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## Improving Survival in Cervical Cancer Patients

BY HEIDI SPLETE

FROM THE SOCIETY OF GYNECOLOGIC ONCOLOGISTS' ANNUAL MEETING ON WOMEN'S CANCER

SAN FRANCISCO — Extensive lymphadenectomy improves survival for node-negative cervical cancer patients, based on a review of data from more than 5,500 women with stage IA2-IIA cervical cancer.

Overall, the greatest benefit was seen in women who had more than 30 nodes removed, but this was seen only in

Major Finding: Women with node-negative cervical cancer who had more than 30 lymph nodes removed were 37% less likely to die, compared with those who had fewer than 10 nodes removed.

**Data Source:** Retrospective study of more than 5,500 women in the SEER database.

**Disclosures:** Dr. Shah had no financial conflicts to disclose. Dr. Gold has received grants and research support from Ikonisys Inc., and he has served on the advisory board of Hologic Inc.

node-negative patients, Dr. Monjri Shah reported.

"Likely this represents a removal of the micrometastases, or [means that clinicians] are identifying women and triaging them to a proper adjuvant treatment group," she said in an interview.

Lymph node status is "the most important prognostic factor that influences treatment planning," noted Dr. Shah of Columbia University in New York. "While the diagnostic benefit of lymphadenectomy is well established, the potential therapeutic benefit remains unknown," she told attendees, explaining why the investigators undertook the study.

Dr. Shah and colleagues reviewed data from the National Cancer Institute's SEER (Surveillance, Epidemiology, and End Results) database on 873 node-positive patients and 4,648 node-negative patients who were diagnosed with stage IA2-IIA cervical cancer between 1998 and 2005. The researchers created separate models for node-positive and nodenegative patients.

Among the node-positive patients, 131 (15%) had 10 or fewer nodes removed, 320 (37%) had 11-20 nodes removed, 236 (27%) had 21-30 nodes removed, and 186 (21%) had more than 30 nodes removed.

Among the node-negative patients, 762 (16%) had 10 or fewer nodes re-

moved, 1,709 (37%) had 11-20 nodes removed, 1,251 (27%) had 21-30 nodes removed, and 926 (20%) had more than 30 nodes removed.

Significant predictors for a more extensive lymphadenectomy included age older than 40 years, white race, earlier year of diagnosis (1988-1993), and stage IB-IIA disease. Fac-

tors that predicted cancer-specific survival included age younger than 40 years, white race, later year of diagnosis (2000-2005), squamous histology, small tumor size, stage IA2, and the number of lymph nodes removed.

Overall, patients who had more than 30 nodes removed were 29% less likely to die than those who had 10 or fewer nodes removed. Extensive lymphadenectomy had no significant effect on survival for women with positive nodes. But among node-negative women, those with more than 30 nodes removed were 37% less likely to die than those who had fewer than 10 nodes removed.

The morbidity of lymphadenectomy should be weighed against the possible survival advantage, Dr. Shah advised.

The results were surprising in that

women with positive nodes had no survival advantage with an extensive lymphadenectomy, but those with pathologically negative nodes did, she added in an interview. "Given that this is a retrospective analysis of the SEER database, we certainly need more information regarding comorbidities and factors that may have influenced patient and physician preferences for treatment," said Dr. Shah.

Prospective, observational studies are needed to determine whether the results are an effect of extensive lymphadenectomy, and to determine how many lymph nodes constitute an adequate lymphadenectomy, as has been done in other types of cancers, she added.

Lymph node positivity is an important

predictor of survival in cervical cancer, said study discussant Dr. Michael Gold of the University of Oklahoma in Oklahoma City.

In early-stage disease, lymph node positivity is among the most common criteria for adjuvant chemoradiation, said Dr. Gold. In theory, more-thorough lymphadenectomy in early-stage patients should allow clinicians to detect more occult metastatic disease, as has been shown with other cancers, including cancers of the colon, rectum, breast, lung, skin, and endometrium. Given the potential survival advantage that is seen with more thorough lymphadenectomy, more research is needed to make evidence-based recommendations.

## **Provocative Findings**

In an interesting retrospective evaluation of the SEER database, investigators noted superior survival within the subgroup of individuals

with node-negative cervical cancer who had the largest number of lymph nodes (more than 30) removed at the time of surgery, compared with those from whom fewer than 10 nodes were removed.

These provocative findings represent another example of the age-old debate as to whether the favorable outcome results from the elimination of "micrometastatic" cancer in these individuals who undergo extensive lymph node surgery, or whether the procedure has simply more carefully defined a population with "true" lymph node-negative disease.

In other words, the surgery has led to the detection of patients with microscopic, positive cancer who are no longer included in the

lymph node-negative subgroup.

If this is the correct interpretation, then the procedure is helpful as a diagnostic strategy, but the performance of the surgery itself is not the reason for the improved outcome.

Only a well-designed and well-conducted, phase III, randomized trial can appropriately address and answer this important and clinically relevant issue.

Maurie Markman, M.D., is the vice president of clinical research at the University of Texas MD Anderson Cancer Center, Houston.

## DXA More Accurate Than BMI to Measure Obesity

BY MIRIAM E. TUCKER

From the annual meeting of the American Association of Clinical Endocrinologists

BOSTON — Dual x-ray absorptiometry was a more accurate predictor of obesity than was body mass index in a retrospective comparison of the two measures in 1,234 adults.

Despite its widespread use, BMI is not an accurate indicator of body fat. Direct measures of adiposity, such as those obtained by dual x-ray absorptiometry (DXA), are far more precise, Dr. Eric R. Braverman and his associates reported in a poster at the meeting.

"We have a big problem with the BMI. You could retitle it the 'baloney mass index.' It's a mathematical equation. ... The scientific standard is clearly subpar compared to our other endocrinology standards," Dr. Braverman of the department of neurological surgery at Weill Cornell Medical College, New York, said at a press briefing.

Medical records of 1,234 private adult outpatients (490 men, 744 women) who had both BMI and DXA measurements during 2003-2009 were analyzed. They had a mean age of 51 years, a mean BMI of  $26.2 \, \text{kg/m}^2$ ,

Major Finding: BMI failed to detect obesity in 37% and falsely detected it in 5% in a study of 1,234 adults who had both BMI and DXA measurements.

**Data Source:** Medical chart review of private adult outpatients.

**Disclosures:** Study funded by the PATH Research Foundation NY. Dr. Braverman, who is director of PATH medical centers in New York and Philadelphia, said he had no other financial disclosures.

and a mean percentage body fat of 29.5%. They were classified as obese or nonobese for both parameters based on the American Bariatric Society's definitions: BMI of at least 30 mg/kg $^2$ , and body fat percentages of 25% for males and 30% for females based on DXA.

Using BMI, 249 (20%) were classified as obese. DXA measurement showed that of those 249, 95% (237) were obese and 5% (12) were nonobese on the basis of body fat percentage.

Using DXA, 689 (56%) were classified as obese. Of those 689, 34% (237) were obese and 66% (452) were not obese based on BMI.

Thus, 37% of patients were misclassified by BMI: 452 were found to be obese by DXA but nonobese by BMI and 12 were obese by BMI but not by DXA. The 66% of patients classified as obese by DXA but who were "missed" by BMI had lower muscle and lean body mass, Dr. Braverman and his associates noted.

The BMI measurement of obesity in this study was approximately identical to the national percentage of obesity, which is also determined by BMI. "However, we have shown that BMI is a highly insensitive measure, resulting in an underdiagnosis of obesity. If we can extrapolate from the rest of our data on the national scale, it is very likely that obesity is a much bigger epidemic than is currently acknowledged," the investigators said in the poster.

Dr. Braverman, who is also director of the Place for Achieving Total Health (PATH) medical centers, New York and Philadelphia, said in an interview that he foresees DXA becoming a routine part of clinical practice in the future, to measure bone density as well as assess obesity. "In the 21st century, the physical is really quite outdated and almost no yield to silent disease that every endocrinologist works in. DXA and an efficiency system that can deliver it at \$3 a test will make it simply a part of the physical."