

Introduction

- Cancer genetic counseling often leads to increased cancer screening and surgeries (downstream services).
- Revenue from downstream services can help cover the cost of a cancer genetics program.
- There is a dearth of data on revenue-generating services that occur due to genetic counseling.

Aim

We sought to quantify the downstream services resulting from guideline-based assessments and recommendations made by cancer genetic counselors.

Methods

- Retrospective chart review of subset of patients seen by telehealth genetic counseling service 1/2018 to 10/2020.
- Inclusion criteria: post-test oncology, breast cancer risk assessment done by our GC (if clinically indicated).
- Downstream services (additional services indicated because of genetics evaluation, beyond services patient already needing) were extracted from chart.

Additional services due to genetics eval

Combined with published adherence rates

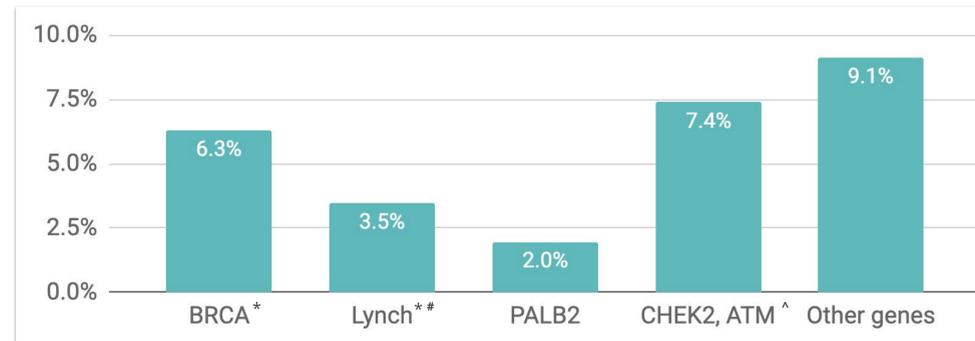
Projected downstream services patient would have due to genetics eval

Results

Characteristics of 460 patients

- 87.8% female, mean age 51.2y (SD 15.6)
- 50.4% - personal history of cancer
- Referred from: lab (54.3%), cancer center (45.7%)
- 28.3% - positive genetic test

Figure 1: Positive genetic test results



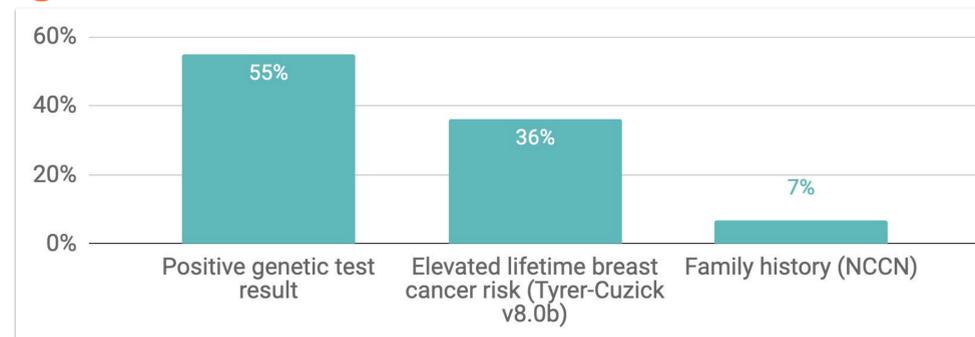
*Includes patients who have an additional variant in another gene

#Lynch: MLH1, MSH2, MSH6, PMS2, or EPCAM

^Includes one person with both CHEK2 and BARD1

Downstream services were indicated for 202/460 (43.9%) patients, based on the genetics evaluation.

Figure 2: Reason for downstream services



Results

Table 1: Downstream services

Service	Adherence rate [^]	Volume in year after GC [*]
Mammogram	60.3%	50.1
Breast MRI	24.5%	25.9
Mastectomy	26.8%	8.6
Oophorectomy	41.8%	11.7
Colonoscopy	72.6%	47.9
Upper endoscopy	75.0%	5.3
Endometrial biopsy	63.1%	6.3
Hysterectomy	31.3%	3.1

[^]Published adherence rates, averaged across studies (see references below)

^{*}Volume of each service expected in year after GC visit, based on recommended care & mean published adherence rates

Discussion

- These data can be used to estimate the downstream services a health system can anticipate from cancer genetic counseling.
- Projections of downstream services need to be adjusted for key variables such as test positivity rate.
- Future studies should estimate revenue associated with these services.

Limitations

- Actual adherence rates for these patients might not be the same as published rates.
- A high percentage of patients had positive genetic test results, likely due to referral bias.

References for published adherence rates: bit.ly/2WbeaFg