Familial Breast Cancer

Breast Cancer

- Breast cancer is the commonest cancer in women, affecting 1 in 7 women during their lifetime
- The aetiology of breast cancer is multi-factorial, including lifestyle, environmental, hormonal and genetic factors
- Identifying women who are at risk of familial breast cancer is important as they may be managed differently to the general population

Familial Breast Cancer

- Up to one-third of all breast cancer cases may be due to an inherited genetic susceptibility
- Only about 5% of breast cancer is due to the inheritance of highly penetrant breast cancer susceptibility gene (e.g. BRCA1 or BRACA2)
- The remaining inherited susceptibility is now recognised to be due to polygenic inheritance,
- 60-70% of familial risk remains unexplained and research is continuing to fully elucidate familial risk

Task in pairs

- You see Ann in your surgery. She is a 37 year old lady who is upset as her sister has recently been diagnosed with breast cancer and she is worried that she might be at risk.
- What information do you want to find out from Ann?

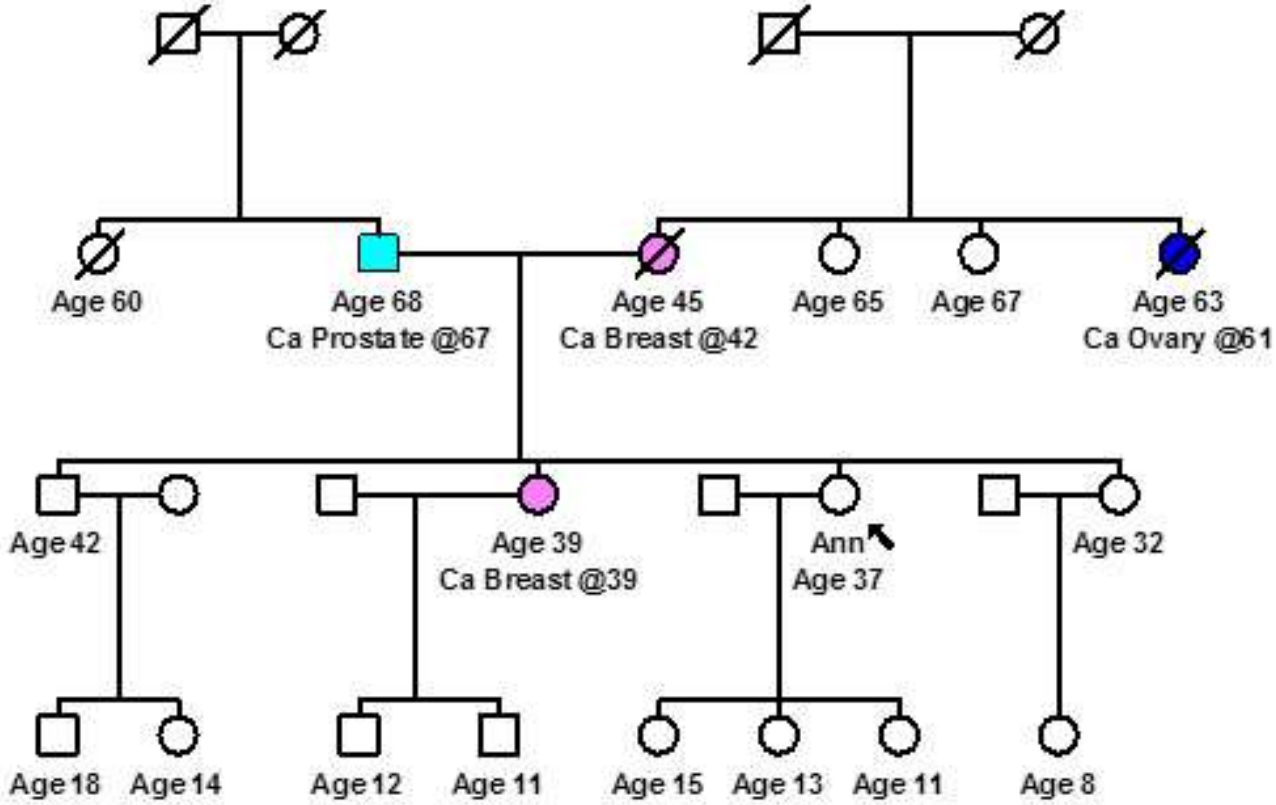
Information from Ann

- NICE recommends when a person presents with concerns about their family history a first and second-degree family history should be taken (including paternal as well as maternal relatives) in primary care
- Age of her sister
- Any other relatives affected with breast cancers (both paternal and maternal sides) and their ages at diagnosis
- Any male breast cancer
- Any family history of other cancers, in particular ovarian cancer, sarcomas in under 45s, childhood cancers, etc
- Any Jewish ancestry
- Any bilateral breast cancer

Ann's Family History

- Ann has 2 sisters (32 and 39) and a brother (42) her one sister is 39 at diagnosis her other two siblings are unaffected.
- Her mother was diagnosed with breast cancer at age 42 and died when she was 46, her father is still alive aged 73 with prostate cancer diagnosed aged 67.
- Her father has one sister who died, she had no children.
- Her mother was one of 4 sisters the surviving sisters are aged 65, 67 who are well with no significant PMH. A third maternal sister died aged 63 having been diagnosed with ovarian cancer at 61.
- Ann's brother has two children, a boy aged 18 and a girl aged 14. Ann's affected sister has two boys aged 11 and 12, her unaffected sister has a girl aged 8. Ann herself has three girls aged 11, 13 and 15. This generation of the family is unaffected.

Ann's Family History



NICE GUIDELINES

NICE guidance on familial breast cancer identifies three levels of risk:

- Women at population risk, who can be managed and reassured in the primary care setting.
- Women at moderate risk who meet criteria for referral to secondary care (family history clinic) for increased breast surveillance.
- Women at high risk who meet criteria for referral to tertiary care (specialist cancer genetics clinic) for increased breast surveillance and assessment of eligibility for genetic testing.

Referral to Secondary Care

- One first-degree relative under 40
- One first degree male relative
- One first degree relative with bilateral breast cancer, first diagnosed under 50
- Two first-degree or one first-, one second-degree relatives at any age
- One first- or second-degree relative diagnosed at any age and one first- or second-degree relative diagnosed with ovarian cancer at any age
- Three first-degree or second-degree relatives diagnosed at any age

Seek advice if

- bilateral breast cancer
- ovarian cancer
- Jewish ancestry
- sarcoma in a relative younger than age 45 years
- glioma or childhood adrenal cortical carcinomas
- complicated patterns of multiple cancers at a young age
- paternal history of breast cancer (two or more relatives on the father's side of the family)

Low risk

- Reassure that their risk is closer to the population risk
- However, if their family history changes (e.g. new diagnosis in another relative, find out more information) then they should come back for review
- Discuss
  - Breast awareness info
  - Lifestyle advice (diet, alcohol, smoking)
  - HRT and Contraception
  - May want to discuss other factors (breast feeding, family size and timing of pregnancies)
- Advice to attend national screening programmes when invited

Moderate Risk

- Lifetime risk of developing breast cancer is at 17-29%
- Give advice on risk reduction
- Eligible for additional screening (annual mammograms age 40-49)
- Consider chemoprevention

High Risk

- Lifetime risk is greater than 30%
- Potentially eligible for genetic testing
- Eligible for extra screening including annual mammography age 40-59 and also MRI screening
- Chemoprevention
- Risk-reducing bilateral mastectomy /oophrectomy

Chemoprevention

- Offer Tamoxifen for 5 years to pre-menopausal women at high risk
- Offer anastrazole to postmenopausal women (unless severe osteoporosis) at high risk
- Do not prescribe if increased risk of thromboembolism or endometrial cancer
- Do not offer with the woman has had a bilateral mastectomy.
- You can consider use in women at moderate risk

Task

- In pairs practice explaining to a patient who has come to see you after their mother was diagnosed with breast cancer at the age of 68 that they are at low risk

Summary

- Concern about family history of breast cancer is common presentation to GP
- NICE (CG164) give guidelines on how to manage women presenting with a family history of breast cancer
- Low risk patients can be managed in primary care with advice
- Moderate to high risk patients will need onward referral