NHS
Cambridgeshire & Peterborough

Position Statement Policy

Familial Breast Cancer

Policy

It is the responsibility of referring and treating clinicians to ensure compliance with this policy. Exceptional Funding is required for requests for screening for patients who do not meet the screening criteria below: (funding request form).

Screening

NHS C&P (ICB) will fund breast screening for women with a family history of breast cancer according to the following criteria:

- Women aged 40-49 at **Moderate risk.** C&P ICB will fund annual mammography for these women. Once aged over 49 they will enter the NHS Breast Screening Programme (NHSBP).
- Women aged 40-59 in the **Standard High-Risk** group.
  C&P ICB will fund annual mammography for these women. Once aged over 59 they will enter the NHS Breast Screening Programme (NHSBP).

Note: Women in the **Very High-Risk** group are eligible for enhanced screening (see reference 1). This is commissioned through the NHS Breast Screening Programme (NHS England) and is not funded by NHS C&P (ICB) (see Appendix 1).

Genetics Services

Patients who present to their general practitioner with concerns about a family history of breast cancer should have a family history taken and **first-** and **second-degree relatives** (see glossary) with breast or ovarian cancer identified.

Patients with a family history of **one first-degree relative** or **one second-degree relative** with breast cancer diagnosed at an **age older than 40 years** and **no ovarian cancers** on the same side of the family do not require referral to a genetics service (see reference 2).

All other patients with family histories of breast cancers with and without ovarian cancers should be referred to the local genetics' services for further assessment. The genetics' service will take further steps to assess the family history and determine whether the patient needs to be seen in genetics clinic, offered genetic testing, offered enhanced screening or may be managed in primary care (Appendix 2). Genetic testing is offered according to the NHS England Genomic Test Directory (see reference 3) by clinical genetics services or cancer teams.

Patients with a family history of breast cancer may have their personal risk of developing cancer classified into the following categories after assessment by clinical genetics (see reference 2).

Smoking

Patients who smoke should be advised to attempt to stop smoking - see stop smoking policy.

Risk	Breast Cancer Risk Category			
	Near Population Risk	**Moderate Risk**	**High Risk 1**	**High Risk 2 (see note 1)**
Lifetime risk from age 20	Less than 17%	Greater than 17% but less than 30%	30% or greater	See below
Risk between ages 40 and 50	Less than 3%	3-8%	Greater than 8%	
Note 1: The **High Risk 2** group includes patients with known BRCA1, BRCA2, PALB2 and TP53 mutations and rare conditions that carry an increased risk of breast cancer such as Peutz-Jegher Syndrome (STK11), Cowden (PTEN) and familial diffuse gastric cancer (E-Cadherin). Patients who have not had genetic testing, but who have a greater than 30% probability of a BRCA1, BRCA2 or TP53 mutation are included in this group.				

Definition

This policy covers referral to genetics services and screening for patients who have a family of history of breast cancer.

Evidence

NICE Guidelines (CG164) state recommended screening protocols for women with a family history of breast cancer based on best evidence (see reference 2 and Appendix 1).

Health Benefits

In patients with a moderate or high risk of breast cancer, screening above and beyond the population NHS Breast Screening programme (NHSBSP) has been shown to be effective in improving outcomes through early detection of asymptomatic cancers in these women (see references 2 and 4-6).

Risk

A family history of breast cancer is a well-recognised risk factor in the development of breast cancer. The closeness of the relationship, the number of relatives with cancer and younger age at which cancer was diagnosed are considered in the risk assessment.

An increased understanding of genetic factors has allowed the ability to calculate personal risk based on family history with or without genetic testing.

Glossary

First Degree Relative (FDR):	Father or mother. Brother or sister. Son or daughter (share half the genes).
Second Degree Relative (SDR):	Grandfather or grandmother. Grandchildren. Niece or nephew. Uncle or aunt. Half brother or half sister (share a quarter of the genes).

Risk

1. Gov.uk. Breast screening: very high risk women surveillance protocols - GOV.UK [Internet]. [cited 2023 Mar 14]. Available from: https://www.gov.uk/government/publications/breast-screening-higher-risk-women-surveillance-protocols
2. Nice.org.uk. Overview | Familial breast cancer: classification, care and managing breast cancer and related risks in people with a family history of breast cancer | Guidance | NICE [Internet]. NICE; [cited 2023 Mar 14]. Available from: https://www.nice.org.uk/guidance/cg164
3. England.nhs.uk. NHS England » National genomic test directory [Internet]. [cited 2023 Mar 14]. Available from: https://www.england.nhs.uk/publication/national-genomic-test-directories/
4. England.nhs.uk. NHS Public Health Functions Agreement 2019-20 [Internet]. 2019. p. 13. Available from: https://www.england.nhs.uk/wp-content/uploads/2017/04/Service-Specification-No.25-Cervical_Screening.pdf
5. Ccge.medschl.cam.ac.uk. BOADICEA - Centre for Cancer Genetic Epidemiology [Internet]. [cited 2023 Mar 14]. Available from: http://ccge.medschl.cam.ac.uk/boadicea/
6. Duffy SW, Mackay J, Thomas S, Anderson E, Chen THH, Ellis I, et al. Evaluation of mammographic surveillance services in women aged 40-49 years with a moderate family history of breast cancer: a single-arm cohort study. Health Technol Assess. 2013;17(11):1–98.

Appendix 1

NICE CG164 recommendations for screening for women at increased risk of breast cancer

Note:

- Enhanced screening for Groups 1 & 2 is funded by NHS C&P (ICB).
- Groups 3-6 are funded by NHS England National Breast Screening Programme

	Moderate risk	High risk				
Age	Group 1 Moderate risk of breast cancer[50]	Group 2 High risk of breast cancer[51] (with a 30% or lower probability of a *BRCA* or *TP53* mutation)	Group 3 Untested but greater than 30% *BRCA* carrier probability[52]	Group 4 Known *BRCA1 or BRCA2* mutation	Group 5 Untested but greater than 30% *TP53* carrier probability[53]	Group 6 Known *TP53* mutation
20-29	Do not offer mammography	Do not offer mammography	Do not offer mammography	Do not offer mammography	Do not offer mammography	Do not offer mammography
	Do not offer MRI	Do not offer MRI	Do not offer MRI	Do not offer MRI	Annual MRI	Annual MRI
30-39	Do not offer mammography	Consider annual mammography	Annual MRI and consider annual mammography	Annual MRI and consider annual mammography	Do not offer mammography	Do not offer mammography
	Do not offer MRI	Do not offer MRI			Annual MRI	Annual MRI
40-49	Annual mammography	Annual mammography	Annual mammography and annual MRI	Annual mammography and annual MRI	Do not offer mammography	Do not offer mammography
	Do not offer MRI	Do not offer MRI			Annual MRI	Annual MRI
50-59	Consider annual mammography	Annual mammography	Annual mammography	Annual mammography	Mammography as part of the population screening programme	Do not offer mammography
	Do not offer MRI	Do not offer MRI	Do not offer MRI unless dense breast pattern	Do not offer MRI unless dense breast pattern	Do not offer MRI unless dense breast pattern	Consider annual MRI
60-69	Mammography as part of the population screening programme	Mammography as part of the population screening programme	Mammography as part of the population screening programme	Annual mammography	Mammography as part of the population screening programme	Do not offer mammography
	Do not offer MRI	Do not offer MRI	Do not offer MRI unless dense breast pattern	Do not offer MRI unless dense breast pattern	Do not offer MRI unless dense breast pattern	Consider annual MRI
70+	Mammography as part of the population screening programme	Mammography as part of the population screening programme	Mammography as part of the population screening programme	Mammography as part of the population screening programme	Mammography as part of the population screening programme	Do not offer mammography

Appendix 2

Guidelines for referral of patients with a family history of breast cancer. Source: Regional Genetics Department, Addenbrooke's Hospital, Cambridge

Note: in assessing a family history, either the maternal or paternal side may be relevant, but each should be considered separately.

May be at HIGH RISK: refer to Regional Genetics Department for more detailed assessment

Breast cancer only families:

- 2 close relatives diagnosed with breast cancer, average age of diagnosis < 50
- 3 close relatives diagnosed with breast cancer, average age of diagnosis < 60
- 4 close relatives diagnosed with breast cancer at any age
- 1 bilateral breast cancer (confirmed separate primary cancers), average age of diagnosis of cancers < 50
- 1 bilateral breast cancer and 1 F/SDR breast cancer, average age of diagnosis of cancers < 60
- 1 bilateral breast cancer and 2 F/SDR breast cancers diagnosed at any age
- 2 close relatives, both with bilateral breast cancers, diagnosed at any age
- Male breast cancer at any age plus 1 F/SDR with breast cancer < 50
- Male breast cancer at any age plus 2 F/SDR with breast cancer < 60

Breast/Ovarian Cancer Families:

- 1 individual with both breast and ovarian cancer, where the ovarian cancer is diagnosed at any age and the breast cancer is diagnosed < 50
- 1 ovarian cancer at any age plus 1 F/SDR breast cancer < 50
- 1 ovarian cancer at any age plus 2 F/SDR breast cancer, average age of diagnosis of breast cancer < 60

Ovarian Cancer only families

Please refer patients with this family history to genetics for a detailed assessment. Additional breast surveillance may not be indicated if genetic testing has been done and Hereditary Breast and Ovarian Cancer syndrome is not suspected.

As it is possible to have paternal transmission of an inherited predisposition the history can still be assessed as High Risk with intervening, unaffected males.

May be at MODERATE RISK – refer to Regional Genetics Department for more detailed assessment

- 1 FDR breast cancer diagnosed age <40
- 1 FDR and 1F/SDR breast cancer diagnosed at an average age of ≥50 but <60
- 1 FDR and 2 F/SDR breast cancer diagnosed at an average age of >60
- 1 bilateral breast cancer (confirmed separate primary cancers), average age of diagnosis of both cancers ≥50
- 1 bilateral breast cancer and 1 F/SDR breast cancer, average age of diagnosis of all cancers ≥60
- Male breast cancer at any age plus 1 F/SDR with breast cancer ≥50 but <60
- Male breast cancer at any age plus 2 F/SDR with breast cancer ≥60
- 1 individual with both breast and ovarian cancer, where the ovarian cancer is diagnosed at any age and the breast cancer is diagnosed ≥50 but <60
- 1 ovarian cancer at any age plus 1 F/SDR breast cancer ≥50 but ≥60
- 1 ovarian cancer at any age plus 2 F/SDR breast cancer >=60

NEAR POPULATION RISK – Managed by PRIMARY CARE, no extra screening currently recommended

- 1 FDR breast cancer diagnosed ≥40
- 1 SDR breast cancer diagnosed ≥40
- Distant relatives with breast cancer diagnosed ≥40 (eg an isolated cousin with at least 2 intervening unaffected females between proband and affected relative).
- If there are relatives more distant to the proband than second degree with breast cancer (eg great aunts, cousins), then there is usually not an increased risk of developing breast cancer for the proband. However, if the more distant cluster meets the above criteria then seek advice from Clinical Genetics as to whether a referral is appropriate.

To contact the East Anglian Clinical Genetics service:

- routine queries tel 01223 216446 or email add-tr.clinicalgenetics@nhs.net
- urgent queries by health professionals: on-call Consultant 07955 434998 / on-call Genetic Counsellor 07955 435001