

Audit Title: Getting to Zero: A Quality Assessment of Multiple Interventions Aimed to Reduce Cancellation Rates in an Ultrasound-Guided Biopsy Program

Background: Given mounting healthcare systems fiscal pressure, we targeted the reduction of same-day cancellations of ultrasound-guided biopsies in order to reduce waste of departmental resources and inefficient workflow.

Audit Target: We aimed for zero same-day biopsy cancellations, where cancellation was defined as loss of a biopsy slot, where a biopsy either could not be attempted or was aborted by the radiologist prior to obtaining a tissue sample.

Method: A detailed database of every ultrasound-guided biopsy performed in our department was prospectively recorded from November 2012. Three unique quality interventions aimed at reducing cancellation rates were instituted at specific time points. For each of the three interventions, the cancellation rates both 6 months pre- and post-intervention were calculated retrospectively and tested for statistical significance using Fisher's exact test.

Intervention: Three unique quality interventions were each instituted in succession approximately one year apart over a three year period. These included: creation of a protocol decision support email group to discuss challenging cases prior to approval; formalized pre-booking anticoagulation guidelines with training for all technologists and booking clerks; and a dedicated paracentesis program including dedicated nursing support, separate location and recovery space.

Resources Required: This audit required buy-in from several allied health professionals and clerical staff, including booking clerks, sonographers, and radiologists. Ultrasound technologists input the data into the database in real-time at the time of biopsy, requiring easy to use spreadsheets and availability of computer consoles. The paracentesis program required the most resource support, including funding for additional peri-procedural nursing and separate recovery space in the department.

References:

1. Cancellation of MRI Guided Breast Biopsies for Suspicious Breast Lesions Identified at 3.0 T MRI. KS Johnson et al. Academic Radiology 2014, Volume 20, Issue 5, 569 – 575.
2. Canceled Stereotactic Core-Needle Biopsy of the Breast: Analysis of 89 Cases. LE Philpotts, CH Lee, LJ Horvath, and I Tocino. Radiology 1997, Volume 205, Issue 2, 423 – 428.
3. Percutaneous Image-Guided Biopsy of the Spleen: Systematic Review and Meta-Analysis of the Complication Rate and Diagnostic Accuracy. MD McInnes, AZ Kielar, DB Macdonald DB. Radiology 2011, Volume 260, Issue 3, 699-708.