

Meeting abstract

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Intraductal assessment to determine response to chemopreventive interventions

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One of the difficulties that translational scientists encounter in evaluating agents to prevent breast cancer is the assessment of efficacy in real time. Classically, one evaluates chemopreventive efficacy based on whether the intervention leads to a lower number of cancers in the treatment than in the control group(s), but these studies require a large sample size and/or take years to complete in order to obtain a sufficient number of events for statistical comparison. We have used intraductal evaluation of breast nipple aspirate fluid (NAF) and mammary ductoscopy (MD) to assess response to both pharmacologic and nutritional chemopreventive interventions. Specifically, we have measured expression of specific proteins in NAF and changes in DNA methylation in MD specimens both before after the interventions. I will review our findings using these strategies, and discuss both the strengths and limitations of the approach.