

## POSITION STATEMENT: Familial Breast Cancer

<b>Date:</b>	November 2017	<b>Date of Last Review:</b>	May 2015
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### 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 available [here](#)).

### Screening

The CCG 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 who have a known mutation in a moderate risk gene.**  
The CCG 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 **High Risk 1** group.  
The CCG will fund annual mammography for these women. Once aged over 59 they will enter the NHS Breast Screening Programme (NHSBP).

**Note:** Women in the **High Risk 2** group are eligible for enhanced screening. This is commissioned through the NHS Breast Screening Programme (NHS England) and is not funded by the CCG.<sup>2</sup> (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 associated ovarian cancers** do not require referral to a genetics service.<sup>1</sup>

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 or may be managed in primary care. (See Appendix 2.)

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:<sup>1</sup>

	Breast cancer risk category			
	Near Population Risk	Moderate Risk	High Risk 1	High Risk 2*
<b>Lifetime risk from age 20</b>	Less than 17%	Greater than 17% but less than 30%	30% or greater	See below
<b>Risk between ages 40 and 50</b>	Less than 3%	3-8%	Greater than 8%	

\* The **High Risk 2** group includes patients with known BRCA1, BRCA2 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.

<b>Definition:</b>	This policy covers referral to genetics services and screening for patients who have a family history of breast cancer.
<b>Estimated number of people affected:</b>	There are currently approximately 763 women in the CCG in the <b>High Risk 1</b> group. It is difficult to estimate the number of people in the CCG in the <b>Moderate Risk</b> group accurately, but the genetics service advice that this could be 10 times the High Risk group.
<b>Evidence:</b>	This has been shown to be cost effective. <sup>1,3</sup>
<b>Health Benefits</b>	NICE Guidelines (CG164) state recommended screening protocols for women with a family history of breast cancer based on best evidence. <sup>1</sup>
<b>Risks</b>	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. <sup>1,3</sup>
	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:

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

#### REFERENCES:

1. NICE Clinical Guidance CG164: Classification and care of people at risk of familial breast cancer and management of breast cancer and related risks in people with a family history of breast cancer. NICE. June 2013. <http://www.nice.org.uk/guidance/cg164/>. Updated by NICE March 2017.
2. Public health functions to be exercised by NHS England. Service specification No.24 - Breast Screening Programme. 2013. [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/192975/24\\_Breast\\_Screening\\_Programme\\_service\\_specification\\_VARIATION\\_130422\\_-NA.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/192975/24_Breast_Screening_Programme_service_specification_VARIATION_130422_-NA.pdf).
3. Breast and Ovarian Analysis of Disease Incidence and Carrier Estimation Algorithm (BOADICEA). University of Cambridge Centre for Cancer Genetic Epidemiology. <http://ccge.medschl.cam.ac.uk/boadicea/>.
4. Duffy S W, 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 Technology Assessment. March 2013. DOI: 10.3310/hta17110.

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

## Note:

- Enhanced screening for Groups 1 & 2 is funded by the CCG.
- Groups 3-6 are funded by NHS England National Breast Screening Programme

Age	Moderate risk	High risk				
	Group 1 Moderate risk of breast cancer <sup>50</sup>	Group 2 High risk of breast cancer <sup>51</sup> (with a 30% or lower probability of a <i>BRCA</i> or <i>TP53</i> mutation)	Group 3 Untested but greater than 30% <i>BRCA</i> carrier probability <sup>52</sup>	Group 4 Known <i>BRCA1</i> or <i>BRCA2</i> mutation	Group 5 Untested but greater than 30% <i>TP53</i> carrier probability <sup>53</sup>	Group 6 Known <i>TP53</i> 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

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

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

### **HIGH RISK: refer to Regional Genetics Department**

#### 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 family

- 2 ovarian cancers, diagnosed at any age

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.

### **MODERATE RISK – refer to Regional genetics Department, for more detailed assessment**

- 1 bilateral breast cancer (confirmed separate primary cancers), average age of diagnosis of both cancers  $\geq 50$
- 1 bilateral breast cancer and 1 F/SDR breast cancer, average age of diagnosis of all cancers  $\geq 60$
- Male breast cancer at any age plus 1 F/SDR with breast cancer  $\geq 50$  but <60
- Male breast cancer at any age plus 2 F/SDR with breast cancer  $\geq 60$
- 1 individual with both breast and ovarian cancer, where the ovarian cancer is diagnosed at any age and the breast cancer is diagnosed  $\geq 50$  but <60
- 1 ovarian cancer at any age plus 1 F/SDR breast cancer  $\geq 50$  but  $\leq 60$
- 1 ovarian cancer at any age plus 2 F/SDR breast cancer  $\geq 60$

### **MODERATE RISK – Refer to secondary care (breast unit). Extra screening may be offered in some units. Genetic testing unlikely to be offered**

- 1 FDR breast cancer diagnosed age <40
- 1 FDR and 1F/SDR breast cancer diagnosed at an average age of  $\geq 50$  but <60
- 1 FDR and 2 F/SDR breast cancer diagnosed at an average age of >60

### **NEAR POPULATION RISK – Managed by PRIMARY CARE, no extra screening or genetic testing currently recommended**

- 1 FDR breast cancer diagnosed  $\geq 40$
- 1 SDR breast cancer diagnosed  $\geq 40$
- Distant relatives with breast cancer diagnosed  $\geq 40$  (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 High Risk Criteria then seek advice from Clinical Genetics as to whether a referral is appropriate.