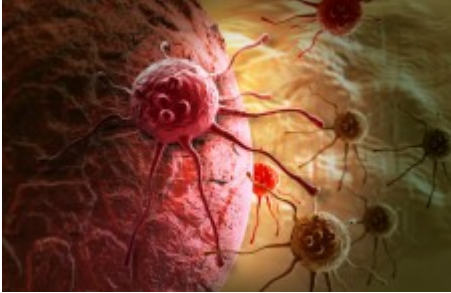


How accurate are breast biopsies?

By ACSH Staff — March 18, 2015



About 1.6 million American women have breast biopsies each

year. A biopsy obtaining actual tissue for microscopic evaluation is considered the gold standard for patient management and research outcomes. However, a [new study published yesterday in JAMA](#) ^[1] suggests that while breast biopsies are still the best option for diagnosing invasive cancer, they are less reliable at identifying more subtle abnormalities.

The researchers, led by Dr. Joann G. Elmore of the University of Washington School of Medicine in Seattle, asked 115 pathologists in eight states to independently assess biopsy slides for 240 women. Then, the researchers compared the pathologists diagnoses with those given by a panel of three leading experts who are internationally recognized for their research on diagnostic breast pathology. These were very, very experienced breast pathologists who have written textbooks in the field, Dr. Elmore [stated](#) ^[2].

For invasive cancer, the outside pathologists matched the experts in 96 percent of the cases. For completely benign findings, the outside pathologists matched the experts in 87 percent of the readings.

While there was a high level of agreement between the outside pathologists and the experts for invasive cancer and completely benign cases, Dr. Elmore and her team found many differences between the interpretations for DCIS (ductal carcinoma in situ) and atypia (abnormal but not cancerous cells). For DCIS, the outside pathologists matched the experts 84 percent of the time, but missed 13 percent of cases where the experts had found it. They also diagnosed DCIS in 3 percent of cases where the experts had not. For atypia, the outside pathologists matched the experts in only 48 percent of the interpretations. The outside pathologists found atypia in 17 percent of the cases where experts had not, and missed it in 35 percent of the cases where the experts saw it.

The overall agreement between the outside pathologists and the experts was just over 75 percent. However, the authors note that their study has limitations. For example, in real life, pathologists review multiple slides per case instead of just a single slide. Also, in real cases, pathologists can consult colleagues about ambiguous findings, while in Dr. Elmore's study, they had to assess the slides independently.

It is often thought that getting the biopsy will give definitive answers, but our study says maybe it won't, said Dr. Elmore. An [editorial in JAMA](#) [3] that accompanied the findings recommended patients seek second opinions in ambiguous cases.

COPYRIGHT © 1978-2016 BY THE AMERICAN COUNCIL ON SCIENCE AND HEALTH

Source URL: <https://www.acsh.org/news/2015/03/18/how-accurate-are-breast-biopsies>

Links

[1] <http://jama.jamanetwork.com/article.aspx?articleid=2203798>

[2] http://www.nytimes.com/2015/03/18/health/breast-biopsies-dcis-atypia-diagnosis-leave-room-for-doubt.html?_r=0

[3] <http://jama.jamanetwork.com/article.aspx?articleid=2203783>