Review of Practice Guidelines for Sentinel Lymph Node Biopsy

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Converging Issues

• Demographics
• Screening Mammography Program of British Columbia (SMPBC)
Converging Issues

- Axillary nodal status - prognosticates, guides therapy
- Axillary Node dissection - morbidity

Converging Issues

- Breast Cancer surgery - BC community general surgeons
- 20% performed SLNB 1996-2001
- SLNB Staging accuracy is promising but incomplete
Considerable variation in:

- Definition of SLN, indications, surgical technique
- Nuclear medicine mapping technique
- Pathologic assessment

Chua et al

- Surgeons performing SLN 19%
- Implemented with validation study 48%
- Mentoring plus Training Course 24%
- Self Taught 8%
- Fewer than 10 SLN 33%
- Performing SLN alone 20%
- Data Management 60%

Chua et al
Outcomes of sentinel node biopsy for breast cancer in British Columbia, 1996 to 2001

- 547 SLNB
- Success rate 88%
- False negative rate 22%
- Surgeon experience - irrelevant

Chua et al

Purpose of SLNB Guidelines

- Define Standard of Care for SLNB
- Harmonize technique
- Improve consistency and precision for SN identification and false negative rate
- Quality assurance - Data reporting, Outcomes assessment
**Provincial SLN Guidelines**

2 Components
- Guideline #1- Technical document
- Guideline #2- Defining the Implementation of SLNB as a Stand alone procedure

*Provincial Guidelines for Lymphatic Mapping and Sentinel Node Biopsy for Breast Cancer (part 1)*

- [http://www.bccancer.bc.ca/HPI/SON/CPG/default.htm](http://www.bccancer.bc.ca/HPI/SON/CPG/default.htm)
- TStrack@bccancer.bc.ca
Provincial Guidelines for Lymphatic Mapping and Sentinel Node Biopsy for Breast Cancer (part 1)

- **Patient Selection**
- **Radiologic Procedures**
- **Surgery**
- **Pathology**
- **Data Reporting**

### Patient Selection

- **Indications**
  - T1/T2 N0 Invasive Breast Cancers
- **Contraindications**
  - Advanced Local Cancer Conditions
  - Previous surgery or breast “disruption”
  - Allergy to blue dye
  - Pregnancy or Breast feeding
Radiology
- Peritumoural injection 99mTc sulphur colloid
- Optional - Intradermal injection
- Preoperative Lymphoscintigram

Preoperative Lymphoscintigram
**Surgery**
- Combination technique of 99mTc sulphur colloid and Lymphazurin
- Technique for SLN identification
- Definition of a completed SLN study
- Protocol for finding SLN if no Hot spot
- Data Documentation

**Pathology- Protocol**
- Fixation in 10% buffered formalin
- 10 Sections cut at 50 microns
- Slide Levels 1,5&10 stained with H&E
- Slide Level 2 Negative control for IHC
- Slide Level 6 IHC (cytokeratin)
- Remainder of levels kept for future use
Provincial Guidelines for Lymphatic Mapping and Sentinel Node Biopsy for Breast Cancer (part I)

Pathology- Optional

- Intraoperative SLN Consultation/assessment
  - Touch imprint H&E rapid section

Data Management
Operative Documentation
Provincial Guidelines for Lymphatic Mapping and Sentinel Node Biopsy for Breast Cancer (part 1)

- Validation
  - Identification (success) rate
    \[
    \text{[# successful ID of SLN / # surgical attempts]}
    \]
  - False negative rate
    \[
    \frac{FN}{FN + TP}
    \]

Provincial SLN Guidelines

2 Components
- Guideline #1- Technical document
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SLN Provincial Guideline #2
Implementation of SLNB as a Stand alone procedure

• Define:
  ➢ Patient Cohort
  ➢ Surgeon Cohort
  ➢ Institutional Requirements
  ➢ Data set and Outcome measurements

Guidelines
Closing comments