

Claire Cronin, MD, MBA

Young Clinician Award 2009

Investigator Profile

Education:

- BS, McGill University Montreal Canada
- MS, McGill University Montreal Canada
- MD, Tufts University Boston MA
- MBA, Babson College Wellesley MA

Clinical/Professional Appointment

- General Surgeon, Newton Wellesley Surgeons, Inc
- Affiliate Surgeon, MGH
- Assistant Clinical Professor, Tufts University School of Medicine

Recent Honors and Awards

- Teaching Surgery Clerkship Award, Tufts University School of Medicine



Impact on Care

- Breast cancer affects more than 190,000 patients annually in US with over 40,000 deaths per year
- Surgery is the oldest form of treatment and plays a key role in diagnosing, staging and treating cancer.
- Re-excision of margin after surgery is required in 30% cases
- Capturing electronic 3D reconstruction of pathology in EMR will improve care of patient in monitoring their disease and be available for research purposes and clinical trials.
- This reporting tool has the potential to improve the communication between the pathologist and surgeon by providing visualization of tumor size and location within the tissue sample.
- Medical providers will be in better position to direct surgical re-excisions and plan radiation therapy.

Abstract

As surgery has become the standard of care for most breast cancers, the pathology report becomes increasingly valuable to describe the tumor and specifically the margins to the other treating physicians.

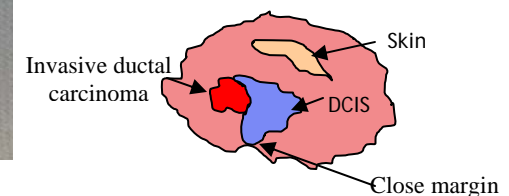
The goal in breast surgery is to remove the cancerous tissue (invasive or ductal carcinoma in situ) *with negative margins*. The definition of a negative margin is controversial and can be described as no tumor at the margin, 1 mm or most commonly 2 mm. Numerous studies have demonstrated a correlation between risk of recurrence and close margins¹. When a close margin is identified, the surgeon usually recommends that the patient return for a re-excision of that margin. This occurs 30% of the time nationwide when lumpectomies are performed.

The aim of this project is to transform the current surgical pathology report from a word document to one that not only meets the Commission on Cancer (CoC) guidelines but also includes a *visual component*. By being able to see the size and location of the tumor within the specimen, the medical providers will be in a better position to direct surgical re-excisions and plan radiation therapy. If this data is captured electronically than the exact margin distances will be available for research purposes and clinical trials.

Digital reconstruction of the tumor size and degree of DCIS vs invasive cancer will be performed automatically by a software program in collaboration with NWH Pathology Dept and Dr. Ron Kikinis, BWH Center for Image Guided Therapy.



Lumpectomy Specimen



2D representation of pathology report