



Taking the Hook out of Breast Surgery

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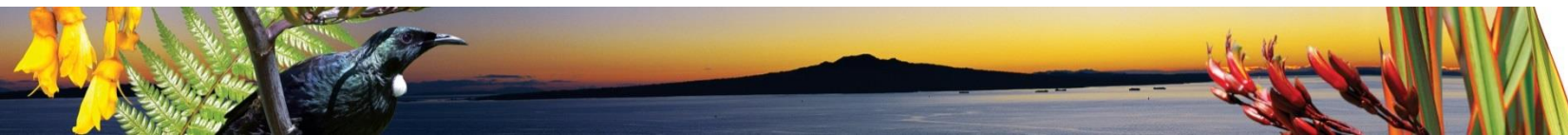
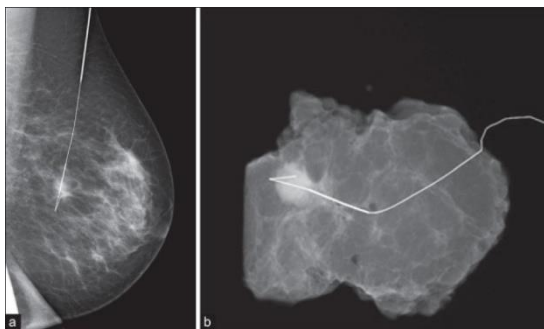
Breast and General Surgeon

WDHB



Background

- Hookwires first introduced in 1966
- Inserted day of surgery
- Two types



Pear shaped hookwires

- Placement. “The clip has migrated 2.5cm lateral to the lesion. The wire has been placed where the clip is”.
- Hookwires move and can be cut with diathermy
- They can be pulled out (use wire cutters to cut)
- Have to be inserted on the day
- Uncomfortable vasovagal 10-20%
- Maximum of 2 per day



Good

- Bracketing for large areas
- Can localize more than one lesion in the breast
- CHEAP. Total cost \$985 per patient for WDHB



Alternatives?

- Carbon marking
- ROLL and radioactive seed
- Magseed
- Saviscout
- Hologic localiser
- Intra-operative USS
- Skin mark



Process

- Med safe
- Northern Region Clinical Practice Committee
- 12 clinicians
- 10 page application



Northern Region Clinical Practice Committee

Dr. Margaret Wilsher
Chief Medical Officer
Auckland DHB

Dr Peter Watson
Chief Medical Officer
Counties Manukau DHB

Dr Jonathan Christiansen
Chief Medical Officer
Waitemata DHB

Dr Michael Roberts
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Carbon Marking

- 1983
- Injection of sterile charcoal diluted with saline into the lesion.
- A visible track guides the surgeon
- CMDHB
- Patient comfort, logistics and cost
- Messy, large breast, multiple lesions, all charcoal must be excised.



ROLL

- Radio-guided occult lesion localization
- Intratumoral injection of technicium 99 labelled human albumin
- Dose 2% bone scan
- Surgery performed within 24 hours
- SNOLL (SNB as well) micromolecules for node, macromolecules for breast



RSL

- Radioactive Iodine-125 seeds 1999
- Point localisation. Same probe as SNB.
- Used at Waikato
- No nuclear medicine department at WDHB
- Only use on cancers >40 years
- Buy in from radiology and pathology. Strict protocols.
- Radiation (5% bone scan). Don't hug your children or pregnant women.
- Lose a seed, lose your accreditation



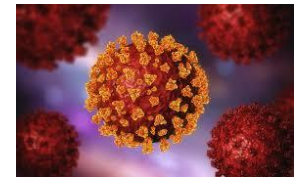
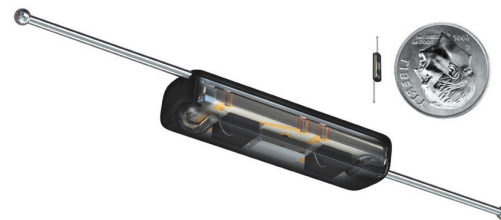
Magseed

- 5x1mm.
- Steel and iron oxide
- The Sentimag probe generates an alternating magnetic field that temporarily magnetizes the magseed and detects it.
- No radiation. Placed anytime. Long term.
- Non-magnetic instruments. MRI bloom 4cm.
- Can be used with magtrace.



Saviscout

- Reflector 12mm. 16G delivery
- Radar and infrared light
- No radiation, point source, any time, MRI no artefact
- Halogen lights, damage, nickel allergy.
- Cost
- Console \$130,000
- Reflector \$900
- Radiology verification console and multiuse hand piece \$50,000



Hologic LOCalizer

- Radiofrequency identification tag 12mm.
- FDA approved.
- Awaiting Therapeutic Goods Authority approval for Australia. Then medsafe in NZ.
- Cost not yet confirmed but is cheaper overseas than saviscout.
- No radiation, multiple lesions.



IOS, HUG, Skin mark

- Intraoperative USS. No marker. Surgeon upskill USS. Air affects utility. Can't use for mamm lesions
- Haematoma Ultrasound-Guided localization. Localizes haematoma after VAB. Surgeon excises haematoma
- Skin mark



Conclusion

- Pros and cons for all methods.
- Excision rates and margin rates.
- MSK, Cleveland – multiple techniques eg saviscout, HWL, and RSL.
- Different DHB preferences.
- Hologic LOCalizer...

