Module

DAT_V2_US

Display

Introduction to Diagnostic Testing

Backend Name: DAT_V2_US_01_Intro

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. When you begin your journey to explore fertility treatment, your fertility specialist will work with you to outline a diagnostic plan. This is also called your infertility work-up— it's tailored specifically for you and will help determine the cause of your infertility and the most likely treatment plan for success. To better understand how your medical team will develop your diagnostic plan,

it may be helpful to have a quick review of the menstrual cycle. An ovary is populated by small fluid-filled structures called follicles, each of which produce estrogen and contain an immature egg. Follicle Stimulating Hormone, or FSH, stimulates the growth of a single follicle in one ovary. This happens over about 14 days, causing the follicle to produce more estrogen, and the egg within that follicle to begin maturing. The rising estrogen level causes the uterine lining, also known as the endometrium, to thicken; in preparation for the potential implantation of a fertilized egg. Once the follicle is fully mature and the estrogen level high, production of another hormone, called luteinizing hormone or LH, rises sharply and completes maturation of the egg, triggering ovulation. Ovulation is the release of an egg from the ovary into the fallopian tube, where a sperm traveling through the reproductive tract can find the egg and fertilize it. If fertilization occurs, the fertilized egg, or embryo, enters the uterus from the fallopian tube after about 6 days, and may become embedded in the uterine lining. This is called implantation and can lead to a healthy pregnancy. Throughout your diagnostic testing, we'll evaluate your ovarian function, egg quality, the fallopian tubes, semen, and the uterine wall and cavity to identify any issues and recommend the best course of treatment to achieve a healthy pregnancy..

Ovarian Reserve Testing

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. An important step in determining your fertility diagnosis is to understand the quantity of potential eggs that remain in your ovary, also known as your ovarian reserve. Ovarian reserve testing may involve a combination of ultrasounds and blood tests. Ultrasounds are used to count the number of small antral follicles, and a blood test will measure your anti-Müllerian hormone, or AMH levels. AMH is secreted by the small preantral follicles found in the ovaries at the start of the cycle. A typical AMH level is 1.0–4.0 ng/ml, but this may be higher or lower depending on age. The antral follicle count and AMH level are very good predictors of ovarian reserve and response to fertility medication. A high AMH level and antral follicle count generally indicate good ovarian function. Blood tests may also be used to measure other reproductive hormone levels such as FSH, LH, estrogen, and progesterone, helping to further assess reproductive and ovarian function,

which may contribute to the overall picture of your fertility. .

Uterine Cavity and Fallopian Tube Assessment

Backend Name: DAT_V2_US_03_UterineCav

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Uterine Cavity and Fallopian Tube Assessment. To fully understand your fertility potential, we will evaluate your uterus, fallopian tubes, and ovaries. The simplest way to view your reproductive anatomy is by using a transvaginal, or internal, ultrasound. To prepare for an internal ultrasound, you will first empty your bladder. The scanning probe is then lubricated and inserted. Many patients say the probe feels like a tampon being inserted. During the procedure, you may feel some pressure, but the process should not be painful. The scanning probe visualizes the structure of the uterus as well as the ovaries. This may allows your medical team to asses the size and structure of the uterus and the presence of fibroids or endometrial polyps . This scan can also be used to monitor ovulation and assess the thickness and pattern of your uterine lining.

. A slightly more involved procedure is a saline sonogram. In combination with a transvaginal ultrasound, a speculum is placed as if you are undergoing a pap smear. . An infusion of sterile saline solution expands the uterine cavity so your medical team can examine the uterine wall for polyps, fibroids, or uterine scarring. Another tool your medical team may use is a hysterosalpingogram, or HSG. An HSG begins with the placement of a speculum to visualize and cleanse the cervix. A small, flexible catheter is then placed into the cervix and a clinician passes a small amount of contrast dye through the catheter, filling the uterine cavity and fallopian tubes. X-rays are taken throughout this process to visualize the movement of the contrast dye through the uterus and into the fallopian tubes. This method of viewing and tracking x-ray dye in real time is known as **fluoroscopy**. If the fluoroscopy shows dye "spilling out" at the ovarian ends of the tubes, it is likely that an egg would also be able to pass through, so the tubes are considered open. If the fluoroscopy does not show dye passing through the tubes, an egg wouldn't be able to pass through either, so a blockage would be diagnosed. If there is blockage at the end of a tube, that is known as hydrosalpinx. . In a very small percentage of patients, an infection can develop following an HSG that may need to be treated with antibiotics. This risk is greater in patients with past instances of pelvic infection. Side effects of these procedures include cramping or aching, though these typically wear off quickly. Spotting may also occur in the days following an HSG—this is completely normal and will go away on its own.. Another tool your medical team may use is a hysterosonogram. All of these tests are simple and take less than 10 minutes to perform and can provide your medical team with vital information about the root causes of infertility. . . . . .

Semen Analysis

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Up to 50% of infertility cases involve an issue with sperm or the reproductive system that produces and ejaculates semen. A semen analysis is a diagnostic tool that measures seminal volume, sperm count, sperm motility, how the sperm are moving, and sperm morphology, the shape of the sperm

. Sperm production is impacted by both **age** and **environment**, and can change over time. A semen analysis may be recommended even if a patient has contributed to a pregnancy in the past or is otherwise healthy. If you anticipate needing special accommodations to produce a semen sample, let your medical team know so they can go over your options with you. If your semen analysis finds results below typical parameters,

your medical team may also perform bloodwork to assess hormone levels and test for genetic conditions. You should not be discouraged if you receive an infertility diagnosis relating to sperm or urology, as there are many treatments to address these issues.. . .

Next Steps

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In addition to diagnostic tests to measure baseline fertility,

infectious diseases screening is required for all parties contributing to a pregnancy, including donors or surrogates. This bloodwork reduces the risk of infectious disease being passed onto the patient or harming the pregnancy or child. Once all tests have been completed, your medical team will design a treatment plan that maps out your fertility journey. The plan will take many considerations into account including your **age,** especially the age of the egg being used in treatment, **infertility diagnosis, how long you've been attempting to conceive, any previous treatments and their outcomes**, and, of course, your **personal preferences**. **Diagnostic testing** can identify fertility challenges, providing vital information that will guide treatment and help you achieve your fertility goals. Our team is committed to making the diagnostic process as efficient and personalized as possible, ensuring you receive the very best care..