

# ON THE CONTRARY:

## A Modern Debate About Universal Cancer Genetic Testing

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## Disclosures

Jaime Malone has no financial disclosures.  
Jessie Poskochil has no financial disclosures.  
Gwen Reiser has no financial disclosures.

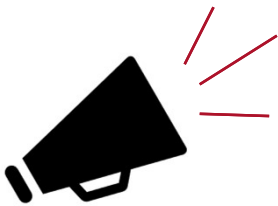
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## Objectives

1. Compare the benefits and risks of universal cancer genetic testing.
2. Recognize the limitations of universal cancer genetic testing.

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## DEBATATORS



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## Jaime Malone

“Pro Team”

From Green Bay, Wisconsin

Cheer for the Pro-Panthers!



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## Jessie Poskochil

“Con Team”

From Bennet, Nebraska

Cheer for the Con-Camels!



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## What is universal cancer genetic testing?

Universal cancer genetic testing is:

- A comprehensive multi-gene cancer panel
- Offered to all patients with a personal history of any type of cancer at any age and/or a family history of cancer
- Regardless of if they meet NCCN criteria or not

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# TOPIC #1

## Disparities

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# Disparities

## PROS

- Increase access for underrepresented populations
  - Everyone deserves to know this information
- Improved outcomes
  - Testing changes treatment
- Level the playing field
  - The only way to lower VUS rate for non-White populations is to do to the work (Samadder et al., 2021)

## CONS

- Uncertainty
  - The VUS rate will be higher in non-White individuals (Jones et al., 2023; Samadder et al, 2021)
    - Uncertain variants can increase anxiety in an already vulnerable population
- Discrimination
  - GINA protects health insurance and employment in most settings, but does **not** protect against discrimination with life, disability, or long-term care insurance (Genetic Information Nondiscrimination Act "GINA" of 2008, 42 U.S.C. § 2000ff).

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# TOPIC #2

## Guidelines

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## Guidelines

### PROS

- NCCN guidelines are extremely complex (Hamel et al.)
- Guidelines offer conflicting recommendations
- Universal testing makes it easy

### CONS

- Principle based ethics
  - Autonomy, Justice, Beneficence and Non-maleficence (A Guide to Genetic Counseling, 2010)
- Not all genes have enough evidence yet to change a patient's management (NCCN, 2023)

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# TOPIC #3

## Testing Volume

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# Testing Volume

## PROS

- Cost
  - This information is available and affordable
- Increased referrals and profits for institution

## CONS

- Burnout
  - The increase in volume could lead to overworked genetic counselors, compassion fatigue, and burnout (NSGC, 2023; Patel et al., 2018).
- Longer Waitlist
  - Longer wait time for scheduling patients and getting their testing completed

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# Questions from the Audience

University of Nebraska  
Medical Center



Nebraska  
Medicine

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## References

1. Genetic Information Nondiscrimination Act "GINA" of 2008, 42 U.S.C. § 2000ff.
2. Hampel, H., & Yurgelun, M. B. (2022). Point/Counterpoint: Is It Time for Universal Germline Genetic Testing for All GI Cancers?. *Journal of clinical oncology : official journal of the American Society of Clinical Oncology*, 40(24), 2681–2692. <https://doi.org/10.1200/JCO.21.02764>
3. Jones, J. C., et al. (2023). Universal Genetic Testing vs. Guideline-Directed Testing for Hereditary Cancer Syndromes Among Traditionally Underrepresented Patients in a Community Oncology Program. *Cureus*, 15(4), e37428. <https://doi.org/10.7759/cureus.37428>
4. Moretz, C., et al. (2022). Comparison of Germline Genetic Testing Before and After a Medical Policy Covering Universal Testing Among Patients With Colorectal Cancer. *JAMA network open*, 5(10), e2238167. <https://doi.org/10.1001/jamanetworkopen.2022.38167>
5. National Comprehensive Cancer Network Clinical Practice Guidelines in Oncology Version 2.2024: Genetic/Familial High-Risk Assessment: Breast, Ovarian, and Pancreatic. (2023).
6. National Comprehensive Cancer Network Clinical Practice Guidelines in Oncology Version 2.2023: Genetic/Familial High-Risk Assessment: Colorectal. (2023).
7. National Society of Genetic Counselors. (2023). 2023 Professional status survey. <https://www.nsgc.org/LinkClick.aspx?fileticket=2JftgHC9jkY%3d&portalid=0>. Accessed 7 Feb 2024.
8. Patel, D., et al. (2018). Finding a Balance: Reconciling the Needs of the Institution, Patient, and Genetic Counselor for Optimal Resource Utilization. *Journal of genetic counseling*, 10.1007/s10897-018-0270-4. Advance online publication. <https://doi.org/10.1007/s10897-018-0270-4>
9. Samadder, N. J., et al. (2021). Comparison of Universal Genetic Testing vs Guideline-Directed Targeted Testing for Patients With Hereditary Cancer Syndrome. *JAMA oncology*, 7(2), 230–237. <https://doi.org/10.1001/jamaoncol.2020.6252>
10. Uhlmann, W., Schuette, J., & Yashar, B. (2010). *A guide to genetic counseling* (2nd ed.). Wiley-Blackwell.
11. Whitworth, P. W., et al. (2022). Clinical utility of universal germline genetic testing for patients with breast cancer. *JAMA Network Open*, 5(9), e2232787–e2232787. <https://doi.org/10.1001/jamanetworkopen.2022.32787>

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