

FEASIBILITY AND CLINICAL YIELD OF IN-CLINIC GERMLINE TESTING IN A COLORECTAL SURGERY PRACTICE

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BACKGROUND

Hereditary cancer syndrome (Lynch, FAP, etc) CRC risk:

- 3–5 % in patients >50 years
- 10-20 % in patients <50 years
- 10-30 % in patients with solid tumors

* CRC = colorectal cancer

Restrictions for germline testing miss **7.8 %** of CRC cases:

- Age <50 years
- Strong family history
- Multiple primary cancers
- MSI-high/MMR-deficient tumors only

* MSI = microsatellite instability; MMR = mismatch repair

Standard genetic counseling causes treatment delays. Point-of-care multigene panel testing (**MGPT**) offers **expedited turnaround**.

RESEARCH OBJECTIVES

- to compare point of care MGPT timeliness and compliance to standard genetic counseling

METHODS

Retrospective review at NMH Colorectal clinic.

Point-of-care MGPT from Myriad Genetics for 63 genes.

Included patients with **newly diagnosed CRC**, referred for escalation of care or meeting criteria for **polyposis**.

Provider (physician, nurses, laboratory and office staff) education was done by the Myriad team.

Same-visit phone pretest education and consent with a Blood drawn during routine labs.

Myriad **genetic counselor** after the surgical consult.

Only positive results had a formal **follow-up** visit.

One-sheet summary of key findings*

GERMLINE STATUS NEGATIVE
 BRCAAnalysis Accession #: 04186575-BLD Reported: May 9, 2023

IHC STAINS
 FRA Accession #: 03809171-BLD Reported: May 5, 2023 POSITIVE
 PD-L1 Accession #: 03809171-BLD Reported: May 4, 2023 POSITIVE

MYRIAD HRD STATUS POSITIVE
 MyChoice CDx Accession #: 03809171-BLD Reported: May 5, 2023

TUMOR MOLECULAR PROFILING
 Precise Tumor Accession #: 03809171-BLD Reported: May 4, 2023

POTENTIALLY SIGNIFICANT FINDINGS			BIOMARKER	LEVEL
Tier IA	Tier IB	Tier IIC	TMB	Low
BRCA2		TP53	MSI	Stable

34 CLINICAL TRIAL(S)
 For details on clinical trials, please see the report

Summary of key findings for all tests ordered on one sheet

Report date included with test result status for each test ordered

Quickly find the status of biomarkers relevant to all solid tumor types

Know how many clinical trials may be available for your patient

See potentially significant findings first to identify the most relevant parts of each test

*Summary sheet includes information from both FDA approved and non-FDA approved tests and will be reflective of the specific tests ordered for each patient.

RESULTS

Study period: 12/2024 – 12/2025

Average time with Myriad genetic counselor - **14.5 minutes**.

Sample collection to reporting - **9.4 days**.

Average return of results in standard genetic counseling (control group) – **24 days**.

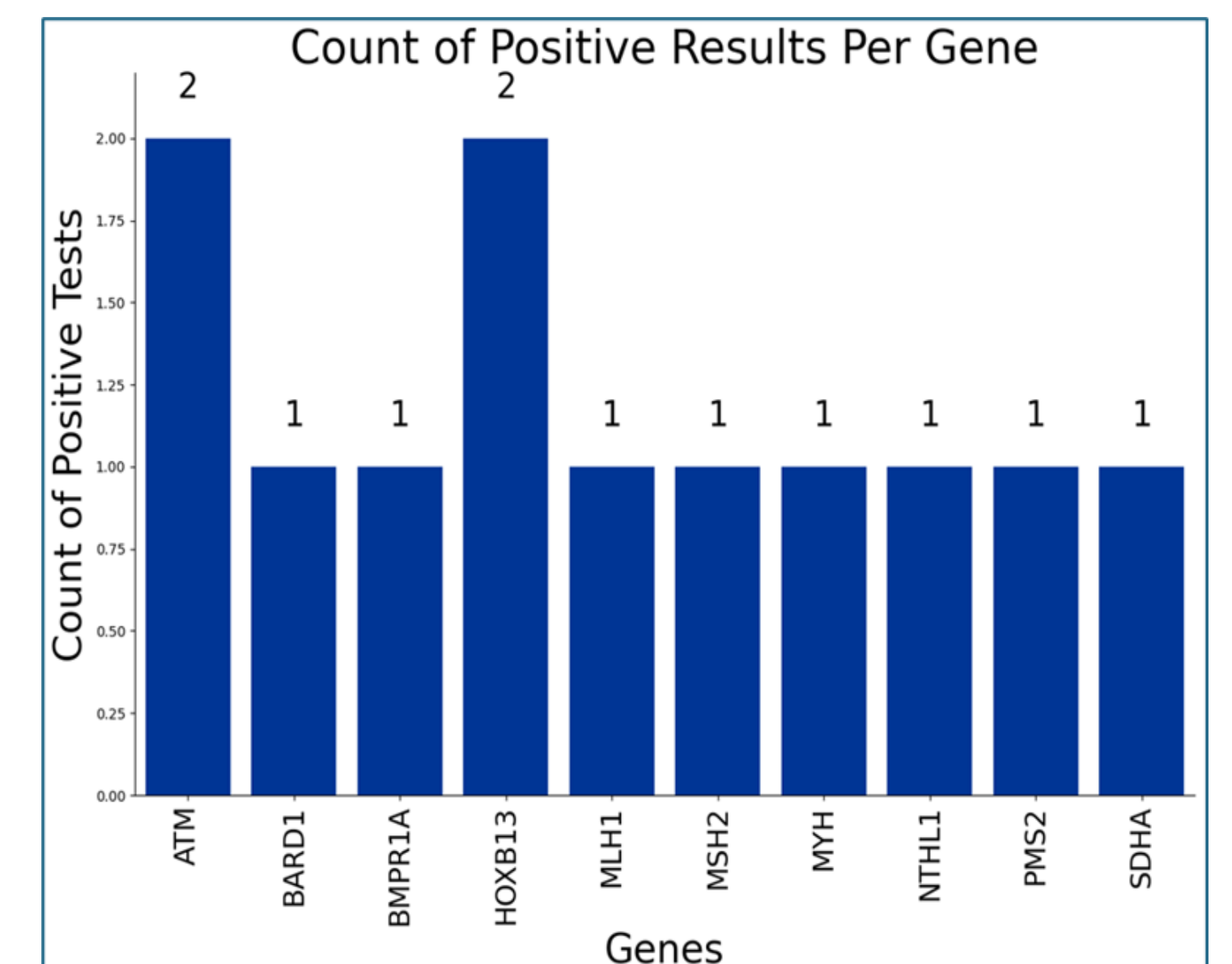
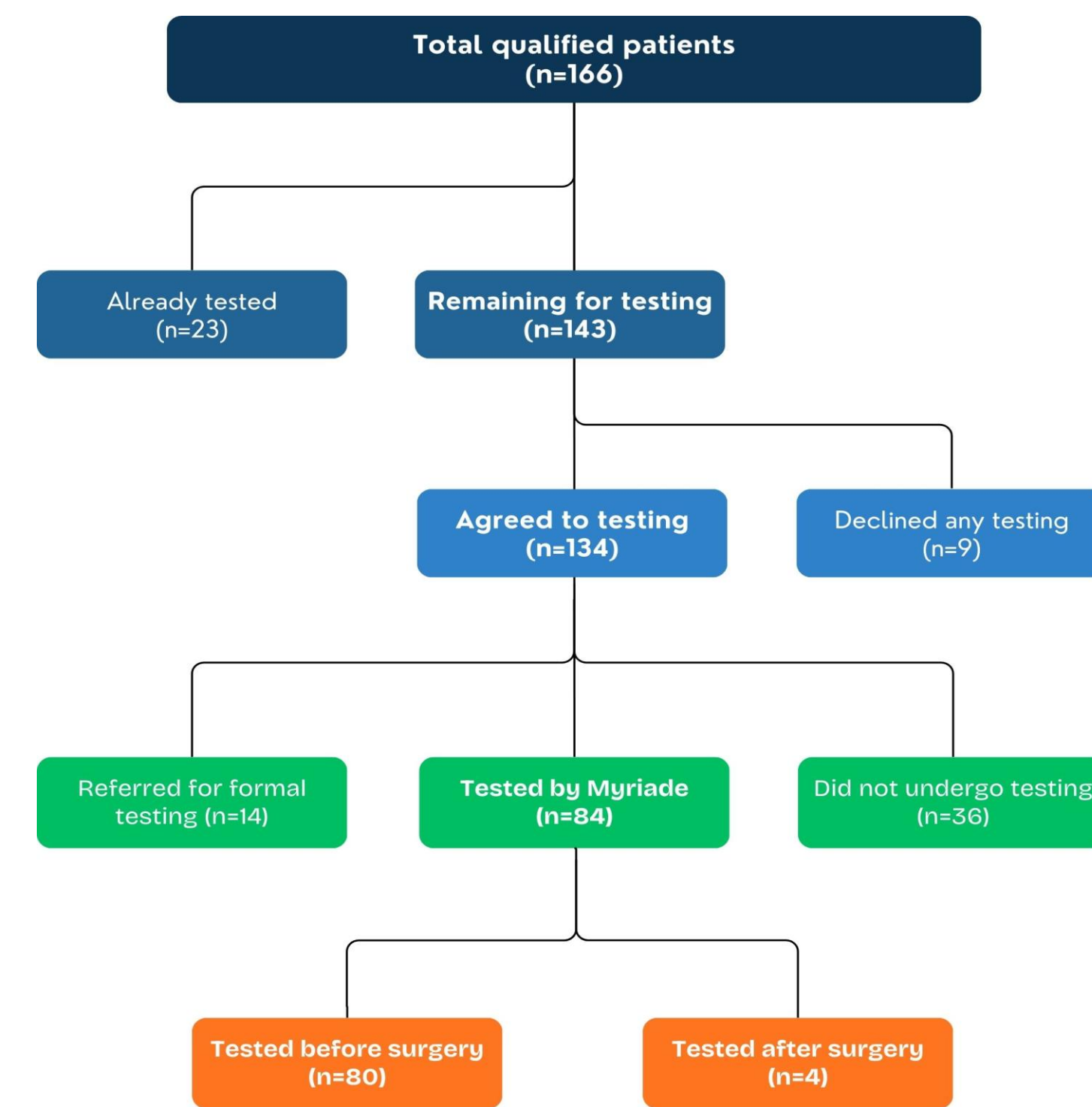
Average running time in lab - **6.2 days**.

Hereditary cancer positive rate - **14.1%**.

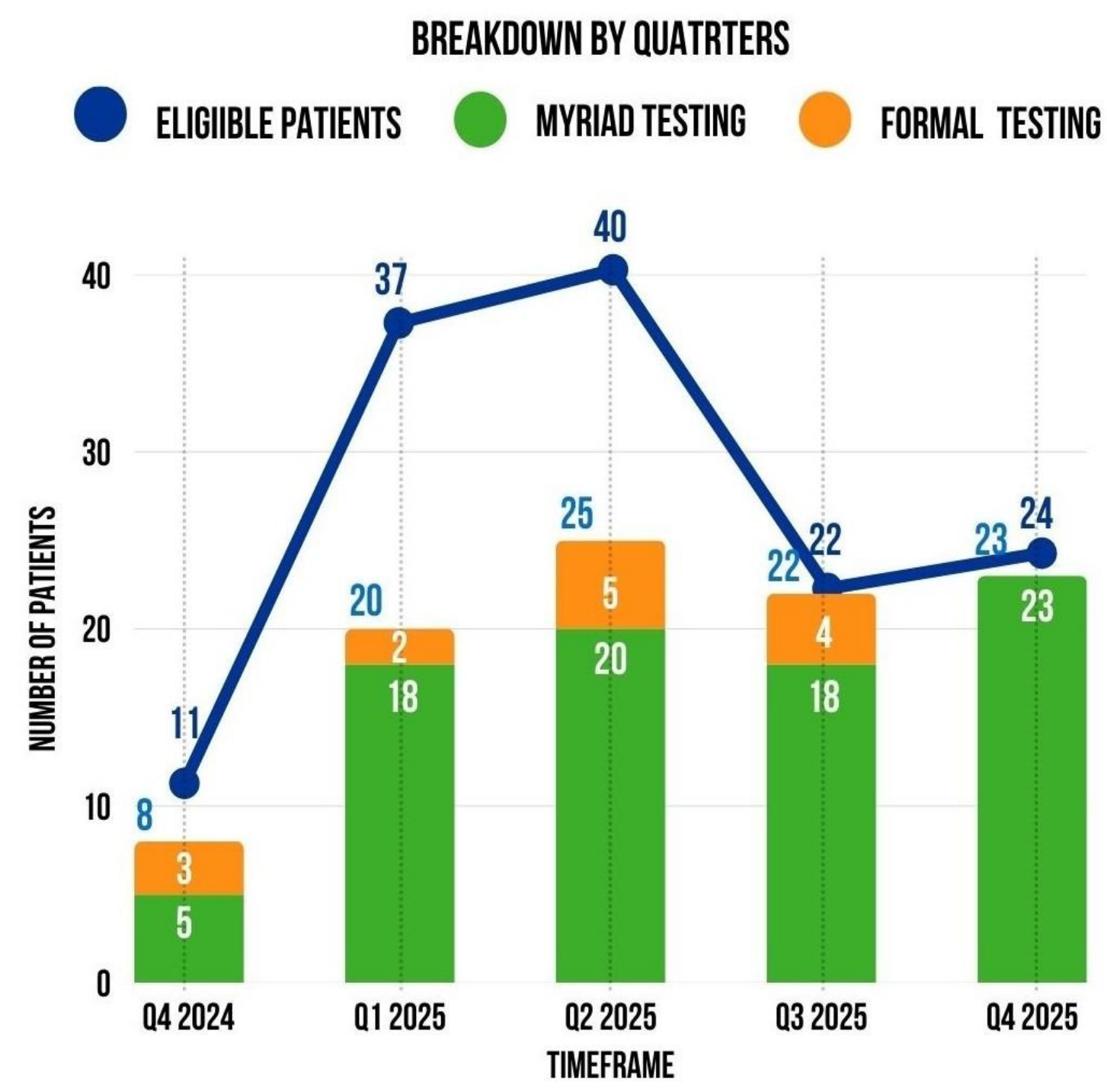
Results suggested for further follow up - **37.2 %**.

Paid by insurance – **98 %**.

Average co-pay - \$30.



Patients with positive results had follow up appointments offered with Northwestern genetic counseling service.



CONCLUSIONS

Point of care MGPT is feasible and reproducible in patients with newly diagnosed colorectal cancer.

It allowed for fast result turnaround time, higher compliance without interrupting normal specialty clinic workflow.

Therapeutically significant results identified in 14.4% of patients.

No significant expense for patient.

Further studies needed to evaluate effects of point-of-care testing on patient outcomes.