

**Introduction to Hendrick RE, Helvie MA, Hardesty LA. Implications of CISNET Modeling on Number Needed to Screen and Mortality Reduction With Digital Mammography in Women 40–49 Years Old. Am J Roentgenology 2014; 203; 1379-81.**

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In 2012, van Ravesteyn et al used Cancer Intervention and Surveillance Modeling Network (CISNET) modeling of Breast Cancer Surveillance Consortium (BCSC) data on screening mammography to estimate the threshold relative risk (RR) at which the “harm–benefit” ratio of screening women aged 40 to 49 years equals that of biennial screening for women aged 50 to 74 years. [1] Their paper included the first BCSC data specific to digital mammography screening, but limited digital mammography data to women aged 40-49 years. Their paper also was the first to model the benefits and risks of screening with digital mammography compared to screen-film mammography, again limiting the results to women 40-49 years of age.

Based on BCSC data and CISNET models of digital screening in women ages 40-49 years, our paper extends CISNET findings to estimate the mortality reduction and number needed to screen over 10 years to save one life (NNS) with annual and biennial digital mammography screening in women 40-49. [2] We find that annual digital mammography in women 40–49 years old saves 42% more lives and life-years than biennial digital mammography and that the NNS with annual digital mammography screening in women 40–49 years old is 588. [2] This compares to our previous estimate of NNS for annual screening in women 40-49, based on CISNET modeling of screen-film mammography, of 746 [3] and previous estimates by USPSTF of number of women 40-49 needed to invite to a randomized screening trial to save one life of 1904. [4]

**References:**

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3. Hendrick RE, Helvie MA. Mammography screening: a new estimate of number needed to screen to prevent one breast cancer death. *Am. J. Roentgenology* 2012; 198: 723-728.
4. U.S. Preventive Services Task Force. Screening for breast cancer: U.S. Preventive Services Task Force recommendation statement. *Annals of Internal Medicine*, 2009; 151: 716-726.