

Including diagnosis related costs, 3-D mammography costs less than digital mammography

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Although digital breast tomosynthesis (DBT), or 3-D mammography, costs more than a digital mammography (DM) screening, it actually may help rein in cancer screening costs, according to preliminary findings (PD7-05) presented by researchers from the Perelman School of Medicine at the University of Pennsylvania during the 2017 San Antonio Breast Cancer Symposium. The group analyzed 46,483 screening episodes - a single screening mammogram and all subsequent breast diagnosis related costs for the following year - in two hospitals within the University of Pennsylvania Health System in 2012 and 2013.

"Early detection is critical to saving lives and lowering costs," said senior author Emily F. Conant, MD, chief of Breast Imaging at Penn Medicine. "Fortunately, [breast imaging](#) is more precise than ever thanks to DBT. Despite its higher initial cost, DBT is increasingly being embraced by radiologists nationwide. If you look at expenses associated with breast diagnosis in the following year after initial [screening](#), DBT is more cost effective in terms of health system or population level screening."

Previous studies modeling outcomes have demonstrated that DBT can be cost effective. In this study, the authors analyzed actual costs and patient outcomes within a single health system where both DM and DBT screening occurred. They excluded any episodes in which the patient had a prior [breast](#) cancer diagnosis or reached 90 years of age before the end of the follow-up period. DM represented 53 percent of the episodes and DBT represented 47 percent. Fifty three percent of women studied received DM and 47 percent received DBT.

They tested DBT and DM according to four outcomes - true positive (TP), true negative (TN),

false positive (FP), and false negative (FN) rates - by comparing the Breast Imaging Reporting and Data System (BI-RADS) score (assigned at screening with data about subsequent cancer diagnosis).

DBT was a more effective screening method. Compared to DM episodes, DBT episodes had lower FP (8.6% vs. 10.8%) and higher TN (90.9% vs. 88.7%, p

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