HOW CAN COMBINED GERMLINE AND TUMOR GENOMIC TESTING SAVE LIVES?

Meet Darryl

- 53 years old
- African American
- Newly diagnosed colon adenocarcinoma
- Suspected metastatic
- Sister diagnosed with breast cancer at age 45

44%

more African American men with colorectal cancer die from the disease compared to White men.[1]

20%

of colorectal cancer (CRC) cases are associated with familial clustering, but **only 6%** of people with colorectal cancer receive germline testing.[2-5]

African American

patients with colorectal cancer have fewer microsatellite instability tumors, potentially reducing the number of patients who could qualify for immune checkpoint inhibitors.[6]

Guidelines

recommend germline testing and mismatch repair (MMR) or microsatellite instability (MSI) testing in all patients newly diagnosed with colon cancer.[2,3,7]

How would you approach Darryl's oncology testing?

Darryl meets criteria for combined germline and tumor genomic testing based on society guidelines[2,3,7]

GERMLINE TESTING	ACTIONABLE RESULTS	CLINICAL IMPACT
MyRisk® Hereditary Cancer Test	**Germline status:** ⊕ POSITIVE *RET*	A germline *RET* pathogenic variant confers a nearly **100% lifetime risk of medullary thyroid cancer,** warranting **lifelong enhanced surveillance and possible prophylactic thyroidectomy,** depending on the variant risk level.[8,9] *RET* pathogenic variant **qualifies family members** for genetic testing.[8]
TUMOR GENOMIC TESTING		
Precise Tumor® Molecular Profile Test	**Variants with FDA-approved therapy:** *RET* *KRAS* **Other variants of clinical significance:** Multiple findings **Biomarkers:** TMB Low MSI Stable PD-L1 IHC Negative **Clinical trials:** 28	*RET* gene fusions are an **indication for targeted therapy** with selpercatinib.[2] **Targeted treatment** with sotorasib and adagrasib is also indicated for second line treatment of metastatic CRC with $KRAS^{G12D}$ mutation.[2] *KRAS* mutations, particularly the G12D variant, are more common in African American CRC patients than in those of European descent.[6] Immuno-oncology treatment **would <u>not</u> be considered** based on negative biomarkers. There are **28 clinical trials** associated with Darryl's cancer and genomic profile.

Following referral to an endocrine surgeon, **Darryl was diagnosed with early-stage medullary thyroid cancer,** with clear margins and no evidence of lymph node involvement.
Had germline testing **<u>not</u>** been performed, this **diagnosis could have been delayed.**

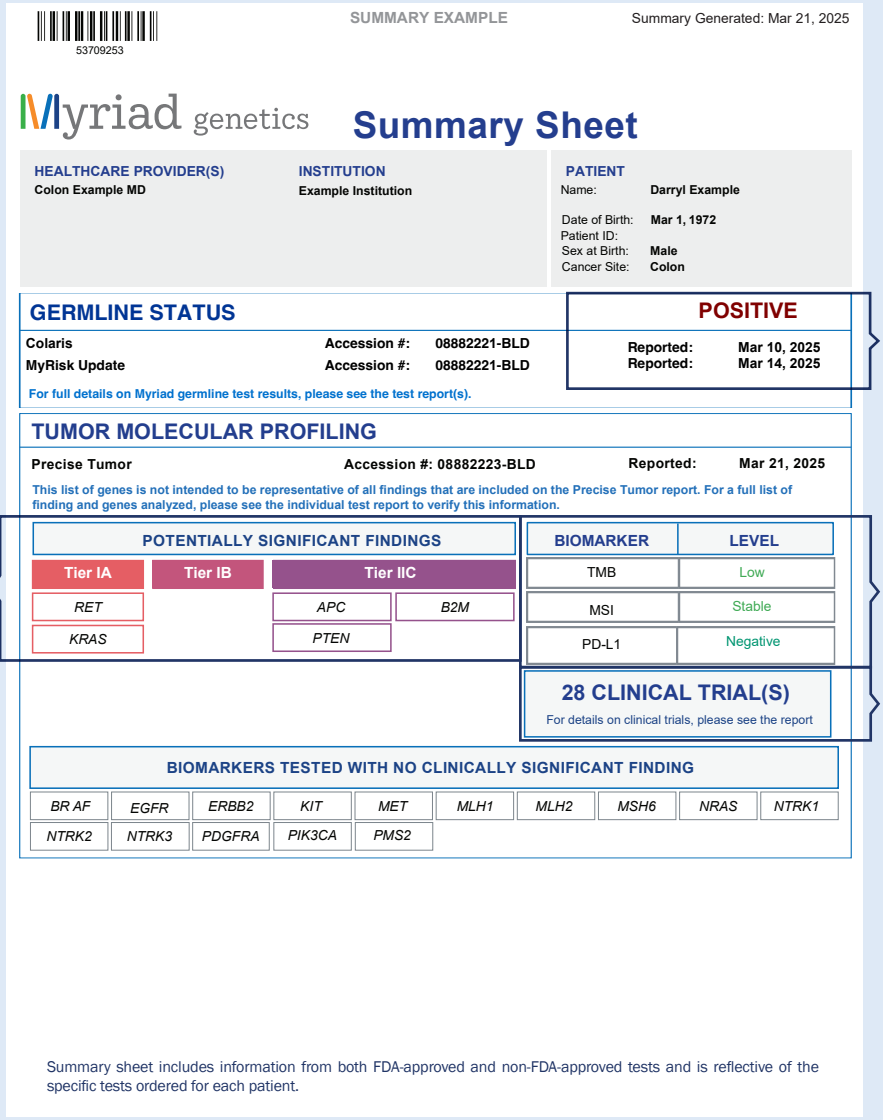
For Darryl, combined germline and tumor genomic testing:

- ✓ Identified a germline *RET* pathogenic variant and ruled out Lynch syndrome,
- ✓ Enabled early detection of thyroid cancer,
- ✓ Identified targeted therapy options for advanced CRC,
- ✓ Prompted germline genetic testing for his family.

Myriad Oncology™

Actionable insights and support services for patients like Darryl

Patient results come with a practical, treatment-focused summary sheet consolidating germline and tumor genomic information on a single page.



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SUMMARY EXAMPLE

Summary Generated: Mar 21, 2025

Myriad genetics

Summary Sheet

HEALTHCARE PROVIDER(S)
Colon Example MD

INSTITUTION
Example Institution

PATIENT
Name: Darryl Example
Date of Birth: Mar 1, 1972
Patient ID:
Sex at Birth: Male
Cancer Site: Colon

GERMLINE STATUS — POSITIVE

Colaris	Accession #:	08882221-BLD	Reported: Mar 10, 2025
MyRisk Update	Accession #:	08882221-BLD	Reported: Mar 14, 2025

For full details on Myriad germline test results, please see the test report(s).

TUMOR MOLECULAR PROFILING

Precise Tumor — Accession #: 08882223-BLD — Reported: Mar 21, 2025

This list of genes is not intended to be representative of all findings that are included on the Precise Tumor report. For a full list of finding and genes analyzed, please see the individual test report to verify this information.

POTENTIALLY SIGNIFICANT FINDINGS

Tier IA	Tier IB	Tier IIC	
RET		APC	B2M
KRAS		PTEN	

BIOMARKER	LEVEL
TMB	Low
MSI	Stable
PD-L1	Negative

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

BIOMARKERS TESTED WITH NO CLINICALLY SIGNIFICANT FINDING

BRAF	EGFR	ERBB2	KIT	MET	MLH1	MLH2	MSH6	NRAS	NTRK1
NTRK2	NTRK3	PDGFRA	PIK3CA	PMS2					

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

Summary of key findings for all tests ordered on one sheet

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

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

Know how many clinical trials may be available for your patient

Lean on Myriad Oncology to support you, your team, and your patients

DID YOU KNOW?

Myriad's industry-leading variant reclassification program ensures that each variant of uncertain significance (VUS) is continuously re-evaluated until a definitive classification is available.

Myriad's Patient Education Program includes pre- and post-test education by board-certified genetic counselors

Customer Support Representatives help patients navigate costs, coverage, and access financial assistance

Faster turnaround times than most labs for timely treatment decisions

Medical Science Liaisons are available to answer clinical, testing, and results questions

LEARN MORE

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References: 1. Siegel RL, Wagle NS, Cercek A, Smith RA, Jemal A. Colorectal cancer statistics, 2023. CA Cancer J Clin. 2023;73(3):233-254. **2.** Referenced with permission from the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) Colon cancer V1.2025. © National Comprehensive Cancer Network, Inc. 2025. All rights reserved. Accessed February 2025. To view the most recent and complete version of the guideline, go online to NCCN.org. NCCN makes no warranties of any kind whatsoever regarding their content, use or application and disclaims any responsibility for their application or use in any way. **3.** Tung N, Lin NU, Magnani CJ, et al. Multigene germline testing in patients with metastatic cancer: ASCO clinical practice guideline update. J Clin Oncol. 2024;42(31):4879-4893. **4.** Kurian AW, Abrahamse P, Furgal A, et al. Germline genetic testing after cancer diagnosis. JAMA. 2023;330(1):43-51. **5.** Schrock-Kelley S, Souter V, Hall MJ, et al. Poor compliance with germline testing recommendations in colorectal cancer patients undergoing molecular residual disease testing. Commun Med. 2024;4:185. **6.** Myer PA, Lee JK, Madison RW, et al. The Genomics of Colorectal Cancer in Populations with African and European Ancestry. Cancer Discov. 2022;12(5):1282-1293. **7.** Chakravarty D, Johnson A, Sklar J, et al. Somatic Genomic Testing in Patients with Metastatic or Advanced Cancer: ASCO Provisional Clinical Opinion. J Clin Oncol. 2022;40(11):1231-1258. **8.** Referenced with permission from the NCCN Guidelines® Thyroid Carcinoma V1.2025. © National Comprehensive Cancer Network, Inc. 2025. All rights reserved. Accessed April 2025. To view the most recent and complete version of the guideline, go online to NCCN.org. **9.** Taccaliti A, Silvetti F, Palmonella G, Boscaro M. Genetic alterations in medullary thyroid cancer: diagnostic and prognostic markers. Curr Genomics. 2011;12(8):618-625.

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