Are BRCA Carriers in NL Receiving Cancer Screening According to Risk Management Guidelines?

Objective

To evaluate uptake of recommended risk-reducing interventions in NL women at high hereditary cancer risk due to BRCA mutation.

Practice Points

1. Inherited mutations in tumour suppressor genes BRCA 1 and 2 cause hereditary cancer predisposition syndrome and elevated lifetime risks of malignancy.

Lifetime Risk	BRCA 1	BRCA 2
Breast	60–75%	40–60%
Ovarian	20–40%	15–20%
Prostate	30%	30%

2. Risk Reducing Salpingo-oophorectomy (RRSO) in female BRCA carriers confers a 70% improvement in all-cause mortality.

3. RRSO is recommended for women with BRCA1 between 35–40y and BRCA2 40–45y.

4. Annual breast MRI age 25–70y with the addition of annual mammography at 30–70y has a sensitivity of >90% in the detection of breast cancers at an early stage.

Methods (PI: Dr. L. Dawson)

1. A comprehensive province-wide study of all female BRCA carriers in NL.

2. Evaluation of rates of breast MRI, mammography, risk reducing salpingo-oophorectomy.

3. Determination of predictors of successful adherence to cancer screening and prevention recommendations.

Results

- Of 276 BRCA carriers identified in NL, 156 are living females currently residing in NL.
- 57/156 (37%) had breast cancer; 8/156 (5%) had ovarian cancer.

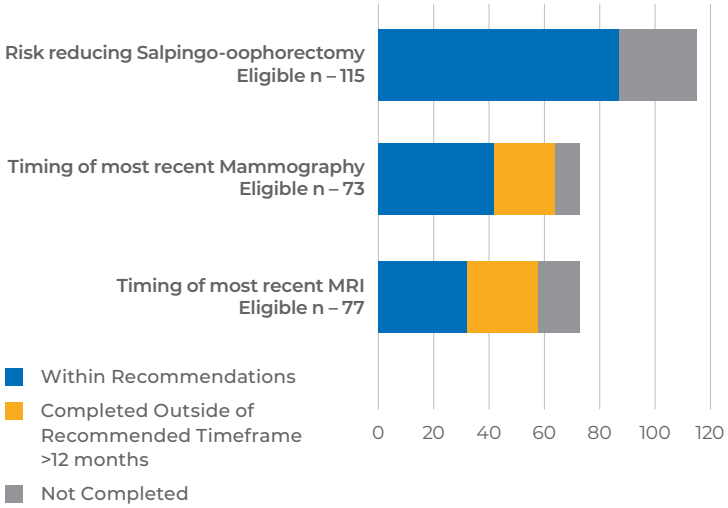

Figure 1. Adherence to Recommended Screening and Prevention in BRCA Carriers

- Of women eligible for breast MRI, 47% (36/77) accessed MRI within 12 months, as per recommendations.
- Screening mammography was done within the 12 months guidelines in 58% (42/73) women.
- Risk reducing salpingo-oophorectomy has been completed in 76% of women (87/115).
- Access to speciality cancer genetics care was the most important factor influencing compliance with optimal screening and prevention.

  Women who had received speciality care were more likely to be very adherent with prevention or screening (73.2% versus 13.4%; $p < 0.001$).

Conclusions

1. Consultation with speciality clinics (virtual or in person) offering cancer genetics expertise was the strongest predictor of adherence to inherited cancer risk management guidelines.

2. Findings support the development of a provincial system of identification and follow up management for high risk families.