"<sup>13</sup> which would include egg quality, but

<sup>&</sup>lt;sup>13</sup> "[D]ifferential diagnosis is a methodology by which the cause of a medical problem is identified by considering and then ruling out the potential causes until the most probable cause remains." *Blackwell v. Wyeth*, 408 Md. 575, 614-15 (2009); *accord Westberry v. Gislaved Gummi AB*, 178 F.3d 257, 262 (4th Cir. 1999) (stating that "[d]ifferential diagnosis, or differential etiology, is a standard scientific technique of

that he "would not know the reason" for her miscarriages to a reasonable degree of "medical probability." A few pages later, however, Dr. Wheeler testified that R.B.'s inability to carry a child to term between 2015 and 2018 "was probably due to the poor quality of her eggs."

In response to questions about R.B.'s AMH levels in 2017, when she experienced a miscarriage, Dr. Wheeler discussed the decline of her AMH levels over time, using "four data points," showing a drop from .2 in May of 2018, to .07 in November of 2019, to .03 in August of 2020, to less than .015 in August of 2022. "That linear decline," he said, "is typical of diminished ovarian reserve." He later clarified that the decline is "logarithmic," rather than strictly linear. When asked whether he relied on any literature or research to make projections about what R.B.'s AMH levels would have been before 2018, Dr. Wheeler said that he did not. He remarked: "It would be very hard to find a study to represent that. That would be a very hard study to conduct."

In response to a question about how many eggs R.B. would have produced had she begun IVF in late 2018, Dr. Wheeler opined that R.B. could have produced between zero and eight eggs per cycle of IVF. When challenged with a study stating a woman with an

identifying the cause of a medical problem by eliminating the likely causes until the most probable one is isolated"). Numerous courts have held that "a medical opinion on causation based upon a reliable differential diagnosis is sufficiently valid to satisfy" *Daubert* and Rule 702 of the Federal Rules of Evidence, the federal analog of Rule 5-702. *Westberry v. Gislaved Gummi AB*, 178 F.3d at 263 (collecting authorities).

AMH of under .5 probably will not produce more than three eggs per cycle,<sup>14</sup> Dr. Wheeler responded by citing studies authored by Alberto Revelli, M.D., and Norbert Gleicher, M.D. He added that he "was relying on the body of literature" that he had "read over the course of [his] career," that no specific article answered counsel's specific question, that each of the articles looks at groups of women to which R.B. does not belong, and that "[t]here is a great deal of interpretation and application to the individual woman that's required." Counsel for Sinai responded, in substance, that Dr. Wheeler's opinions relied on his own ipse dixit.

Defending his methodology, Dr. Wheeler asserted that an expert must generalize from studies to specific cases: "Any study that Ms. [B.] did not partake in herself does not include her own data." He added that "the single most important value here is age." R.B.'s AMH was "particularly low" for her age, "yet," Dr. Wheeler said, different authors have written that a "younger age with a poor AMH is a positive prognostic factor."

Dr. Wheeler agreed that poor egg quality was "the most likely explanation" for R.B.'s inability to achieve a live birth through IVF, but he said that he could offer only a differential diagnosis about why R.B. miscarried in July 2020, after she had conceived naturally. He disagreed that DOR was not a potential cause of the miscarriage. He

<sup>&</sup>lt;sup>14</sup> Based on arguments in the written motion to exclude Dr. Wheeler's testimony, the article appears to have been Wendy Kuohung, et al., *Evaluation of Female Infertility*, UpToDate 1, 8 (2022). Sinai's counsel asserted that Dr. Wheeler had produced the article.

explained: "[D]iminished ovarian reserve decreases the likelihood of good egg quality. It's associated with the chance of miscarriage in and of itself."

Dr. Wheeler testified that, in his experience, "very committed" patients could complete three to four cycles of IVF in a year. He opined that, if R.B. had begun IVF in 2018, "three to four cycles would medically probably result in a greater than 50 percent cumulative pregnancy rate"—i.e. that, after three or four cycles of IVF, she would, more likely than not have become pregnant. He also opined that a patient "like" R.B. "could likely perform three to four cycles in one calendar year."

Dr. Wheeler agreed that R.B.'s AMH levels would probably have been declining while she (hypothetically) was undergoing IVF in 2018 and 2019, but he stressed that IVF would allow the physicians "to see the quality of the eggs" and to select the best eggs for fertilization. He testified that "pregnancy has occurred at AMH levels at zero."

Sinai's counsel asked Dr. Wheeler if, when forming his opinions on R.B.'s ability to achieve a live birth through IVF, he accounted for her past miscarriages. Dr. Wheeler explained that he did, because a low level of "AMH is associated with . . . miscarriage risk."

Dr. Wheeler made clear that his opinions relied "in part" on nine articles that he submitted to the parties before the deposition. Those articles did not include a study by Phillip A. Romanski, M.D., which was not published until after the deposition.

## E. The Romanski Study

At some point after Sinai deposed Dr. Wheeler, he gave R.B. a study authored by Dr. Romanski and titled *Live-Birth Outcomes Among Women with Infertility and Anti-*

*Müllerian Hormone Levels of 0.3 ng/mL or Lower*.<sup>15</sup> R.B., in turn, shared the Romanski study with Sinai.

The Romanski study "estimate[d] the live-birth rate per [IVF] cycle and after cumulative infertility treatment among patients with anti-müllerian hormone (AMH) levels of 0.3 ng/mL or lower." A total of 978 patients participated in the study, and each patient underwent between one and three cycles of IVF. The study presents three relevant conclusions.

First, the study concludes that, after one completed cycle of IVF, women younger than 35 years old with an AMH level of 0.3 ng/mL or lower had a live-birth rate of 26.2 percent. The study compared this rate to the national average for live births for all women under 35 years of age, which was 55.6 percent.

Second, the study concludes that the "cumulative outcome" of live births for women younger than 35 with an AMH level of 0.3 ng/mL or lower who underwent "up to three initiated" IVF cycles was 38.8 percent.

Third, the study concludes that women younger than 35 with an AMH level of 0.3 ng/mL or lower, "after all infertility treatments[,]" including "cumulative IVF, ovulation induction, and unassisted cycles" have a live-birth rate of 48.9 percent. That rate, according to the study, was "comparable with the national rate per single IVF cycle." Dr. Wheeler made notations on the copy of the study, including one notation emphasizing

<sup>&</sup>lt;sup>15</sup> 140(5) Obstet. Gynecol. 743 (2022).

that the national live-birth rate per single IVF cycle "is 55 [percent], for [under] 35 [yearolds.]"

Sinai did not ask to redepose Dr. Wheeler after it received the Romanski study.

## F. Sinai's Motion to Preclude Dr. Wheeler's Testimony

On February 28, 2023, Sinai moved to preclude Dr. Wheeler's testimony. Sinai argued that Dr. Wheeler's opinions were inadmissible under Maryland Rule 5-702 and *Daubert-Rochkind*.<sup>16</sup>

Sinai began by arguing that Dr. Wheeler could not say, to a reasonable degree of medical certainty, why R.B. had suffered a series of miscarriages and had not been able to achieve a live birth. Sinai conceded that Dr. Wheeler had expressly opined that egg quality was (in its words) "the likely cause" and "the most likely explanation" for the miscarriages. Nonetheless, Sinai argued that Dr. Wheeler had also said that he could only perform a differential diagnosis and that poor egg quality was not (in his words) "the only possibility."

Sinai went on to attack Dr. Wheeler's opinion that R.B.'s egg quality had declined at an accelerated rate, calling it "speculative." Sinai argued that Dr. Wheeler could point to no literature to support his opinion. Sinai did, however, acknowledge Dr. Wheeler's explanation that this "would be a very hard study to conduct."

Sinai proceeded to argue that if R.B.'s egg quality was declining even before 2018 (as Dr. Wheeler opined), and if poor egg quality was the likely cause of her earlier

<sup>&</sup>lt;sup>16</sup> Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993); Rochkind v. Stevenson, 471 Md. 1 (2020).

miscarriages (as he also opined), these opinions would "completely undermine[]" his principal opinion that, but for the delay in pursuing IVF from May of 2018 through November of 2019, R.B. would have carried a child to term. Dr. Wheeler, Sinai argued, "has no basis for concluding that the same eggs which were responsible for her three years of failed attempts at a viable pregnancy would, more likely than not, have achieved a live birth between May, 2018 and November, 2019."

Sinai took issue with Dr. Wheeler's opinion that, had R.B. undergone three to four cycles of IVF, she would probably have succeeded in achieving a viable pregnancy. Sinai argued that his deposition testimony, read literally, "contemplates only a pregnancy, but not a live birth." Sinai added: "Dr. Wheeler has never articulated why, if Mrs. [B.] was unable to maintain a pregnancy as early as 2015, she would be able to maintain one between 2018 and 2022, despite his opinion that her egg quality and quantity was continuing to decline."<sup>17</sup>

Sinai also took issue with Dr. Wheeler's opinion that R.B. could have completed three to four cycles of IVF between May of 2018 and November of 2019. In support of this argument, Sinai advanced a number of factual contentions concerning the physical, emotional, and financial challenges of undergoing IVF.

According to Sinai, the scientific literature "flatly refutes" Dr. Wheeler's opinions. Sinai cited the Gleicher study, to which Dr. Wheeler referred at his deposition.

<sup>&</sup>lt;sup>17</sup> In fact, Dr. Wheeler testified that IVF facilitates a successful pregnancy because it allows the physicians "to see the quality of the eggs" and to select the best eggs for fertilization.

According to Sinai, the Gleicher study established that R.B. had only a 10 percent chance of pregnancy with several IVF cycles. "These numbers," Sinai argued, "clearly fall short of meeting [the] burden of proof."

Similarly, Sinai contended the scientific literature did not support an opinion that R.B.'s chances of becoming pregnant changed between May of 2018 and November of 2019. Sinai cited the article, mentioned in Dr. Wheeler's deposition, that purportedly says "that women with AMH values below .05 ng/mL will yield less than three follicles in an IVF cycle."<sup>18</sup> Sinai also cited the Revelli article, to which Dr. Wheeler referred, for the proposition that age is more important than AMH values in determining pregnancy rates. The Revelli article, Sinai asserted, does not support "Dr. Wheeler's speculation that Mrs. [B.]'s chances of achieving pregnancy decreased between the ages of 30-32."

In the final paragraph of the 18-page motion, Sinai addressed the Romanski study. It described Romanski's conclusion as follows: "in patients younger than 35 years old with an AMH level of 0.3 ng/mL, when all IVF and non-IVF treatment cycles were included, the cumulative live-birth rate became comparable with the national rate, which was 55%." Nonetheless, Sinai asserted that the Romanski study does not support Dr. Wheeler's opinion that, but for the 18-month delay in pursuing IVF, R.B. would probably have achieved a live birth. It argued that the Romanski study "does not differentiate between AMH levels from close to zero to .03." "Thus," Sinai wrote, "there is no proof offered that the decrease in Mrs. [B.]'s AMH made any difference in her chances of a live

<sup>&</sup>lt;sup>18</sup> "Follicles" are "sacs in the ovaries that each contain an egg." *In Vitro Fertilization Overview*, MAYO CLINIC, https://perma.cc/9H83-8W7C.

birth." Instead, Sinai argued, her chances "remained the same, even after the alleged delay period."

#### G. R.B.'s Opposition to the Motion to Preclude

On March 24, 2023, R.B. opposed the motion to preclude Dr. Wheeler's testimony. In her opposition, R.B. first addressed the argument that Dr. Wheeler could not say why she had suffered multiple miscarriages. She argued that Dr. Wheeler had opined, to a reasonable degree of medical probability, that the cause of the miscarriages was poor egg quality associated with DOR. In support of her argument, R.B. discussed the differential diagnosis that Dr. Wheeler had performed in order to rule out other causes and to determine that poor egg quality was the most likely cause. She observed that the law does not require an expert to identify the cause of a medical condition with absolute certainty.

R.B. turned next to the attack on Dr. Wheeler's opinion that her ovarian reserve and egg quality were declining at a much faster rate than those of other women of her age. She pointed out that between May of 2018, when Dr. Hinting misinformed her of the results of her bloodwork, and November of 2019, when she first learned that she had DOR, her AMH levels declined by 66 percent, from an already-low level of .212 ng/mL to .07 ng/mL. Later, she remarked that Dr. Wheeler had "four data points"—four measurements of her declining AMH levels over more than two years—on which to base his opinions.

R.B. responded at length to the argument that Sinai's negligence was (in R.B.'s words) "harmless" because she was already suffering from DOR in May 2018. R.B.

asserted that Dr. Wheeler, Dr. Hinting, and her treating doctors all agree that a 29-yearold woman with an AMH of .212 ng/mL should have received treatment immediately from a fertility specialist. She claimed that, according to Dr. Wheeler, a 29-year-old woman "has a much better chance of a successful pregnancy" than a 40-year-old with the same AMH level, because the younger woman's egg quality will be better. She noted that in March 2020, when her AMH level had fallen to .07 ng/mL, she was still able to produce three eggs. She argued that, had she undergone IVF in May of 2018, when her AMH levels were three times higher than they were less than two years later, "the medical science and medical literature shows [sic] that [she], more likely than not, would have produced significantly more eggs of a higher quality, leading to a successful pregnancy and a live birth."

R.B. disputed the contention that Dr. Wheeler's opinions had no support in the scientific literature. She argued that no single study would account for the specific circumstances of her case. She appealed instead to "generally," "commonly," or "widely" accepted medical principles. It is "widely accepted," she argued, that DOR indicates poor egg quality, that age is critical in determining a woman's ability to conceive and maintain a successful pregnancy, that a woman of R.B.'s age had a much greater chance of conceiving than a 40-year-old woman with the same AMH levels, that DOR worsens over time, and that R.B. should have been referred immediately for fertility treatment in May of 2018, when her bloodwork showed that she had an AMH level of .212 ng/mL.

Finally, R.B. took issue with the use of a discovery deposition as a means of presenting a *Daubert-Rochkind* challenge. She complained that Sinai "did little to dig beneath the surface of Dr. Wheeler's opinions and actually obtain any explanations" of them.

R.B.'s opposition did not mention the Romanski study.

## H. Sinai's Reply

On June 22, 2023, Sinai replied to R.B.'s opposition. Sinai began by arguing that, because Maryland does not recognize loss of chance<sup>19</sup> claims, R.B. had the burden to show that, "1) if [she] had begun fertility treatments in May 2018, she would have been more likely than not to have a child and 2) due to the conduct of Defendants, that likelihood was reduced by over 50%."

Sinai argued that, without epidemiological studies, R.B. could not meet her burden. In addition, Sinai challenged Dr. Wheeler's opinion that R.B.'s miscarriages were caused by poor egg quality associated with DOR, arguing that he did not rule out all other causes, that the medical literature suggests that egg quality depends more on age than on AMH levels, and that there is no "objective test" to determine the quality of unfertilized eggs.

Sinai reiterated its challenge to Dr. Wheeler's opinion that R.B.'s ovarian reserve and egg quality declined at an accelerated rate compared to those of other women of her

<sup>&</sup>lt;sup>19</sup> A loss of chance claim is a "tort theory that permits recovery for avoiding some adverse result or of achieving a more favorable result." *Barton v. Advanced Radiology P.A.*, 248 Md. App. 512, 525 (2020).

age. Sinai asserted that it was "essentially a guess" for Dr. Wheeler to opine, as he did, that the accelerated decline began when R.B. was 25 or 26 years old. Sinai conceded that Dr. Wheeler had four data points to use in projecting the rate of decline, but argued that he had never used the methodology before and that its reliability had not been tested. Sinai complained that Dr. Wheeler did not identify the "normal rate of decline for women" of R.B.'s age. And Sinai repeated the argument that if Dr. Wheeler were correct that DOR indicates poor egg quality, then R.B.'s egg quality was "extremely poor" even before May of 2018.

Finally, Sinai reiterated the assertion that, even if all of R.B.'s miscarriages resulted from poor egg quality attributable to DOR, Dr. Wheeler did not explain why "he is confident to a [reasonable] degree of medical certainty that [R.B.] would have produced eggs capable of a successful pregnancy between May 2018 and November 2019." Here, on the final two pages of the reply, Sinai turned to the Romanski study.

Sinai quoted the conclusion of the Romanski study: in patients younger than 35, with AMH levels of .3 ng/mL, "when all IVF and non-IVF treatment cycles were included," the "cumulative live-birth rate" becomes "comparable with the national rate per single IVF cycle." Sinai observed that, next to that sentence, Dr. Wheeler had a handwritten notation to the effect that the national rate is 55.6 percent for women under 35. Thus, Sinai asserted that Dr. Wheeler had "extrapolate[ed]" from that figure to conclude that R.B. had more than a 50 percent chance of successful pregnancy in 2018. Sinai identified "two problems" with Dr. Wheeler's reliance on the Romanski study.

First, citing Figure 2 in the Romanski study, Sinai pointed out that "the cumulative live-birth rate for women under 35 with AMH levels of 0.3 or less *was less than 50%*." (Emphasis in original.) In fact, the rate was 48.9 percent. Although Romanski and his co-authors called that rate "comparable" to the national average, Sinai argued that it was insufficient to show R.B. "was more likely than not to have a successful pregnancy in 2018."

Second, Sinai argued that both in 2018, when Dr. Hinting misinformed R.B. about her bloodwork, and 2019, when R.B. discovered that she had DOR and began fertility treatments, she was less than 35 years old and had AMH levels of less than .3 ng/mL. "In other words," Sinai argued, "she remained in the same category for purposes of the Romanski study, and thus the same cumulative live-birth rate applies—still under 50%."

#### I. Daubert-Rochkind Hearing

The parties appeared in the Circuit Court for Baltimore City on June 30, 2023, for a *Daubert-Rochkind* hearing. Dr. Wheeler was not present and did not testify.

At the hearing, the parties reprised some of their written arguments, but the discussion mainly involved the Romanski study and its implications. Sinai argued that the Romanski study is the only "study that Dr. Wheeler says shows that had [R.B] been referred [to IVF] in May of 2018 she had a more than 50 percent chance of a live birth." It argued that Dr. Wheeler placed too much weight on the study's conclusion that women under 35 with AMH levels under 0.3 ng/mL can achieve a live-birth rate "comparable" to the national average of 55.6 percent after all reproductive interventions. "[I]f you look

inside the study," Sinai argued, "the live birth rate cumulatively for those women is actually 49.8%," not more than 50 percent.<sup>20</sup>

Sinai concluded with these comments:

The only data that we have is that Ms. [B.] had a suspected miscarriage in 2015 and a confirmed miscarriage in 2017. Dr. Wheeler fails to explain why, despite those miscarriages, in spite of those pregnancies that did not result in a live birth, IVF would have been more likely than not to result in [her] carrying a pregnancy to viability if only Ms. [B.] had begun treatment 18 months earlier than she actually did.

The court responded that Sinai was asking it to make "a really close call," between 50.01 percent and 49.8 percent. The court expressed doubt that, in the "exercise of [its] gate-keeping function," it "should be splitting hairs that closely." Sinai responded that it, too, would harbor doubt "if Dr. Wheeler could point to anything that suggested there was a greater than 50 percent likelihood" of a live birth. The Romanski study, Sinai argued, "doesn't say[,] despite multiple miscarriages for these women[,] they still achieved a 49.8 [sic] percent chance of a successful pregnancy."

In response to Sinai, R.B. argued that Dr. Wheeler had "divined that the multiple miscarriages related to egg quality more likely so than not." R.B. argued, however, that in IVF "[t]he more eggs that are retrieved, the higher the likelihood of a quality egg being [pro]duced."<sup>21</sup> Dr. Wheeler knew that R.B. was still able to produce three eggs in November of 2019, when her AMH levels were only a third of what they had been when

<sup>&</sup>lt;sup>20</sup> Either counsel for Sinai misspoke or there is an error in the transcription: the rate is only 48.9 percent.

<sup>&</sup>lt;sup>21</sup> The transcript erroneously states "reduced."

Dr. Hinting should have referred her for fertility treatment. Furthermore, Dr. Wheeler knew that R.B. had the ability to become pregnant, that "her husband's sperm was tested to be normal," and that R.B. had no anatomical abnormalities with her reproductive organs. Hence, R.B. concluded, Dr. Wheeler's opinion, that R.B. could have achieved a live birth had she begun IVF in May of 2018, "is based upon widely accepted principles" in the field of reproductive endocrinology.

In a colloquy with counsel for R.B., the court pointed out that *Rochkind* directs Maryland courts to consider "alternative causation modalities."<sup>22</sup> The court explained that, in this case, the alternative explanation for R.B.'s inability to give birth would be "[her] miscarriage history." R.B. responded that Dr. Wheeler is "able to conclude" from the four distinct data points of R.B.'s AMH levels that it is an "[egg] quality [issue] that caused the miscarriages."

The court repeated its concern, saying that "the literature"—i.e., the Romanski study—supports the conclusion that there was a 49 percent chance that R.B. would have achieved a live birth had she begun IVF in 2018, not a 55 percent chance. The court added that "the literature is not expressly accounting for a miscarriage history."

The court took a recess after hearing the parties' arguments. When the court returned, it granted Sinai's motion to preclude Dr. Wheeler's testimony because, it said,

<sup>&</sup>lt;sup>22</sup> See Rochkind v. Stevenson, 471 Md. at 36.

Dr. Wheeler was "unable to bridge the analytical gap"<sup>23</sup> between the studies on which he relied and his ultimate conclusions. In explaining the basis for its decision, the court expressed concern about "a lack of data and/or information regarding certain aspects of [R.B.]'s medical history and history of miscarriage." The lack of data or information, the court said, undermined the reliability of Dr. Wheeler's analysis. Apparently referring to R.B.'s history of miscarriages, the court said that Dr. Wheeler failed "to account for obvious alternative explanations" for her inability to achieve a live birth.

In its ruling from the bench, the court accepted Dr. Wheeler's opinion that R.B.'s egg quality was diminishing rapidly as the result of DOR. The court also accepted Dr. Wheeler's opinion that R.B.'s miscarriages were caused by poor egg quality.

Then, however, the court identified what it thought was "the real problem[]" with Dr. Wheeler's testimony: "[T]he most supported aspect of Dr. Wheeler's opinion" was the Romanski study, and "the study itself doesn't account for a miscarriage history[.]" For that reason, the court did not "believe that Dr. Wheeler's testimony gets beyond speculation as it relates to the ultimate outcome of a live birth had there been an aggressive IVF intervention 18 months" before R.B. first learned that she had DOR.

Neither party had included any information in their respective briefs about the extent to which the Romanski study accounts for miscarriage history. The court based its

<sup>&</sup>lt;sup>23</sup> An analytical gap exists because of a "'failure by the expert witness to bridge the gap between [the expert's] opinion and the empirical foundation on which the opinion was derived." *State v. Matthews*, 479 Md. 278, 317 (2022) (quoting *Savage v. State*, 455 Md. 138, 163 (2017)).

decision solely on the written and oral arguments of counsel, not on the testimony of a medical expert with skill and training in interpreting a medical study.

## J. Sinai's Motion for Summary Judgment

Sinai moved for summary judgment on July 7, 2023. Because the court excluded Dr. Wheeler's causation testimony, Sinai argued that R.B. "now cannot prove causation, a required element of her negligence claim."

## K. R.B.'s Motion for Reconsideration and Dr. Wheeler's Affidavit

On July 17, 2023, R.B. moved for reconsideration of the court's order to exclude Dr. Wheeler's testimony. R.B. argued that the court's ruling was "based on a misunderstanding of the medical science and the medical literature." R.B. offered an affidavit from Dr. Wheeler in support of her motion.

In his affidavit, Dr. Wheeler asserted that, contrary to what the court found, the Romanski study *does* account for miscarriage history. Specifically, Dr. Wheeler claimed that "because DOR is, on its own, associated with miscarriage, the Romanski Study accounts for the variable of miscarriage in its calculation of live birth rate." In other words, because the Romanski study followed over 900 women with DOR as they attempted to achieve a live birth by means of IVF, the rates reported in the study necessarily included incidents in which a woman failed to achieve a live birth because she experienced a miscarriage.

Dr. Wheeler summed up his affidavit by saying that, based on his analysis of the Romanski study and his review of R.B.'s medical history, he determined that R.B., more likely than not, would have achieved a live birth "if she initiated a minimum of four (4)

IVF cycles" between May of 2018 and November of 2019. Dr. Wheeler opined that R.B. could have, realistically, undergone four or more IVF cycles in that time. In fact, he opined, she "could have completed [six] to [seven] full IVF cycles[]" between May of 2018 and November of 2019.

Sinai opposed R.B.'s motion for reconsideration on July 21, 2023. Sinai argued that the trial court "correctly found an analytical gap between the data in this case and conclusions that Dr. Wheeler seeks to draw from that data." Sinai claimed that it was "too late" for R.B. to "try [to] salvage Dr. Wheeler's causation opinion" with an affidavit attached to a motion for reconsideration. Regardless, according to Sinai, "nothing in Dr. Wheeler's affidavit or [R.B.'s] motion for reconsideration provides any basis for this Court to reverse its decision." Sinai reiterated that, according to the Romanski study, the cumulative live-birth rate for women under 35 with AMH levels of 0.3 or lower "got close" to a 50 percent live-birth rate, but that the number was, in fact, only "49.5%."24 Finally, Sinai took issue with Dr. Wheeler's assertion that "the more IVF cycles a woman has, generally the greater likelihood there is that a woman will have a successful pregnancy."

## L. Trial Court's Reconsideration Hearing

The parties appeared before the court on July 31, 2023, for a jury trial. Before beginning jury selection, the court heard oral argument on R.B.'s motion for

<sup>&</sup>lt;sup>24</sup> As previously stated, the cumulative live-birth rate for women under 35 with AMH levels of 0.3ng/mL or less is actually 48.9 percent.

reconsideration. Once again, the Romanski study was a major focus of the parties' arguments.

At this hearing, however, R.B. also emphasized the importance Dr. Wheeler placed on an article authored by Eleni Greenwood Jaswa, M.D.: Eleni Greenwood Jaswa, M.D. et al., *Diminished ovarian reserve is associated with reduced euploid rates via preimplantation genetic testing for aneuploidy independently from age: evidence for concomitant reduction in oocyte quality with quantity*, Fertility and Sterility, Vol. 115, No. 4 (Apr. 2021). R.B. argued that the Jaswa study "was specifically referenced and incorporated in the Romanski study." According to R.B., the Jaswa study says there is a "56.8% chance [of a live birth] in a single IVF cycle" in a woman with DOR "when there's a quality embryo achieved." R.B. characterized the Jaswa study, in tandem with the Romanski study, as "the science that Dr. Wheeler has relied on."

After hearing argument, the court denied the motion for reconsideration. The court ruled that it "reviewed the Romanski study[,]" and the record "speaks for itself, as it relates to [the court's] understanding of the Romanski study in the context of Dr. Wheeler's testimony regarding [R.B.'s] miscarriage history."

After the court denied the motion for reconsideration, R.B. conceded the outstanding motion for summary judgment. This appeal followed.

#### **M.** This Appeal

On appeal, the Romanski study became a focus of the parties' briefs. R.B. argued that the court misread the Romanski study when it stated that the study does not deal with the issue of miscarriages. As Dr. Wheeler explained (in the affidavit that he submitted

after the court precluded his testimony), the Romanski study clearly does account for a history of miscarriages, "as the condition of DOR is associated with miscarriages." By their "very nature," R.B. argued, "the live birth rates determined by the Romanski study factored in miscarriages, [the] failure of an embryo to implant, and IVF cycle cancellation."

In addition, R.B. explained how the Romanski study supported the opinion that R.B. had a greater than 50 percent chance of achieving a live birth even though the study itself reported that women with AMH levels akin to R.B.'s had a (slightly less) than 50 percent chance of achieving a live birth. The Romanski study reported live-birth rates after the first three initiated cycles of IVF and after all efforts at conception were considered cumulatively. Dr. Wheeler, however, extrapolated from the study to opine that R.B.'s likelihood of achieving a live birth was greater than 50 percent had she participated in more than three cycles of IVF between May of 2018 and November of 2019. R.B. stressed that, according to Dr. Wheeler, she could have undergone six to seven cycles of IVF during that period.

Sinai, too, focused on the Romanski study. It wrote: "[T]he fatal flaw in Dr. Wheeler's opinion is that he failed to explain how [his] conclusion"—that R.B. had a greater than 50 percent chance of a successful pregnancy between May of 2018 and November of 2019—"flowed from the Romanski study and the circumstances of [R.B.]'s medical history, including the 2017 miscarriage." Dr. Wheeler, Sinai argued, "failed to bridge the analytical gap between the findings of the Romanski study and the conclusion that [R.B.] would have had a greater than 50% chance of a successful pregnancy had she

begun fertility treatments in May of 2018." Sinai explained: "Not only did the women in the study never achieve above a 50% live birth rate, but Dr. Wheeler did not account for [R.B.]'s specific history of miscarriages when relying on the results of the study to conclude that [R.B.] would have, more likely than not, achieved a successful pregnancy."

At oral argument, R.B. once again put forth her argument that the Romanski study, bolstered by the Jaswa study, supported Dr. Wheeler's opinion that R.B. would have been more than 50 percent likely to achieve a live birth had she begun IVF in May of 2018. The Jaswa study found, according to R.B., that the problem for women with DOR is "they have trouble getting to that quality embryo because of the quality of the eggs." Once a woman with DOR gets a quality embryo, however, the Jaswa study found she has a 56.8 percent likelihood of achieving a live birth.

Sinai maintained that Dr. Wheeler had misread the Romanski study, but this time argued specifically that he provided no support for his proposition that *more than* three IVF cycles would increase the chances of a live birth to over 50 percent. Sinai relied on the Romanski study to rebut Dr. Wheeler's opinion, but did not address the Jaswa study when refuting that specific point.

R.B. concluded her appellate argument by emphasizing that "what we have is lawyers arguing medical science."

#### **QUESTIONS PRESENTED**

On appeal, R.B. raises two questions:

1. Did the trial court abuse its discretion by excluding Dr. Wheeler's causation opinions?

2. Did the trial court err in granting summary judgment in favor of Defendants based on the improper exclusion of Dr. Wheeler's causation opinions?

For the reasons stated below, we shall vacate the judgment and remand this case to the circuit court with instructions to hold an evidentiary hearing to evaluate the admissibility of Dr. Wheeler's testimony. We decline to address the admissibility of the testimony itself.

#### **STANDARD OF REVIEW**

Appellate courts review a trial court's decision concerning the admissibility of expert testimony under Maryland Rule 5-702 for an abuse of discretion. *See Rochkind v. Stevenson*, 471 Md. 1, 10 (2020); *Oglesby v. Baltimore Sch. Assocs.*, 484 Md. 296, 326-27 (2023). In cases involving the admission of expert testimony under *Daubert-Rochkind*, the precise meaning of "abuse of discretion" appears to be in flux. *See, e.g.*, *Abruquah v. State*, 483 Md. 637, 652 n.5 (2023); *Katz, Abosch, Windesheim, Gershman* & *Freedman, P.A. v. Parkway Neuroscience* & *Spine Inst., LLC*, 485 Md. 335, 386-407 (Booth, J., concurring).

In general, an abuse of discretion occurs "where no reasonable person would take the view adopted by the trial court," *Oglesby v. Baltimore Sch. Assocs.*, 484 Md. at 327 (quoting *Maryland Bd. of Physicians v. Geier*, 451 Md. 526, 544 (2017)), or "when 'the decision under consideration [is] well removed from any center mark imagined by the reviewing court and beyond the fringe of what that court deems minimally acceptable." *Id.* (quoting *Wilson v. John Crane, Inc.*, 385 Md. 185, 199 (2005)). In the federal courts, where the *Daubert* standard originated, "'[a]n abuse of discretion can occur where the [trial] court applies the wrong law, follows the wrong procedure, bases its decision on clearly erroneous facts, or commits a clear error in judgment." *Katz, Abosch, Windesheim, Gershman & Freedman, P.A. v. Parkway Neuroscience & Spine Inst., LLC*, 485 Md. at 404 (Booth, J., concurring) (quoting *United States v. Brown*, 415 F.3d 1257, 1266 (11th Cir. 2005)).

"An appellate court reviews without deference a trial court's grant of a motion for summary judgment, reviews the record in the light most favorable to the nonmoving party, and construes any reasonable inferences that may be drawn from the facts against the moving party." *Oglesby v. Baltimore Sch. Assocs.*, 484 Md. at 327 (quoting *State v. Rovin*, 472 Md. 317, 341 (2021) (cleaned up)). "Summary judgment is appropriate where 'there is no genuine dispute as to any material fact and [] the [moving] party is entitled to judgment as a matter of law." *Id.* (quoting Md. Rule 2-501(a)).

#### DISCUSSION

Maryland Rule 5-702 provides that "[e]xpert testimony may be admitted, in the form of an opinion or otherwise, if the court determines that the testimony will assist the trier of fact to understand the evidence or to determine a fact in issue." "In making that determination, the trial court must determine: '(1) whether the witness is qualified as an expert by knowledge, skill, experience, training, or education[;] (2) the appropriateness of the expert testimony on the particular subject[;] and (3) whether a sufficient factual basis exists to support the expert testimony." *Oglesby v. Baltimore Sch. Assocs.*, 484 Md. at

327 (quoting Md. Rule 5-702).

"The third factor, the existence of a sufficient factual basis, has been interpreted as encompassing two sub-factors—whether the expert had an adequate supply of data and whether the expert used a methodology that was reliable." *Id.* "Absent either sub-factor, an expert's opinion is inadmissible." *Id.* at 328. This case concerns the reliability of the expert's methodology.

As shown by the foregoing discussion of the procedural history of this case, the challenge to Dr. Wheeler's expert testimony has changed repeatedly as the case progressed. On the question of causation, Sinai began largely by contending that Dr. Wheeler could point to no support in the medical literature for his opinion about the probability of R.B. achieving a live birth. The case gradually began to take a different shape after Dr. Wheeler's deposition, when he produced the Romanski study, which had not been published in a physical format when he was deposed.

In the briefing on the motion to preclude, the Romanski study received little attention from Sinai and none from R.B. Instead, the parties debated other issues. Those issues fell by the wayside as the proper use and interpretation of the Romanski study came to dominate the *Daubert-Rochkind* hearing before the circuit court.

The court precluded Dr. Wheeler from testifying because it accepted Sinai's argument, first asserted at the hearing itself, that the Romanski study does not account for a history of miscarriages. The correctness of that conclusion has become the overriding issue in this appeal. Yet, neither Dr. Wheeler nor any medical expert had ever been

examined about whether or how the Romanski study addresses the issue of miscarriage. The court had to rely on the arguments of counsel to interpret a scientific document.

From the affidavit that Dr. Wheeler submitted after the court precluded him from testifying, it is now beyond any serious dispute that the Romanski study *does* tacitly account for a history of miscarriages.<sup>25</sup> Because the participants in the study had low levels of AMH, and because low levels of AMH are associated with miscarriage risk, some of the more than 900 women in the study undoubtedly had a history of miscarriages. Furthermore, in calculating the likelihood that IVF and other fertility treatments would assist women with low AMH levels to achieve a successful pregnancy, the study compiles and reports the number of attempts that failed for any reason— including miscarriage. The circuit court erred in reaching the contrary conclusion, and that error can be characterized as an abuse of discretion. *Katz, Abosch, Windesheim, Gershman & Freedman, P.A. v. Parkway Neuroscience & Spine Inst., LLC*, 485 Md. at 404 (Booth, J., concurring).

It is admittedly hard to fault the court for reaching that erroneous conclusion. The court did not receive Dr. Wheeler's explanation of the Romanski study until after it had ruled. And, ordinarily, a court would have an enormous amount of discretion to decline to revisit an interlocutory ruling, like the decision to preclude Dr. Wheeler's testimony. *Cf. Steinhoff v. Sommerfelt*, 144 Md. App. 463, 484 (2002) (stating that "a post-trial

<sup>&</sup>lt;sup>25</sup> From Dr. Wheeler's deposition testimony, it also seems clear that DOR is associated with miscarriages. For example, Dr. Wheeler testified that a low level of "AMH is associated with . . . miscarriage risk."

motion to reconsider is not a time machine in which to travel back to a recently concluded trial in order to try the case better with hindsight"). For two reasons, however, we think that the court ought to have exercised its discretion to reconsider its decision in this case.

First, Dr. Wheeler's affidavit shows that the central premise of the court's ruling was wrong—the Romanski study *does* account for miscarriages. Second, R.B. had no reason to put forward Dr. Wheeler's affidavit until after the hearing—not only was the Romanski study itself only a minor issue before the hearing, but the specific question of whether the study accounted for miscarriages did not come up until the hearing. In fact, although Sinai made several points about the Romanski study in the briefing in support of the motion to preclude, its written submissions said nothing about whether the study accounted for miscarriages—the issue that Sinai now identifies as the "fatal flaw." In these circumstances, R.B. submitted Dr. Wheeler's affidavit as soon as she could.

"[W]hen a party makes a prompt and timely request that a court reconsider a ruling because of a development that the party could not have raised before the court ruled, the court can and should reconsider its decision." *Schlotzhauer v. Morton*, 224 Md. App. 72, 85 (2015), *aff'd*, 449 Md. 217 (2016). Because the court erred or abused its discretion in declining to reconsider its decision in light of the new and timely information in Dr. Wheeler's affidavit, and because its decision to exclude Dr. Wheeler's testimony led directly to the grant of summary judgment against R.B., we must vacate the judgment and remand the case for further proceedings.

But vacating the judgment does not mean that the court must deny Sinai's motion to preclude. In response to Dr. Wheeler's affidavit and in its briefing in this appeal, Sinai has raised other questions concerning the extent to which the Romanski study supports his opinions. For example, even though the Romanski study reports only a 48.9 percent chance of achieving successful pregnancy (after three initiated cycles of IVF and all other efforts at conception were considered cumulatively), Dr. Wheeler opines that R.B., more likely than not, would have achieved a successful pregnancy because he assumes that she could have undergone more than three cycles of IVF in the 18 months between May of 2018 and November of 2019. On appeal, Sinai has questioned whether Dr. Wheeler has a reliable methodology for extrapolating from the results for women who had up to three initiated cycles of IVF (or from women who had up to three initiated cycles of IVF and pursued other efforts to conceive) to conclude that their success rate would be even higher if they underwent more than three initiated cycles of IVF. If the case proceeds as it has in the past, other questions will certainly arise.

We shall remand this case for further proceedings on the issue of whether Dr. Wheeler's proposed testimony satisfies the requirements of *Daubert-Rochkind*. On remand, the court should conduct an evidentiary hearing to evaluate Sinai's arguments in support of its motion to preclude. Dr. Wheeler should testify at the hearing and be subjected to cross-examination. Nothing in this opinion should be taken to express any view as to how the court should resolve the motion to preclude on remand.

## JUDGMENT OF THE CIRCUIT COURT FOR BALTIMORE CITY VACATED; CASE REMANDED FOR FURTHER

# PROCEEDINGS CONSISTENT WITH THIS OPINION. COSTS TO BE PAID BY APPELLEES.