Gynecology AND OBSTETRICS

By Helen K. Kelley

Through research and minimally invasive testing and surgical techniques, Atlanta physicians are making a difference for patients with high-risk pregnancies, gynecological cancers and more.

Non-Invasive Prenatal Testing Moves Toward Becoming Standard of Care

Non-Invasive Prenatal Testing (NIPT) is used to analyze cell-free fetal DNA circulating in maternal blood. It allows for earlier and more accurate detection of chromosomally abnormal pregnancies. Over the past two years, NIPT has become an increasingly popular option for women who desire aneuploidy screening during pregnancy in North America and Europe.

Cell-free DNA (cfDNA) fragments are present in the bloodstream. In pregnant women, cfDNA from both the mother and the pregnancy circulates in the maternal blood. NIPT is able to isolate and analyze the fetal fraction of the cfDNA and detect fetal trisomies such as Down syndrome (trisomy 21) with >99.9 percent accuracy with less than 0.1 percent (1/1000) false-positive rate.

Genevieve Fairbrother, MD, MPH

According to Genevieve Fairbrother, M.D., M.P.H., with Obstetrics & Gynecology of Atlanta, the high accuracy of NIPT, along with the additional benefit of a decreased false-positive rate, has made this new approach a "game changer."

"Prior to NIPT, the most accurate non-invasive, low-risk option had a 1/20 false-positive rate. These older tests could detect affected pregnancies 90 percent of the time, but out of a thousand women, there would be 50 false-positives and maybe only three true-positives," she explains. "With a false-positive rate this high, it is difficult to counsel a woman when her 'positive screen' is correct less than 5 percent of the time."

A non-invasive prenatal screen, NIPT requires only two vials of the patient's blood and can be performed as early as the 10th week of pregnancy. From this blood sample, the test distinguishes between the mother's cell-free DNA and that of her fetus. It determines normal levels of chromosomes using reference chromosomes, and then, with specialized probes, evaluates chromosomes of interest, such as chromosome 21, to determine if the pregnancy is affected.

"We're so happy to have the ability to detect chromosomal abnormalities with this kind of accuracy and at the same time limit our patients' exposure to unnecessary invasive tests such as CVS or amniocentesis. The advances that this technology has made in dramatically decreasing the false-positive rate are creating a paradigm shift in our approach to aneuploidy screening in pregnancy," Fairbrother says. "The majority of insurance companies have agreed to cover this test for women who are age 35 and older at delivery. We have high expectations that an upcoming

validation study of general risk patients involving more than 18,000 patients will prompt insurance companies to expand coverage for the general risk population. I offer it to all of my patients. I foresee NIPT becoming the new standard of care here in the United States."

Can Diet and Exercise Modulate Ovarian, Fallopian Tube and Primary Peritoneal Cancer Progression-free Survival?

A clinical trial, overseen by John McBroom, M.D., at Piedmont Atlanta Hospital, is exploring whether or not a change in diet and exercise in women with ovarian, fallopian tube or primary peritoneal cancer has an effect on the length of time the patient is cancer-free following their initial treatment. Some studies suggest diet and exercise may improve survival for cancer patients, but no studies have been done to show if changes in diet and exercise can have an effect on cancer returning in women treated for ovarian, fallopian tube or primary peritoneal cancer.

Other goals include finding out if the changes in diet and exercise will improve overall quality of life and the ability to be physically active. In addition, the first 200 patients to enter the study will have their blood and carotenoid levels tested, which will tell them about the kind of foods the patient is eating.

Patients are being sought for the trial. Among the criteria are:

- Histological diagnosis of epithelial ovarian cancer, fallopian tube or primary peritoneal carcinoma, clinical stage II, III or IV at diagnosis
- Completion of all primary chemotherapy and consolidation therapy at least six weeks ago, and no more than six months and two weeks, prior to enrollment and must be in complete remission
- Documented complete response to treatment based on normal CA-125 and CT scan or MRI with contrast
- GOG Performance Grade of 0, 1, or 2
- Not currently enrolled in an ongoing medically prescribed diet or physical activity regimen
- No other chronic disease that would preclude randomization into a lifestyle intervention trial

For more information, contact Franca Cenciarelli, 404-425-7927, franca.cenciarelli@piedmont.org

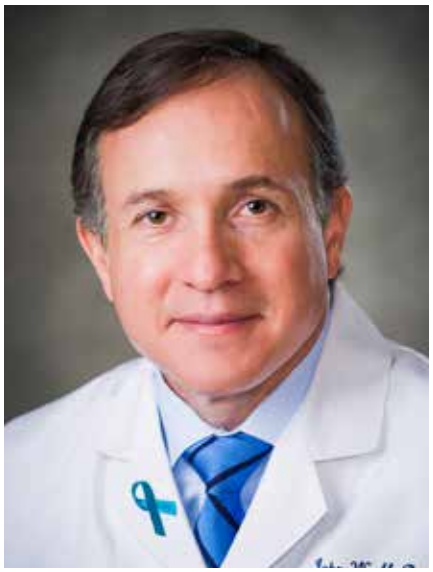
Breakthrough New Fibroid Surgery

Physicians at WellStar Kennestone Hospital are the first in Georgia to treat women with symptomatic fibroids using the Acessa™ Procedure. Kevin Windom, M.D., recently performed the first of these procedures.

The minimally invasive procedure is highly effective and less invasive than most surgical alternatives, with faster recovery time and symptom relief. Additionally, the need for further fibroid treatment is reduced, as demonstrated by clinical studies in which 90 percent of patients three years after the procedure did not require further medical or surgical treatment.

Fibroids are benign, non-cancerous tumors in a woman's uterus that, when symptomatic, can be very painful and cause heavy bleeding, pressure on the bladder or rectum, and abdominal discomfort and distention. The laparoscopic Acessa™ procedure allows the surgeon, using a small scope and ultrasound guidance, to locate the patient's fibroids and treat them individually with radiofrequency energy to destroy them. The surrounding healthy tissue is left intact and unharmed. ■

Kevin Windom, MD



John McBroom, MD