These guidelines have been designed to inform clinicians which of their patients may be eligible for a diagnostic genetic test of 7 genes on the R208 cancer gene panel, or for predictive testing. They are based on the NICE Familial Breast Cancer guideline (CG164). NB. Male = Assigned male at birth (AMAB), Female = Assigned female at birth (AFAB)

Primary Care Guidelines for genetic testing of the R208 cancer gene panel

Bristol Regional Clinical Genetics Service

10.07.2023

An individual may be eligible for R208 analysis if there is a 10% chance they could have a faulty gene.

Your patient may be eligible for a genetic test if the chance of finding a faulty copy of one of the genes on the R208 panel is 10% and they are a first degree relative of an affected individual.

**START**: Is there a known gene alteration reported in the family relating to breast or ovarian cancer?

An affected family member should be referred to their local genetics service (see diagnostic eligibility criteria)

Is there a surviving affected family member?

Has your patient had breast and/or ovarian cancer?

**Eligibility criteria for diagnostic R208 analysis on an affected individual**

Refer If:

* Female & diagnosed with breast cancer <40.
* Female & diagnosed with a triple negative breast cancer <60 (i.e.ER-ve, PR-ve & Her2-ve.)
* Female & diagnosed with bilateral breast cancer both <60.
* Female & diagnosed with breast cancer <45, with a first degree relative diagnosed <45.
* Female diagnosed with breast cancer at any age & with Jewish ancestry.
* Diagnosed with non-mucinous ovarian cancer at any age. (R207)
* Male & diagnosed with breast cancer at any age.
* ≥ 1 grandparent from Westray (Orkney) or Whalsay (Shetland) and breast cancer at any age

**Referring for predictive testing:**

* Male and female relatives aged ≥18 can be referred for genetic counselling and testing if there is a known BRCA1/2 alteration in the family.
* Where possible, first-degree relatives to the individual with the alteration should be referred prior to more distant relatives.
* Please include with the referral: a copy of a laboratory report, a ‘Dear Relative’ letter, or identifiers for the individual with the alteration,.
* If patient does not want genetic testing, consider seeking advice regarding surveillance.

**\*Examples where your patient may meet the 10% threshold & you could consider a referral:**

* 2 affected family members with at least one male breast cancer or ovarian cancer (on the same side of the family)
* 3 affected family members (on the same side of the family), average age less than 50.
* 4 or more affected family members with breast, prostate, pancreas or ovary at any age (on the same side of the family) .

**Examples where your patient would not meet the 10% threshold & you should not refer:**

* Only one affected family member at any age (either sex).
* 2 affected family members average age of onset >40
* 3 affected family members average age of onset >50.

Yes

No

No

No

Yes

Yes

\*Please note that estimating whether an unaffected individual will meet the 10% threshold for testing depends on the number & age of onsets of the cancers in the family. The examples shown do not guarantee that your patient’s risk is sufficiently elevated to offer R208 analysis. Your patient will be sent a family history questionnaire to assess eligibility. If not eligible, they will be written to.