Protocol 3
BRCA mutation carrier guidelines

Negative result
no mutation identified
Breast surveillance according to Protocol 1

Positive result
Pathogenic mutation identified

BRCA1 risks*

Unaffected carriers:
Breast Cancer
Lifetime risk (to 80 yrs): 60%-90%
Average remaining lifetime and 5 year risks - see table below

Ovarian cancer
Lifetime risk: 40%-60%
Majority of lifetime risk conferred after age 40

Male breast cancer
Lifetime risk ~0.1%-1%

Prostate cancer
Lifetime risk similar to population risk ~8%

Affected carriers:
Women with unilateral breast cancer
Lifetime risk contralateral breast cancer ~50%
Overall 5 year risk ~10%

BRCA2 risks*

Unaffected carriers:
Breast Cancer
Lifetime risk (to 80 yrs): 45%-85%
Average remaining lifetime and 5 year risks - see table below

Ovarian cancer
Lifetime risk: 10%-30%
Majority of lifetime risk conferred after age 50

Male breast cancer
Lifetime risk ~5-10%

Prostate cancer
Lifetime risk ~25%

Affected carriers:
Women with unilateral breast cancer
Lifetime risk contralateral breast cancer ~50%
Overall 5 year risk ~5-10%

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<th>Current age (yrs)</th>
<th>Approximate remaining lifetime risk to 80 yrs</th>
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Surveillance*

Breast
Advise on breast awareness
Annual mammography 40-70 yrs - review age 70
Annual MRI 30-50 years
No breast surveillance for male carriers

Ovary
Ovarian surveillance is not recommended

Other cancers
No surveillance is recommended for other cancers
Carriers may be eligible for surveillance in research studies

Chemoprevention*
- It is not appropriate to offer chemoprevention to BRCA1 carriers
- Discuss benefits and sides effects with BRCA2 carriers. Can be offered if no contra-indications

Risk-reducing surgery*

Breast
Discuss bilateral risk reducing mastectomy
+ breast cancer risk reduction 90-95%
+ refer to surgeon to discuss surgical options

Ovary
Offer risk-reducing bilateral salpingo-oophorectomy, once childbearing is complete.
Discuss the following:
+ Ovarian cancer risk reduction ~95%
+ Breast cancer risk reduction ~ up to 50%
+ Side effect: premature menopause
+ HRT should be offered until age 50 in women who have not had ER positive breast cancer

VUS
If variant of uncertain significance identified email: vus@icr.ac.uk

* See FAQ document for further details. http://www.icr.ac.uk/protocols