

# Is It Safe Practice Not To Biopsy Fibroadenomas In Women Under 30?

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## FIBROADENOMAS ARE COMMON IN YOUNG WOMEN

### Previous practice in Cambridge Breast Unit:

- Core biopsy routinely performed on suspected FAs in women  $\geq 20$
- Significant pathology & radiology workload
- Costly in time & patient anxiety as well as financially

### Aim

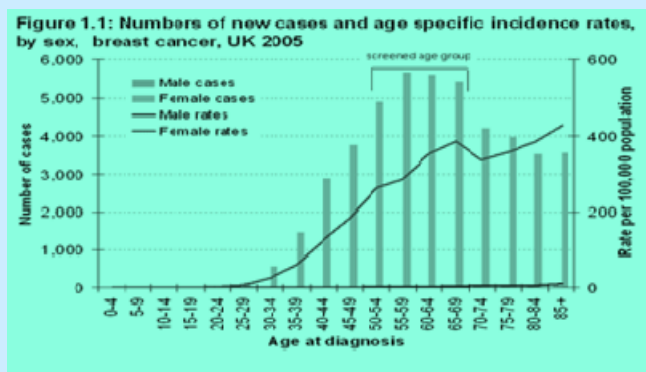
Would be safe practice to raise the age for non biopsy up to 30?

### Method

We established a theoretical incidence of a benign presentation of a breast cancer to the Cambridge Breast Unit (CBU) by looking at three variables:

1. The incidence of breast cancer in women under 30
2. The likelihood of a mass with sonographic features of a FA being a cancer on core biopsy
3. Whether any cancers would be missed

## 1. THE INCIDENCE OF BREAST CANCER IN WOMEN UNDER 30

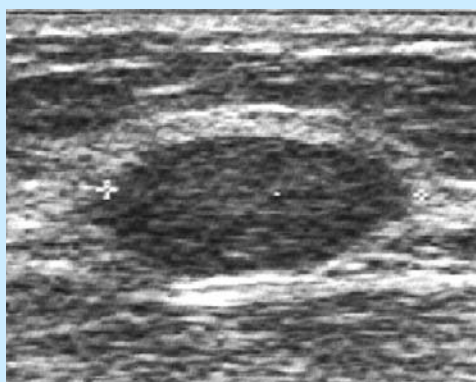


**Fig 1.1:** In 2005, there were 45660 new cases of breast cancer in women in the UK, 172 in women under 30

From this we calculated that for CBU where ~400 cancers are diagnosed annually, the incidence in a woman under 30 would be **one breast cancer every 1-2 years**

## 2. THE LIKELIHOOD OF A CANCER PRESENTING AS A FA, ACTUALLY BEING A CANCER

Stavros *et al* (Radiology 1995) classified 426 solid breast lesions as sonographically benign based on the following criteria:



### A solid mass which is:

- Wider than tall
- Well defined with smooth edges or
- Up to 4 gentle lobulations
- Surrounded by a thin echogenic pseudocapsule
- Plus no suspicious features

### Fibroadenoma

U/S	Histology	
	Benign	Malignant
Benign	424	2
Malignant	201	123

### Results:

U/S False negative rate = 1.6%

## 3. WOULD ANY CANCERS BE MISSED?

Age	UK annual incidence of breast ca	No of those with U2 features	No of yrs to see one such case in the UK	CBU annual incidence of U2 breast ca	No of yrs to see one such case in CBU
<25	30	0.48	2.08	0.0032	312
25-29	142	2.27	<1	0.0198	50.5
30-34	564	9.02	<1	0.079	13
35-39	1448	23.17	<1	0.203	5
ALL AGES	45660	730.56	<1	6.40	<1

Applying the Stavros false negative rate to national and departmental incidence statistics, we calculated that it would theoretically take **over 50 years** to see a cancer in a woman under 30 presenting sonographically as a FA in CBU.

Reassured by this prediction, we devised a new departmental imaging criteria based protocol for non biopsy of FAs:

### Mandatory criteria for non biopsy:

- Stavros criteria *plus*
- E2/U2 correlation
- No extenuating circumstances (Family history, BRCA1/BRCA2, expressed patient request).

### Is this safe?

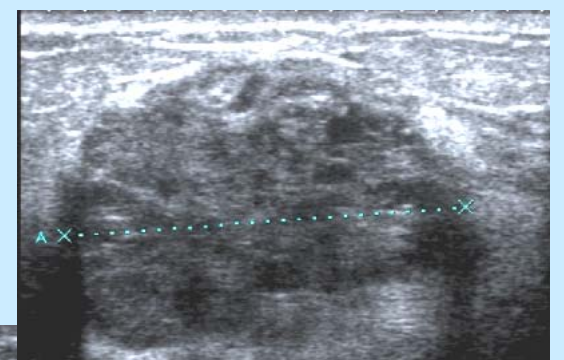
We retrospectively tested this protocol against our departmental practice over the period 2000-2008 in women under 30.

### During The 8 years:

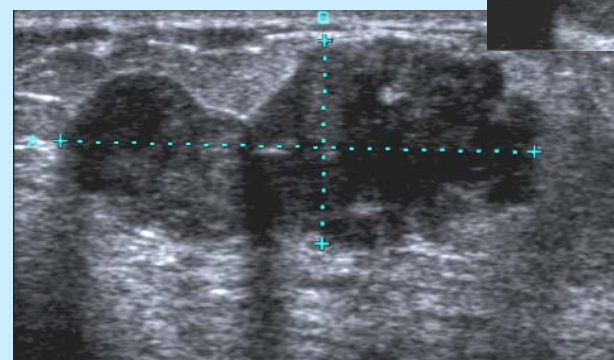
- 499 Core biopsies were performed on women under 30
- 9 were B5 – cancers
- 11 were B3 – (9 FA & 2 phyllodes on surgical histology)
- 479 were B2 FA

NB: all cancers and phyllodes tumours fell outside the non biopsy criteria ie: if new policy had been applied we **would not have missed any cancers or phyllodes**

### Cancer



### Phyllodes



### Conclusion

Our new protocol provides a sound evidence base for non biopsy of likely fibroadenomas in women under 30. This is safe practice provided there is rigid adherence to this protocol. This is currently being audited.