

## POSTER ABSTRACT EXAMPLE:

### Identification of Surgical Quality Indicators in Breast Cancer Surgery

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**Introduction:** There is growing interest among government, insurance, and patient advocacy organizations in defining surgical quality measures. These efforts have focused primarily on factors influencing operative mortality, which is not applicable to breast cancer surgery. We proposed specific surgical outcomes as quality measures for initial breast cancer operations and assessed the feasibility of measurement and the variation between individual breast surgeons at a single academic institution.

**Methods:** Initial surgeries for a known breast malignancy were identified. Data was collected prospectively by specialized breast care nurses, entered into a central database, and reviewed by a surgeon for accuracy. Measures assessed were: 1) total mastectomy (TM) rate; 2) positive and close (<1mm) margin rate after partial mastectomy (PM); 3) mean number operations to obtain appropriate margins after PM; 4) number of lymph nodes from axillary dissection (AD); 5) proportion of completion AD performed after positive sentinel node biopsy (SLNB).

**Results:** 655 operations (DCIS =149, invasive = 506) performed by four surgeons from April 2003-March 2007. Institutional rate of initial TM was 24.7% (162/655) - 21.5% (32/149) for DCIS, and 25.7% (130/506) for invasive cancer. TM rate varied significantly by surgeon (20.2-40.5%,  $p = .03$ ), while mean tumor size (2.47 cm) did not ( $p=NS$ ).

Combined positive or close margin rate after PM was 29.6% (146/493) and varied by surgeon (14.5-38.3%,  $p<0.01$ ). Close margin rate was 19.1% (94/493) and varied by surgeon ( $p<0.01$ ), while positive margin rate (10.5%) did not ( $p=NS$ ).

Mean operations after initial PM was 1.14, and did not vary by surgeon (1.09-1.17,  $p=0.65$ ).

Median number of nodes retrieved with AD was 15 (range 1-44) and varied by surgeon (10-17,  $p=0.034$ ).

AD following positive SLNB ( $n=78$ ) demonstrated a wide range but did not vary significantly by surgeon (48.1-85.7%,  $p=0.22$ ).

**Conclusions:** Quality indicators for breast cancer surgery are identifiable, quantifiable, and can feasibly be assessed. We have identified variation in surgical practice patterns even among high volume surgeons. Implications of variability in surgical practice to more meaningful outcomes of patient satisfaction, breast cancer local recurrence and survival are unknown. Further study into the reasons for surgical practice variability and correlation to long term disease outcomes is warranted.