Preoperative sonographic evaluation of axillary lymph nodes in breast cancer patients; a local experience

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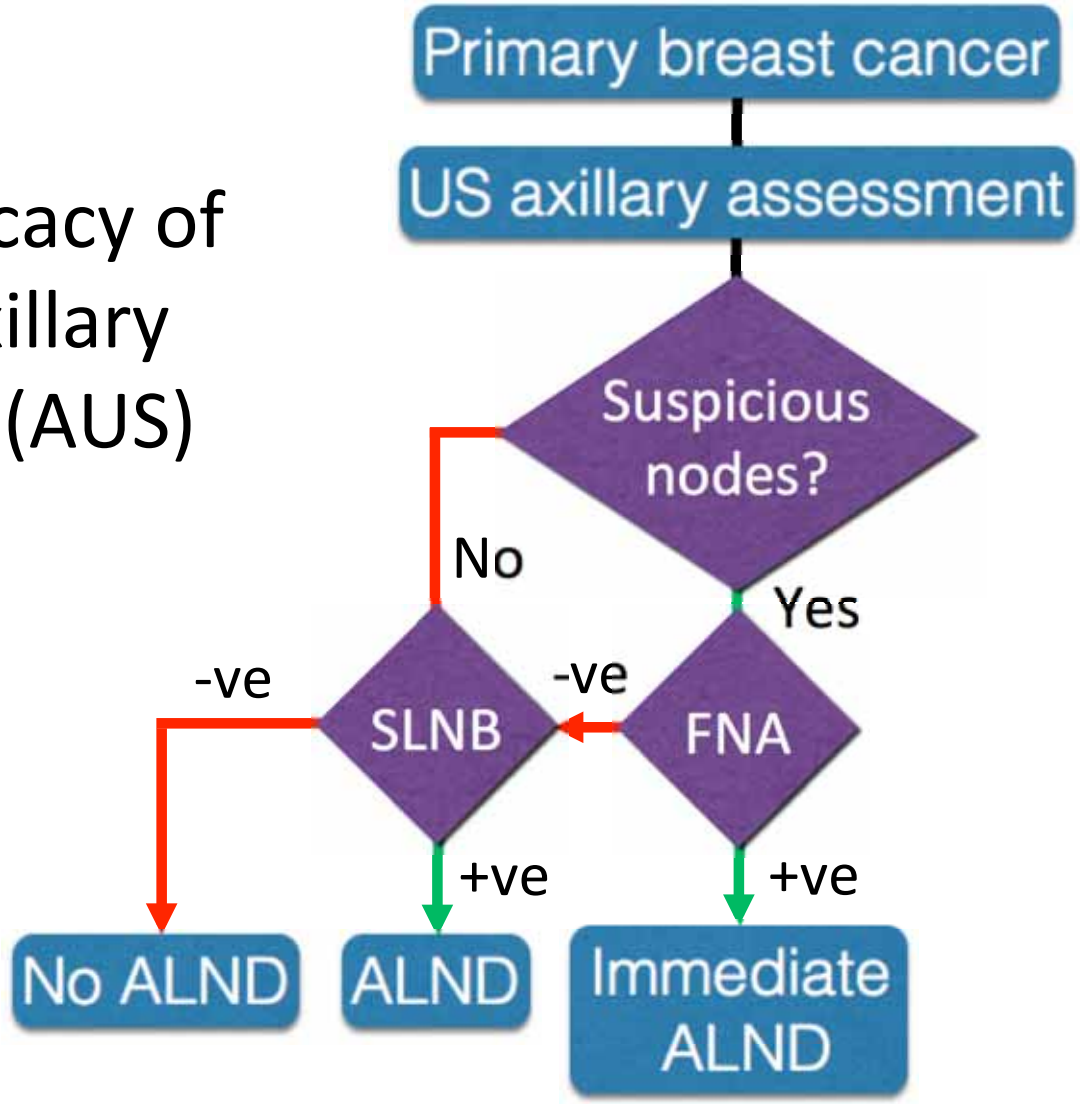
Canadian Association of Radiologists
L'Association canadienne des radiologistes

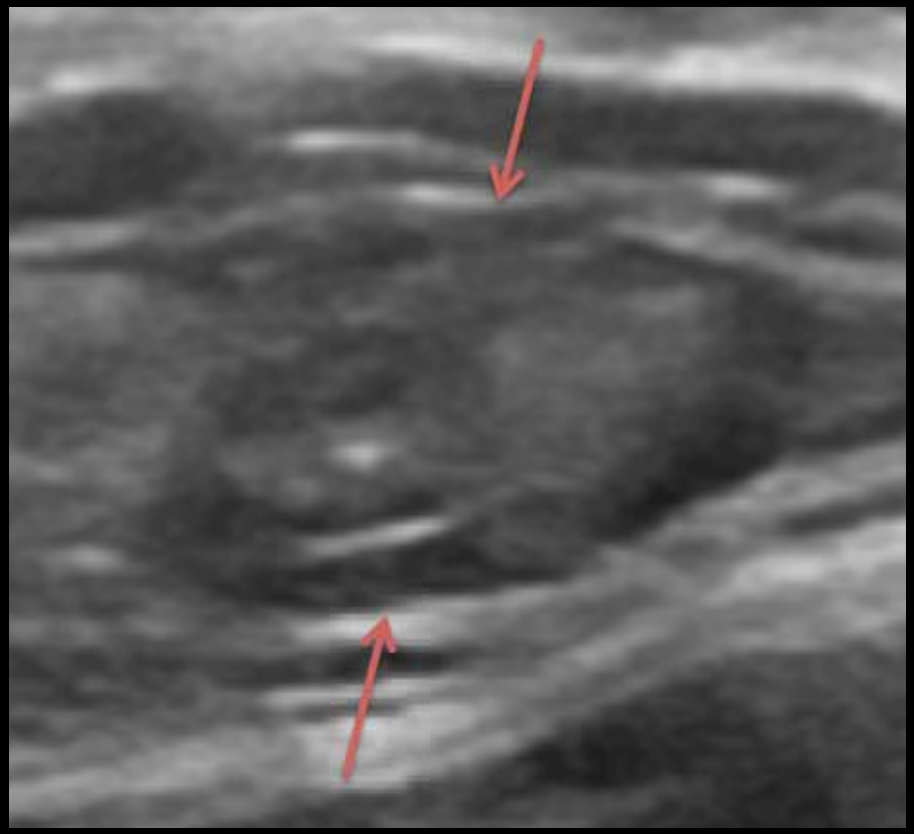
The authors declare that they have
no conflict of interest.

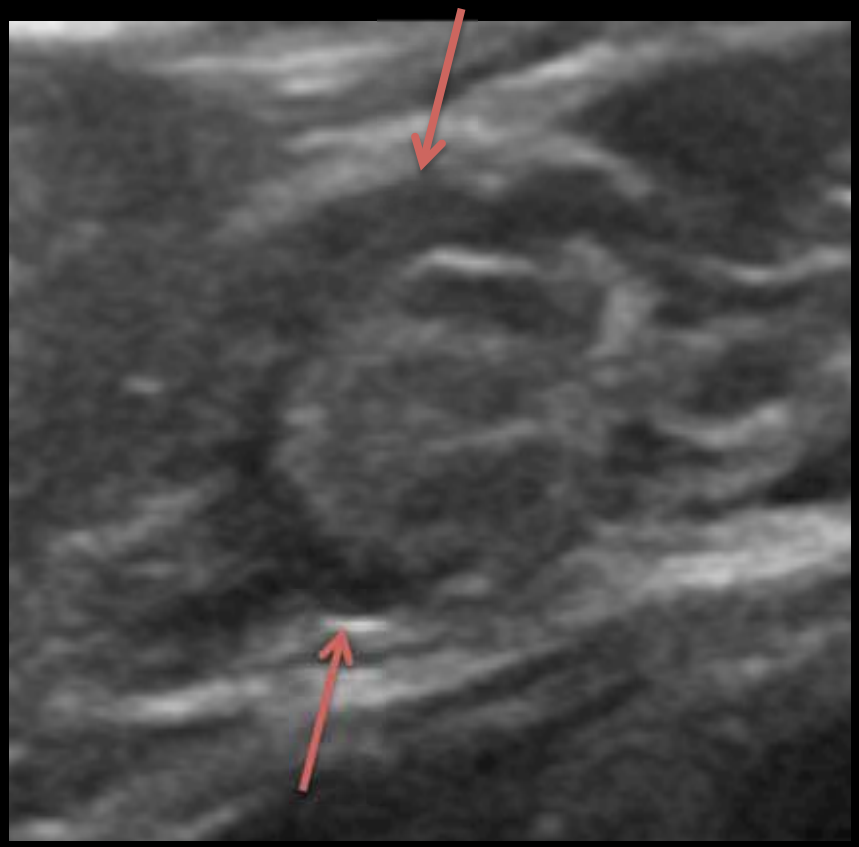
Background

Aim: assess efficacy of preoperative axillary lymph node US (AUS) interpretation

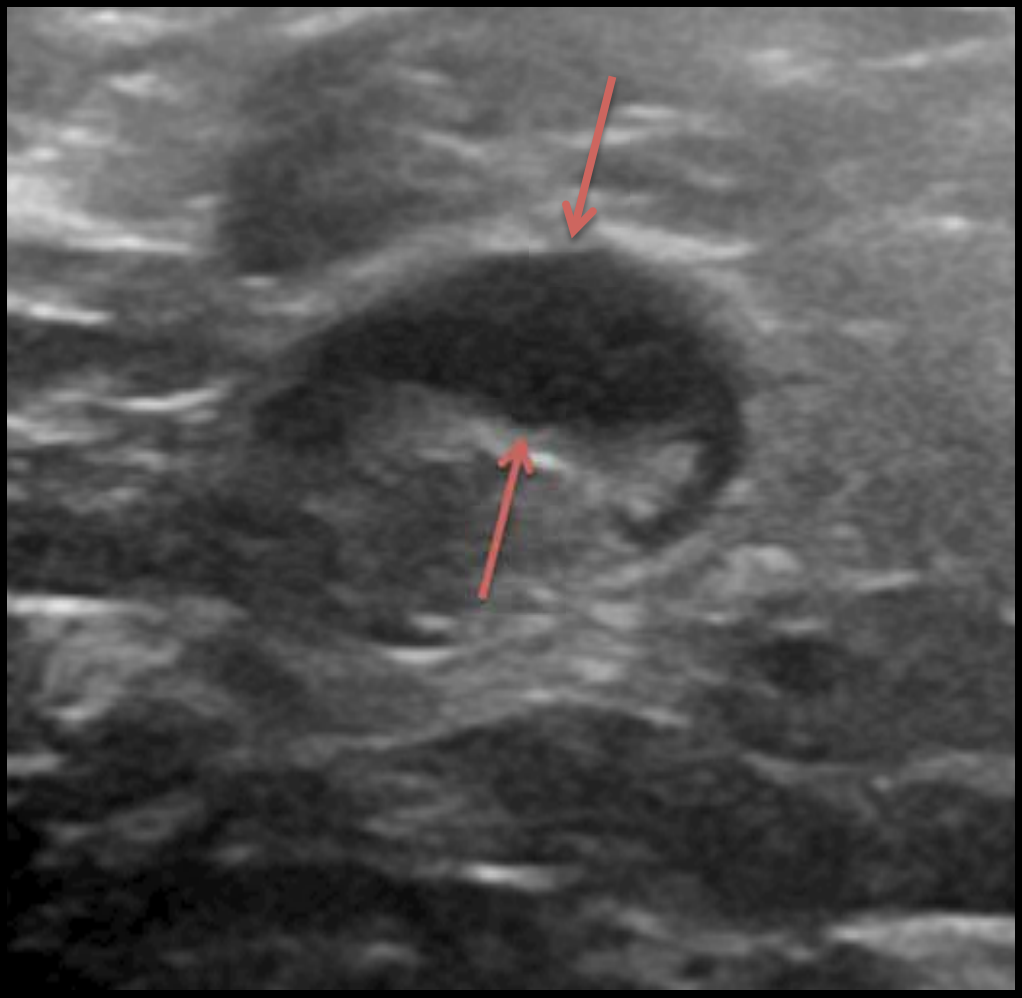


Normal node



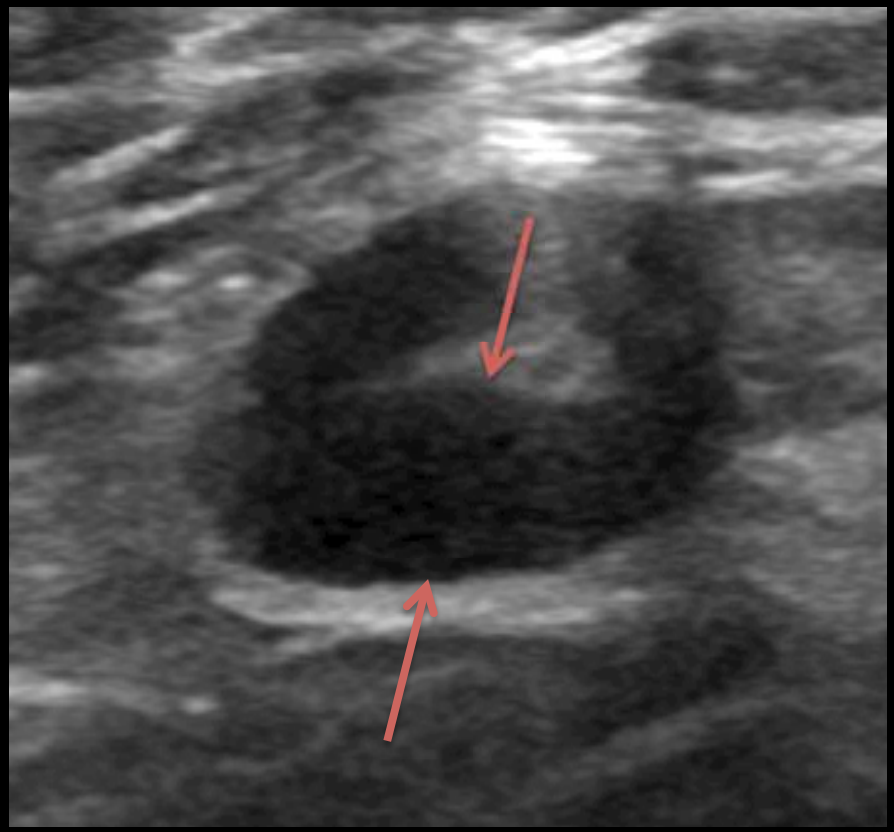


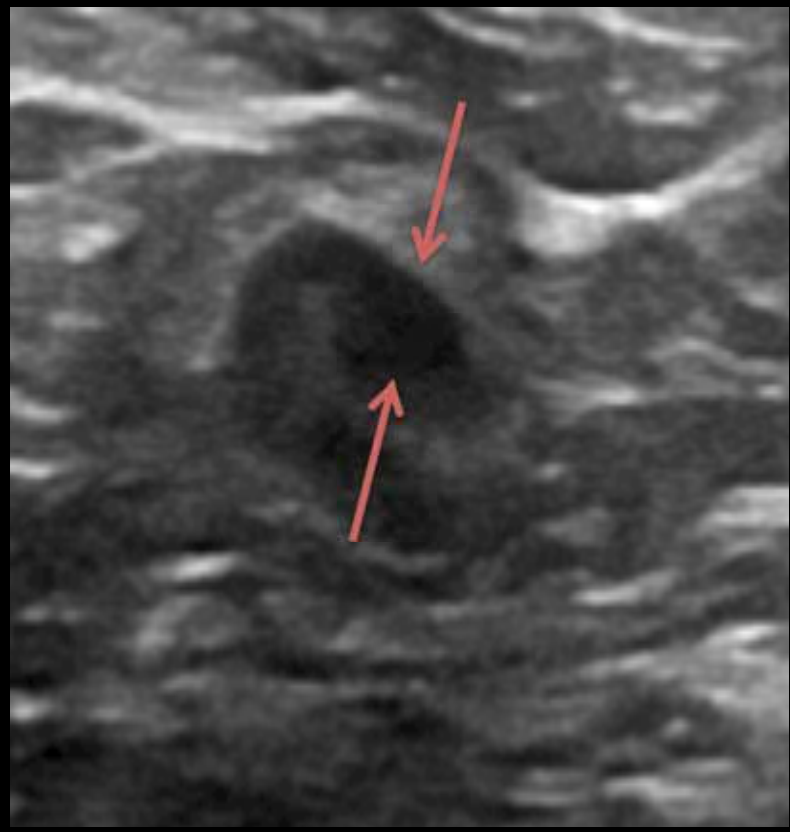
Focal thickened cortex; hilum maintained



Focal thickened cortex; hilum maintained

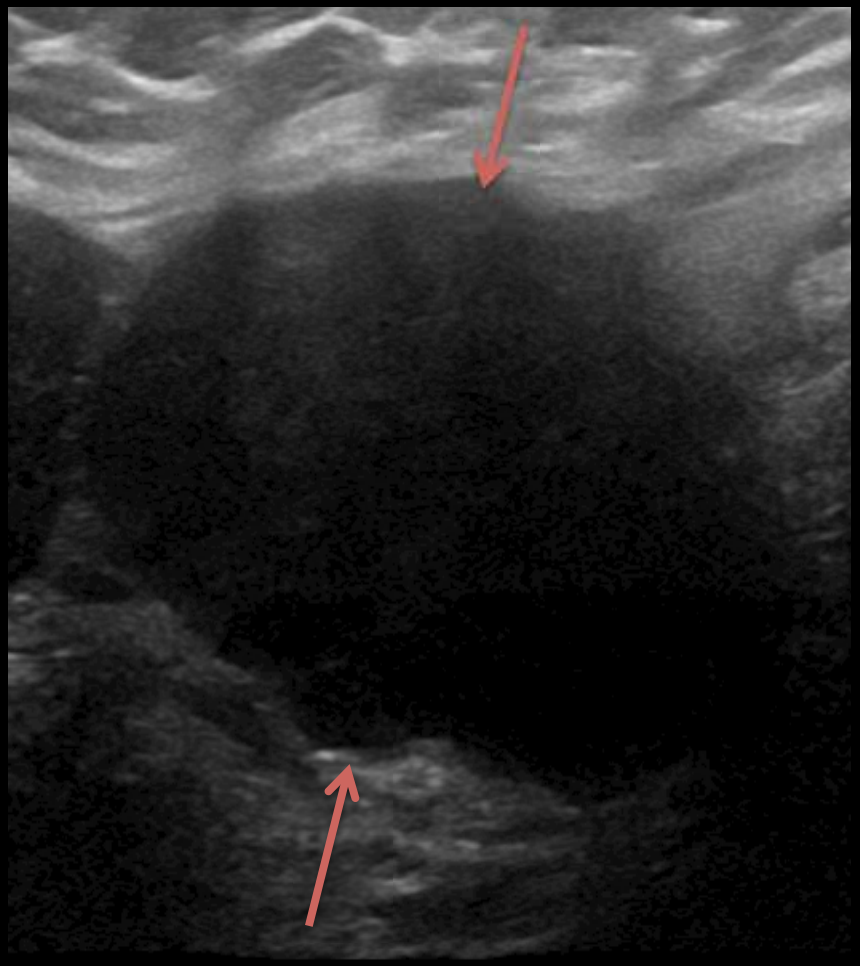
Thick cortex





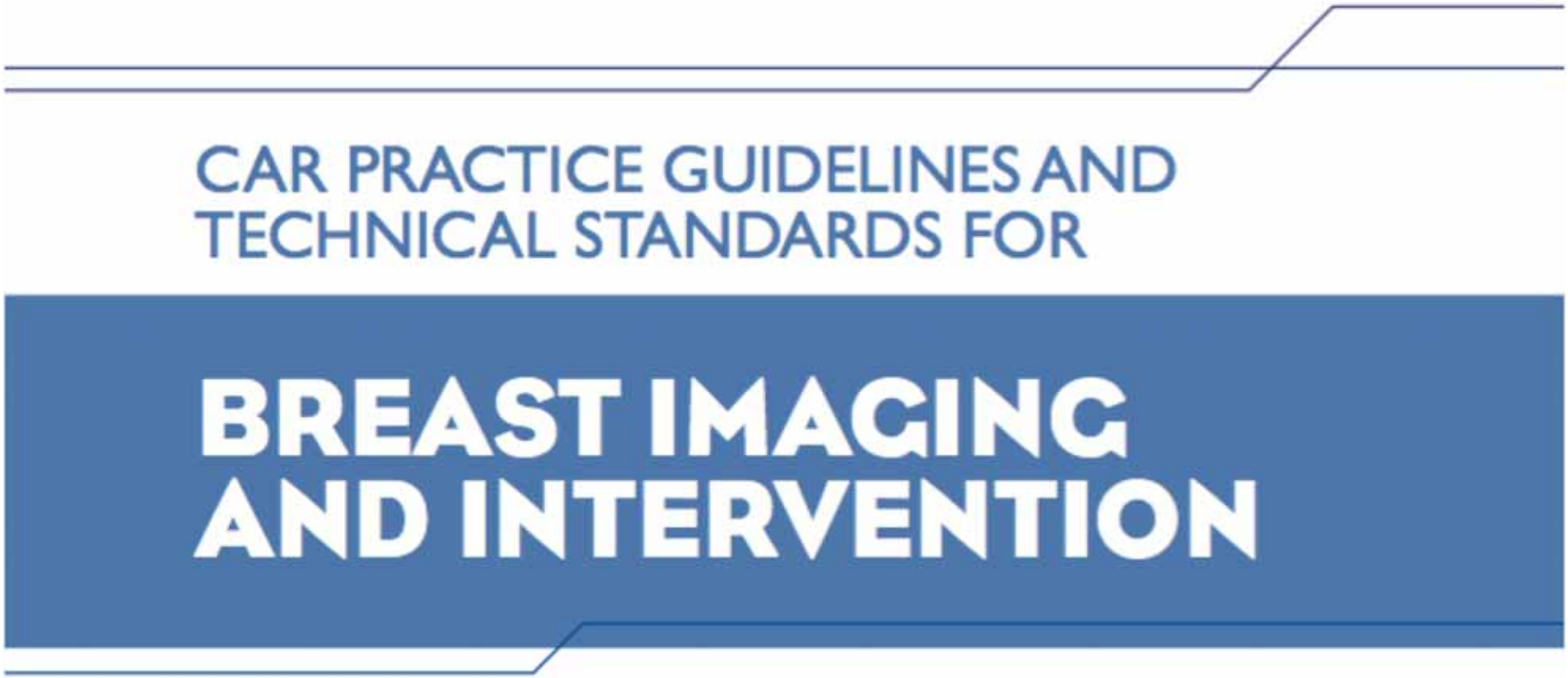
Diffuse asymmetrically thickened cortex; decreased fatty hilum

Complete lack of fatty hilum

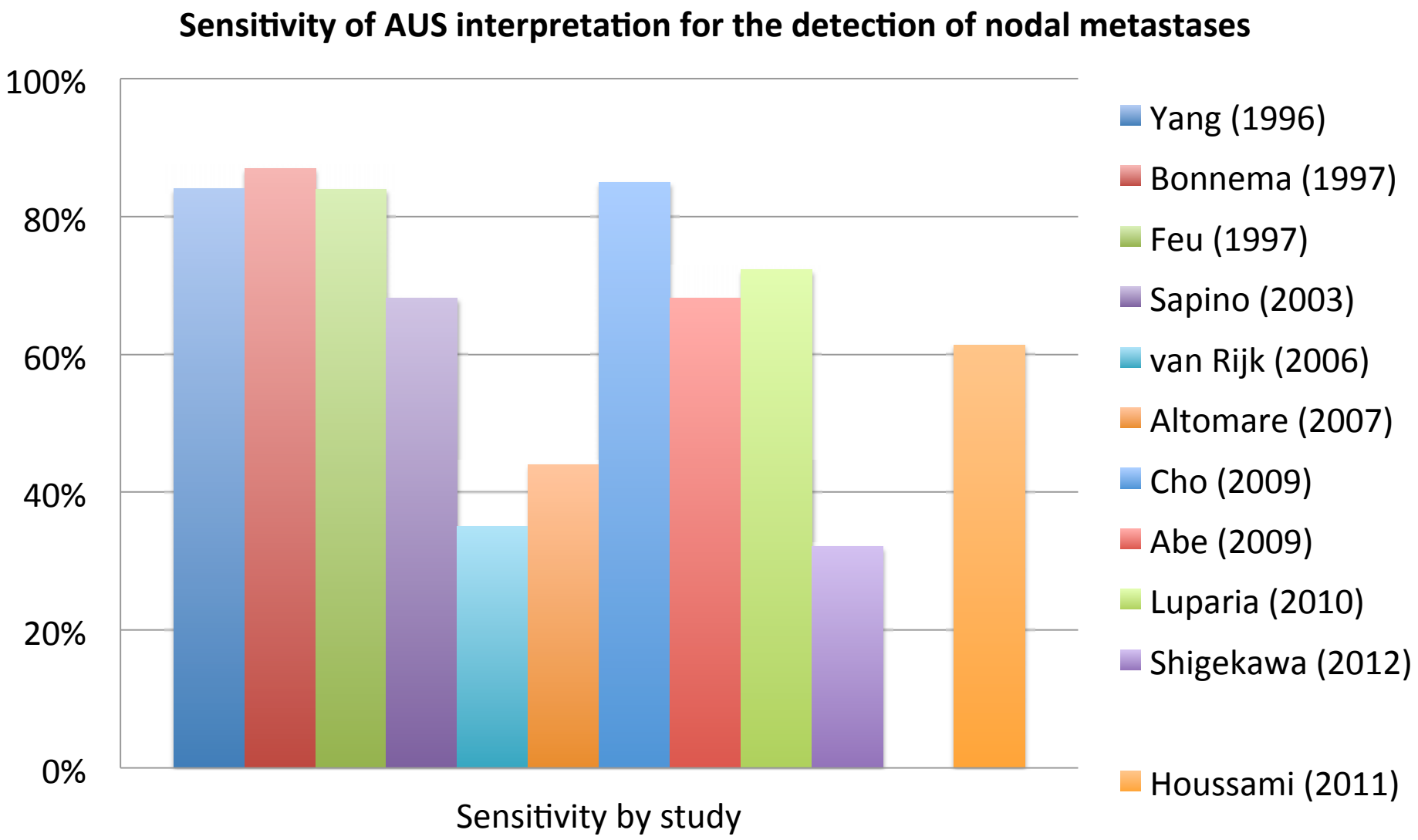


Standard

- Suspicious nodes biopsied under US-guidance
- +ve FNA avoids need for SLNB



Audit Target



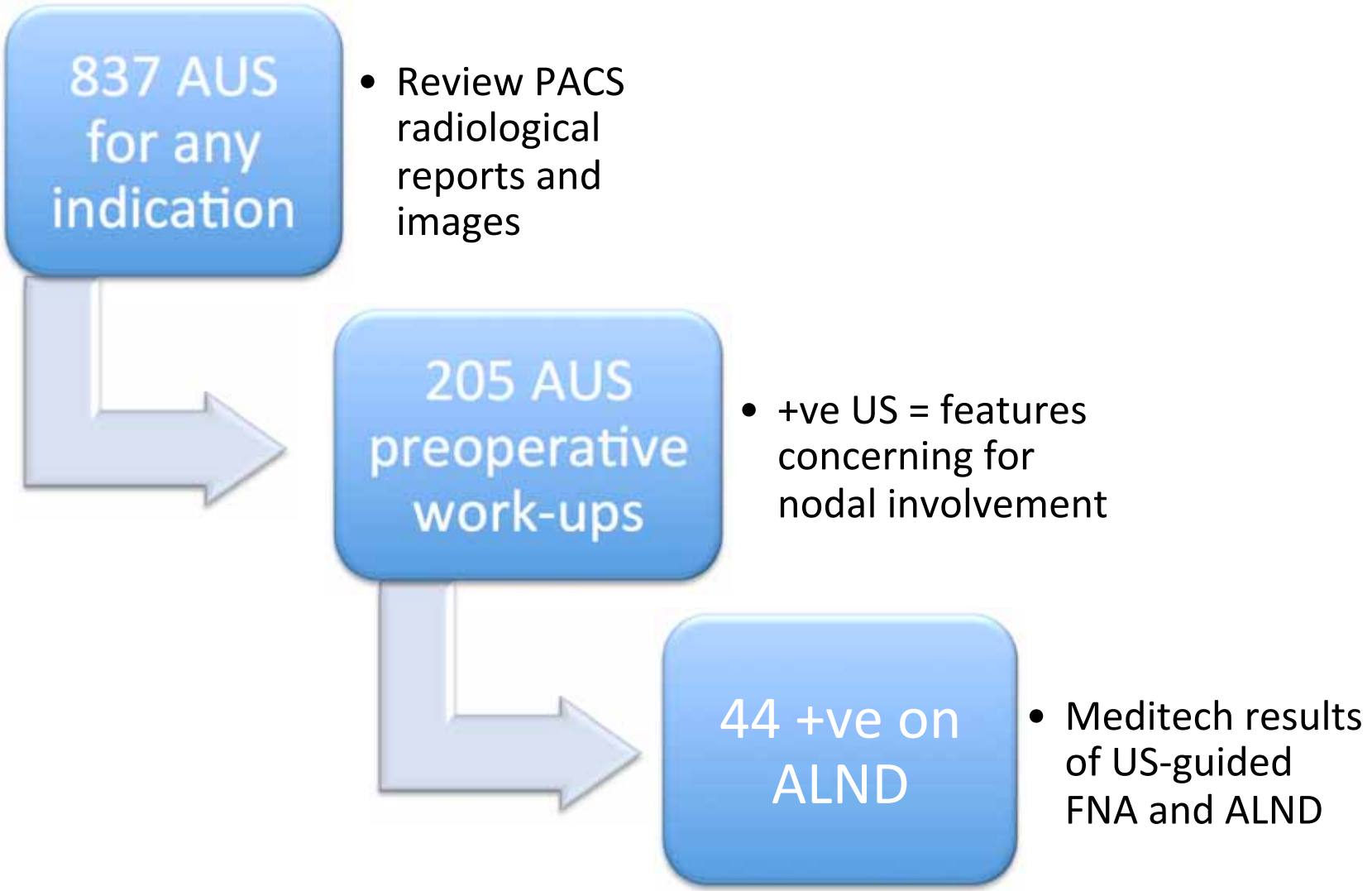
Methods

- Retrospective chart review
  - Local breast imaging center
- January 2013 to December 2014
- HREB ethics approval #2015.061

Data collected:
✔ Patient age
✔ AUS interpretation
✔ FNA result
✔ Number of +ve and -ve nodes on ALND

- ➢ Descriptive statistics
- ➢ Literature review

Methods


837 AUS for any indication
• Review PACS radiological reports and images
205 AUS preoperative work-ups
• +ve US = features concerning for nodal involvement
44 +ve on ALND
• Meditech results of US-guided FNA and ALND

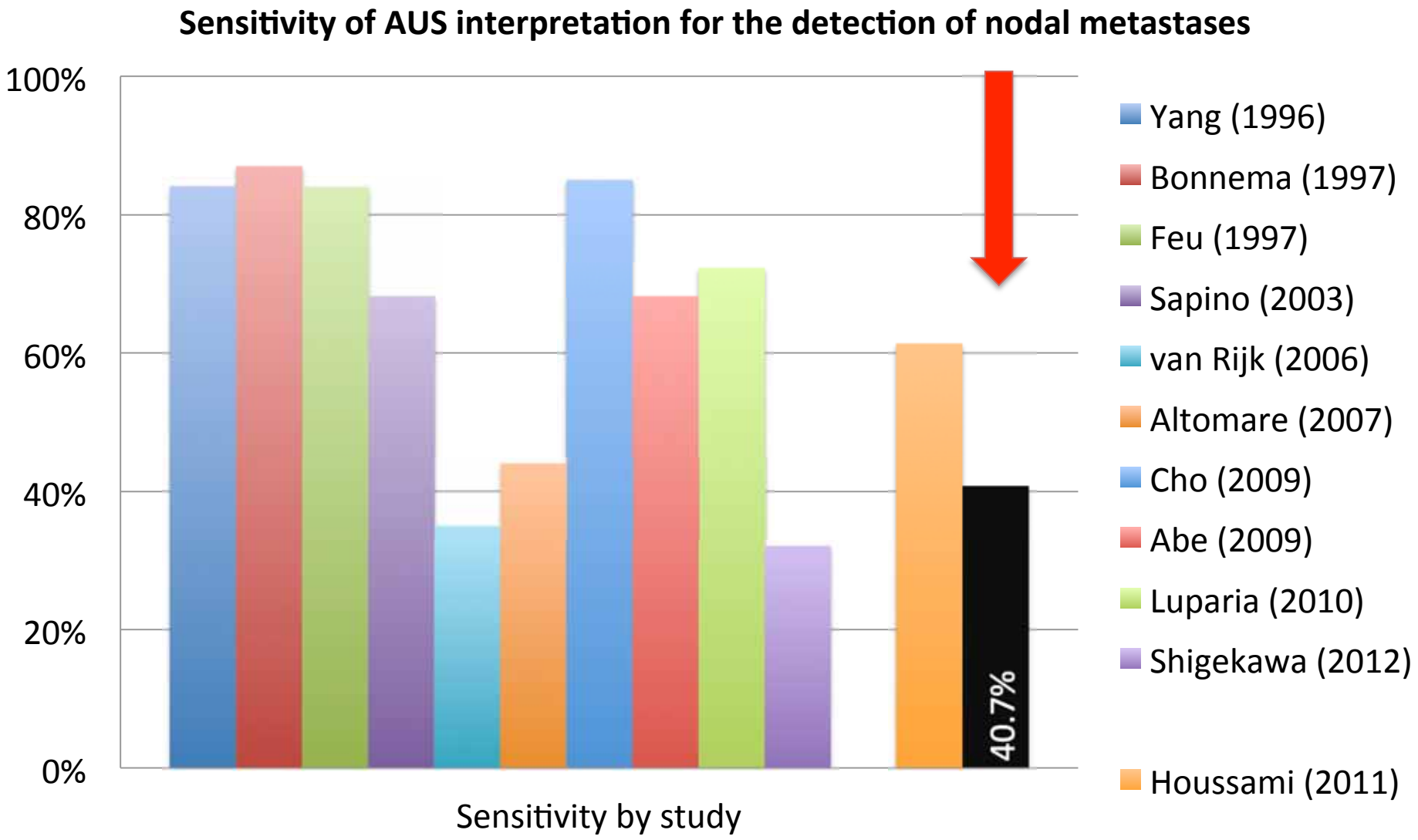
First Cycle Results

		Pathology	
		+ve	-ve
US	+ve	33	11
	-ve	48	113

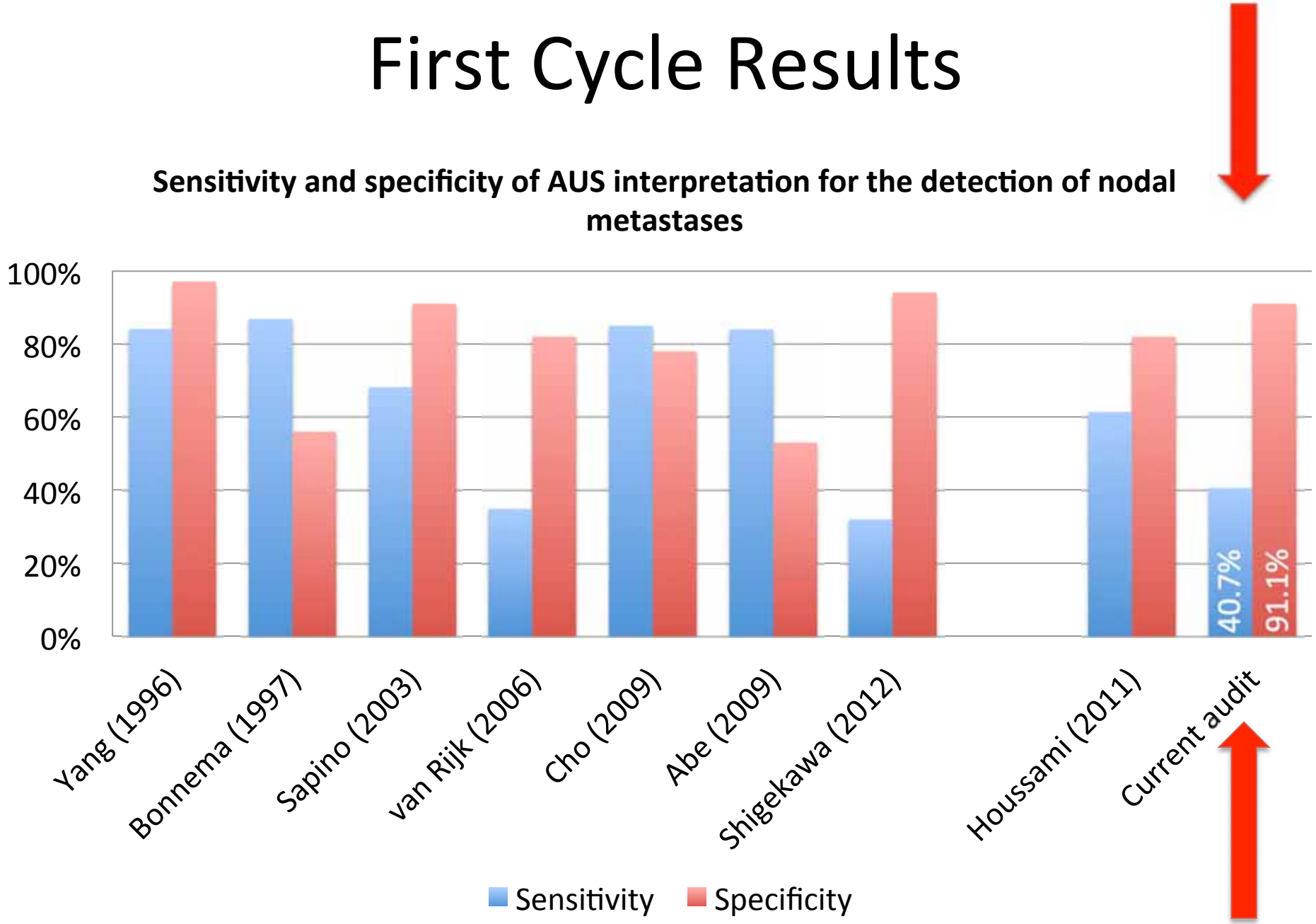
n = 205

- Sensitivity = 40.7%
- Specificity = 91.1%
- PPV = 75.0%
- NPV = 70.2%
- Accuracy = 71.2%

First Cycle Results

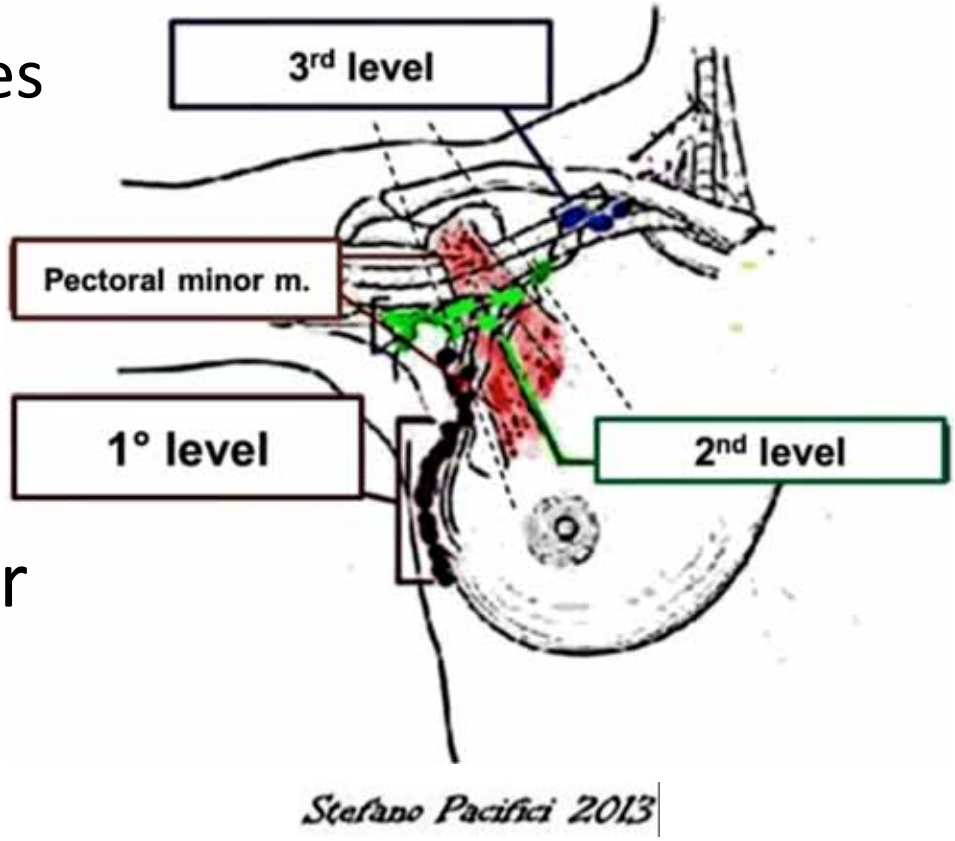


First Cycle Results



Interventions

- In-house education
  - Morphological features of pathological nodes
  - Axillary node level anatomy
- Prospective audit over 1-2 years



Discussion

✓16.1% (33/205) SLNB avoided

- Good practice:
  - Complete axillary scanning to include lower mid-axillary line

- Challenges:
  - Retain high specificity *while* increasing sensitivity
  - Evolving literature

Value of AUS ± SLNB?

- Current focus: optimal axilla management
- Z0011 Randomized Trial: ALND can be omitted in some cases

O. Gentilini, U. Veronesi / The Breast 21 (2012) 678–681

Trial SOUND

Sentinel node vs **O**bservation after axillary **U**ltra-sou**ND**

- Patients with breast cancer ≤2.0 cm
- Any age
- Candidates to Breast Conserving Surgery
- Negative preoperative axillary assessment

(negative ultra-sound of the axilla or negative FNAC of a single doubtful axillary lymph node)

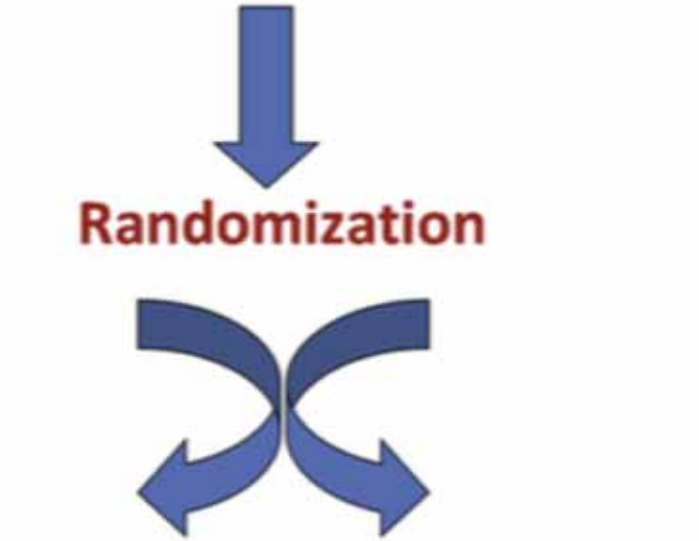


Fig. 1. SOUND trial: study design.

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