Is breast conservation safe in the younger woman?

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Definition of the ‘young’ woman?

Pre-menopausal but.....
- Under 50yrs? Surrogate indication of menopause
- Under 40 yrs?
- Under 35 yrs?

No clear definition in the literature so difficult to compare studies but in general ‘young’ is taken to mean pre-menopause or fertile
- Young pre-menopause 15-35yrs
- Older pre-menopause 35-50yrs
BC and the younger woman

- Why focus on age – emotive? ageism?
  - 80% (40,000) of breast cancers >50 yrs

- BC is most common cancer in 15-40yr and commonest cause of death in this age group
  - Present symptomatically – no screening programme
  - More advanced disease

- In private healthcare demographics are skewed:
  At 108 40% of our patients are under 50yrs
Issues at diagnosis

- Fear of dying
- Body image
- Financial — woman are increasingly important source of family income
- Coping with family and other domestic or social responsibilities

However these concerns are not age-specific
What is the risk?

1 in every 250 (0.4%) woman between 30-40yrs will get BC over 10 years

NCI, Seer database 2005
Breast cancer care: 10 point charter for younger women

- Diagnosis during pregnancy
- Family history/genetics
- Childcare – bread winner
- Fertility after treatment
- Premature menopause
  - Bone health

www.breastcancercare.org.uk/docs/youngerwomensstandards
Conservation or mastectomy? You choose

Breast conservation (when compared with mastectomy) results in

- Lower psychological morbidity
- Less anxiety and depression
- Improved body image, sexuality, self esteem

Al-Ghazal et al comparison of psychology and satisfaction after breast conservation, mastectomy and reconstruction EJC 2000 36:1938-43
Conservation or mastectomy?  
You choose........

Mastectomy and conservation (+RT) are equivalent in terms of survival*
but
local recurrence rate 10yrs
Mastectomy ~2-5%
Conservation ~5-10%

Conservation or mastectomy? You choose........

Many studies demonstrate higher local recurrence following conservation in pre-menopausal women.

<table>
<thead>
<tr>
<th>Age</th>
<th>% Recurrence</th>
<th>% EIC</th>
<th>% Grade III</th>
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<tbody>
<tr>
<td>&lt;40</td>
<td>20</td>
<td>33</td>
<td>42</td>
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<td>40-49</td>
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<td>50-59</td>
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<td>&gt;60</td>
<td>8</td>
<td>17</td>
<td>28</td>
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Kurtz et al, 1992
Local Recurrence: Survival significance

At 15 yrs 1 of 4 local recurrences results in a BC death*

*EBCTG Lancet 2006,
Independent* predictors of local recurrence

Age*
Stage: LVI, nodal status
- Later presentation bigger tumours

Tumour biology:
- Inherently more ‘aggressive’
- Less treatment sensitive chemo, TAM, AI
- More triple negative

Margins*
Multifocal, extensive DCIS
Local Recurrence: Inappropriate conservation?

Younger patients more likely to have conservation**
  – despite larger tumours with more DCIS

Younger patients more likely to have repeat surgery to clear margins**
  – The quality of conservation depends on volume excised (<10-15%)

**All breast cancer report 2009
Conservation or mastectomy?
Other influencing factors

Genetic: high risk family history/BRCA1-2 carrier

The younger the patient
the higher the risk a gene defect*
  • 20yr 40%
  • 30yr 33%
  • 40yr 20%
  • 50yr <10%

• Risk of new primary
• Radiation risks in the young?
• Increased risk of contra-lateral disease over 20-30yrs

*Claus EB et al Cancer 1996
Breast surgery in the younger woman

Lower threshold for mastectomy

NB: peer review standard 2010 mastectomy rates
Facilitating conservation

• Breast awareness with targeted screening
  – Smaller tumours

• Better patient selection for conservation
  – Role of MRI - multi-focality, synchronous
    • Will result in a ~20% higher mastectomy rate but there is little evidence so far to suggest it impacts on survival (but EBCGT 2005…..)
Facilitating conservation

Converting unfavourable breast: tumour volume ratios

- Primary chemotherapy to down size
  - Cochrane review 8% reduction in mastectomy rates

Extending the role of conservation

- Onco-plastic surgery
  - therapeutic mammoplasty
Is conservation in the young safe?

Yes
Is conservation safe?

• Follow oncological principles for conservation
  – margins and multifocality

• Note increased risk of contralateral, index

• Never possible to eliminate risk completely so balance risk reduction and aesthetics to maintain QOL