

# The significance of lymph node micrometastases and isolated tumour cells in Breast Cancer



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# Introduction and Background

**The Axilla Past**



**The Axilla Present**



# Prognostic significance of the Axilla

## The Future



## The Ability to predict

- Why cancers spread
  - How cancers spread
  - What cancers spread
  - When cancers spread
- 
- Relevance of cancer spread

# Pathology assessment of SLN

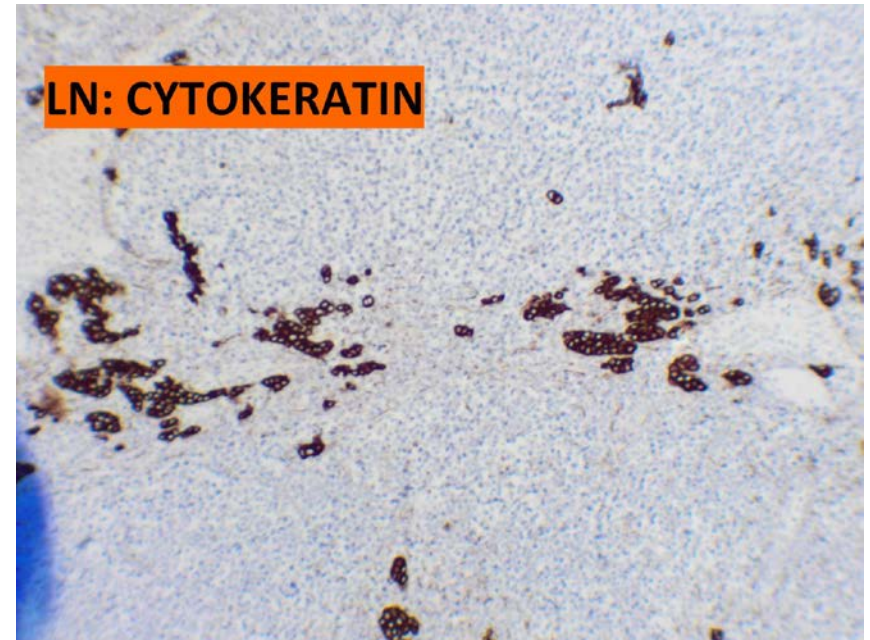
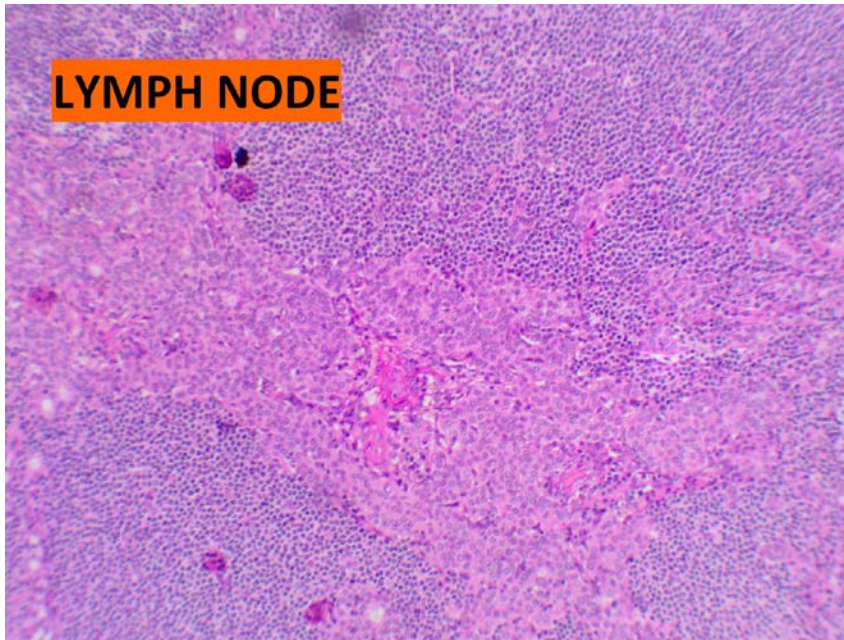
- Despite recommendations from the College of American Pathologists and the American Society of Clinical Oncology, there are still variations in the approach to SLN evaluation by pathologists necessitating a standardized evaluation protocol.
- Numerous studies analysing the discordance between frozen section, imprint cytology at the time of the procedure demonstrate that **best assessment of the sentinel lymph node pathology is determined in the laboratory by definitive histology.**

# Challenges with Micro-metastatic disease

- Micrometastases include all metastases 2.0 mm in greatest dimension. Isolated tumour cells ( ITCs) are defined as cell clusters or single cells with no single cluster larger than 0.2 mm



“Closer look reveals more disease”



The more sections we evaluate from  
SLNs the more metastases we identify



# What the data says

- A systematic review of 58 studies showed a decreased survival in patients with micrometastatic disease
- SEER database containing 209720 patients , (1992-2003) showed the presence of micromets is associated with decreased survival and worse prognosis,
- A better prognosis though than those with macrometastatic disease



# The other side of the coin

- Biology reigns supreme
- Possibly size does matter re micromets
- Oncology treatment trumps surgery
- Radiation therapy may trump surgery too  
(Z11; Amaros)

# Understanding Occult metastases

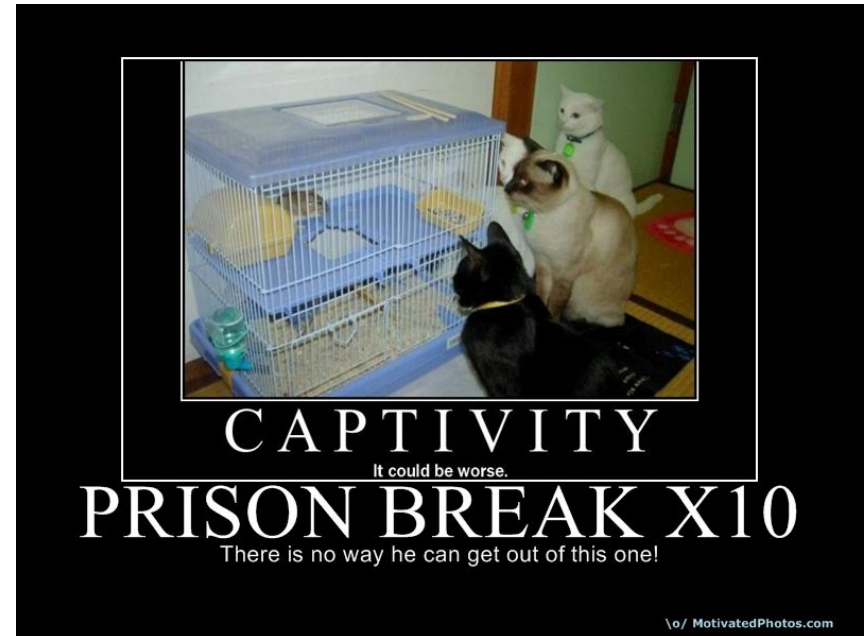
- Occult metastases is the detection of metastatic disease in the sentinel lymph node that is not picked up on routine H&E staining.
- NSABP-B32 study provided insight and information into the clinical significance of occult metastases
- Occult mets were associated with age less than 50, tumour size greater than 2cm, and planned mastectomies

# What are the controversies?

- Should we go back to the axilla
- Should we use a mic as a guideline for chemo
- Does a mic mean radiation is better
- Should a mic mean extended adjuvant endocrine

# Prognostic value of lymph node micrometastatic disease

- ? Different for different tumour biologies,
- ? Different interpretation for members of the multidisciplinary team



# Conclusion

- Current understanding of tumour biology with the mere prognostic value of the axilla means that our understanding of micrometastatic disease and isolated tumour cells is not a linear one
- Micormets provide a complexity around options of further treatment both in terms of oncology and surgery.
- Survival may not be altered significantly
- Need for a completion ALND is no longer required
- Individual patient treatments may well be altered by the finding.

# Thank you



*"Nurse, get on the internet, go to SURGERY.COM, scroll down and click on the 'Are you totally lost?' icon."*



