

Computer-Aided Mammography Did Not Improve Diagnostic Accuracy

Despite its greater cost, computer-aided detection (CAD) in digital mammography examinations did not show improved diagnostic accuracy compared with non-CAD digital screening, according to a study published in *JAMA Internal Medicine*.¹

Researchers compared the accuracy of digital screening mammography interpreted with CAD (n = 495 818) or with non-CAD digital screening (n = 129 807) in 323 973 women from 2003 to 2007. After linking with tumor registries, 3159 breast cancers were identified within 1 year of screening.

The researchers compared the two methods' sensitivity, specificity, and screen-detected and interval cancers per 1000 women, adjusting for patient age, race/ethnicity, time since previous mammogram, examination year, and registry. No metric showed improvement

with CAD mammography compared with non-CAD.

Mammography sensitivity was 85.3% (95% CI, 83.6%-86.9%) in the CAD group and 87.3% (95% CI, 84.5%-89.7%) in the non-CAD group. Specificity was 91.6% (95% CI, 91.0%-92.2%) in the CAD group and 91.4% (95% CI, 90.6%-92.0%) in the non-CAD group. Both groups had detection rates of 4.1 per 1000 women.

The researchers stressed the importance of their study in terms of health care cost, as the Centers for Medicare and Medicaid Services provides higher payments for CAD examination compared with non-CAD examination. CAD mammography costs more than \$400 million per year, according to researchers.

1. Lehman CD, Wellman RD, Buist DSM, et al. Diagnostic accuracy of digital screening mammography with and without computer-aided detection [published online ahead of print September 28, 2015]. *JAMA Intern Med*.

Diabetes Rate Has Risen Among Adults

The estimated prevalence of diabetes among adults in 2011 and 2012 was approximately 12% to 14%, according to research published in the *Journal of the American Medical Association*.¹ This was higher than the rate reported in an earlier period.

Researchers used cross-sectional surveys conducted from 1988 to 1994 and 1999 to 2012 as part of the NHANES study to gather data on prevalence of diabetes and prediabetes among various populations, using criteria such as age, sex, race/ethnicity, education level, and poverty income ratio tertiles.

Researchers defined diabetes as previous diagnosis of disease or an A1C level of 6.5% or greater, a fasting plasma glucose (FPG) level of 126 mg/dL or greater, or a 2-hour plasma glucose (PG) level of 200 mg/dL or greater; prediabetes was defined as an A1C level of 5.7% to 6.4%, an FPG level of 100 mg/dL to 125 mg/dL, or a 2-hour PG level of 140 mg/dL to 199 mg/dL.

The overall unadjusted prevalence of diabetes in 2011-2012 was 14.3% (95% CI, 12.2%-16.8%) for total diabetes, 9.1% (95% CI, 7.8%-10.6%) for diagnosed diabetes, 5.2% (95% CI, 4.0%-6.9%) for undiagnosed diabetes, and 38.0% (95% CI, 34.7%-41.3%) for prediabetes. Compared with non-Hispanic white participants (11.3% [95% CI, 9.0%-14.1%]), the age-standardized prevalence

of total diabetes was higher among non-Hispanic black participants (21.8% [95% CI, 17.7%-26.7%]; $P < .001$), non-Hispanic Asian participants (20.6% [95% CI, 15.0%-27.6%]; $P = .007$), and Hispanic participants (22.6% [95% CI, 18.4%-27.5%]; $P < .001$).

Excluding the 2-hour PG level as a qualification for diabetes, disease rates were lower and rates of undiagnosed diabetes were higher. The unadjusted prevalence of total diabetes was 12.3% (95% CI, 10.8%-14.1%), 25.2% (95% CI, 21.1%-29.8%) of which was undiagnosed.

Using the definition for diabetes that excluded the 2-hour PG level, rates of age-standardized disease prevalence were 9.8% (95% CI, 8.9%-10.6%) in 1988-1994, 10.8% (95% CI, 9.5%-12.0%) in 2001-2002, and 12.4% (95% CI, 10.8%-14.2%) in 2011-2012 ($P < .001$ for trend). Rates increased significantly in every age, sex, and race/ethnic group, at all education levels, and in all poverty income ratio tertiles. ■

1. Menke A, Casagrande S, Geiss L, Cowie CC. Prevalence of and trends in diabetes among adults in the United States, 1988-2012. *JAMA*. 2015;314(10):1021-1029.

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