

6<sup>th</sup> Global Summit on **CANCER AND ONCOLOGY RESEARCH**

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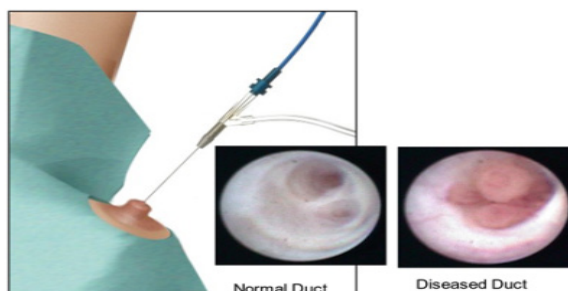
**Time for a New Approach to Breast Cancer Screening and Prevention – Intraductal Technologies in the Molecular Liquid Biopsy Age**

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**Statement of the Problem:** Screening for breast cancer and high risk lesions has for the last several decades relied upon mammography and other radiographic imaging such as ultrasound and MRI to supplement simple clinical exam. With the advent of advances in molecular pathology and liquid biopsy in oncology, we have yet failed to engage other techniques to address breast cancer detection and prevention. Preliminary investigations of intraductal technology and our understanding of progression to breast cancer in the ductal system have reached a point where new approaches may be possible. **Methodology & Theoretical Orientation:** New sub-millimeter endoscopy systems are now available and in use in some Asian, German and US centers to explore and direct sampling of intraductal lesions. Studies of ductal lavage and ductoscopy sampling have shown the weaknesses of classic cytology but tremendous power of molecular approaches to identify the earliest ductal changes which can indicate increased breast cancer risk or actual sub-clinical breast cancers at sizes far smaller than traditional breast radiographic imaging. Further ductoscopy has shown ability to correctly identify the splay of proliferative disease in a ductal system and therefore direct surgical ablation with more precision.

**Conclusion & Significance:** The rapid rise in breast cancer cases in regions of the world with limitations in traditional breast imaging methods calls for new methods of screening. Anti-estrogenic prevention is highly effective for pre-malignant lesions in the breast and relatively low cost. The combination of molecular pathology with micro liquid specimens and ductal screening of the breast with a variety of intraductal sampling techniques could provide the next major revolution in breast cancer management in this time breast cancer case escalation.

**Biography 1:**

Professor Dooley has a distinguished career in clinical and translational research into breast cancer at Johns Hopkins where he was the founding director of the Johns Hopkins Breast Center and now as the G. Rainey Williams Chair of Surgical Breast Oncology at the University of Oklahoma Stephenson Cancer Center NCI CC. He has won national and international awards for his efforts which include a lifetime achievement award for his work in the intraductal approach to breast cancer. He and Dr. Mukherjee are now developing the next generation of sub millimeter endoscopy devices and tools to allow liquid biopsy through such tiny endoscopes.

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