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U.S. Department  
of Veterans Affairs

# Realizing the Potential of Genomics across the Continuum of Precision Health Care

*Session V: What are the system level challenges and opportunities?*

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October 12, 2022

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FOR BRCA

# System-level barriers to widespread adoption of genomics and precision medicine

- ▶ Diverse ways in which patients gain genetic testing results
- ▶ Increasingly complex medical management implications of genetic testing results
- ▶ Level of discussion and urgency of interventions vary over life-span and health status
- ▶ Providers have varying expertise



*NOTE: My discussion uses inherited cancer genetics as illustrative example*



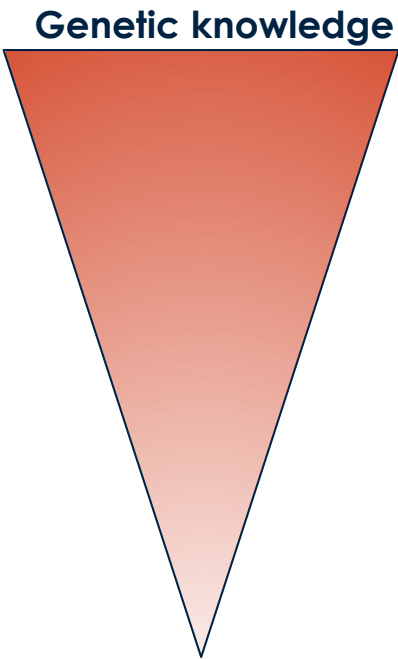
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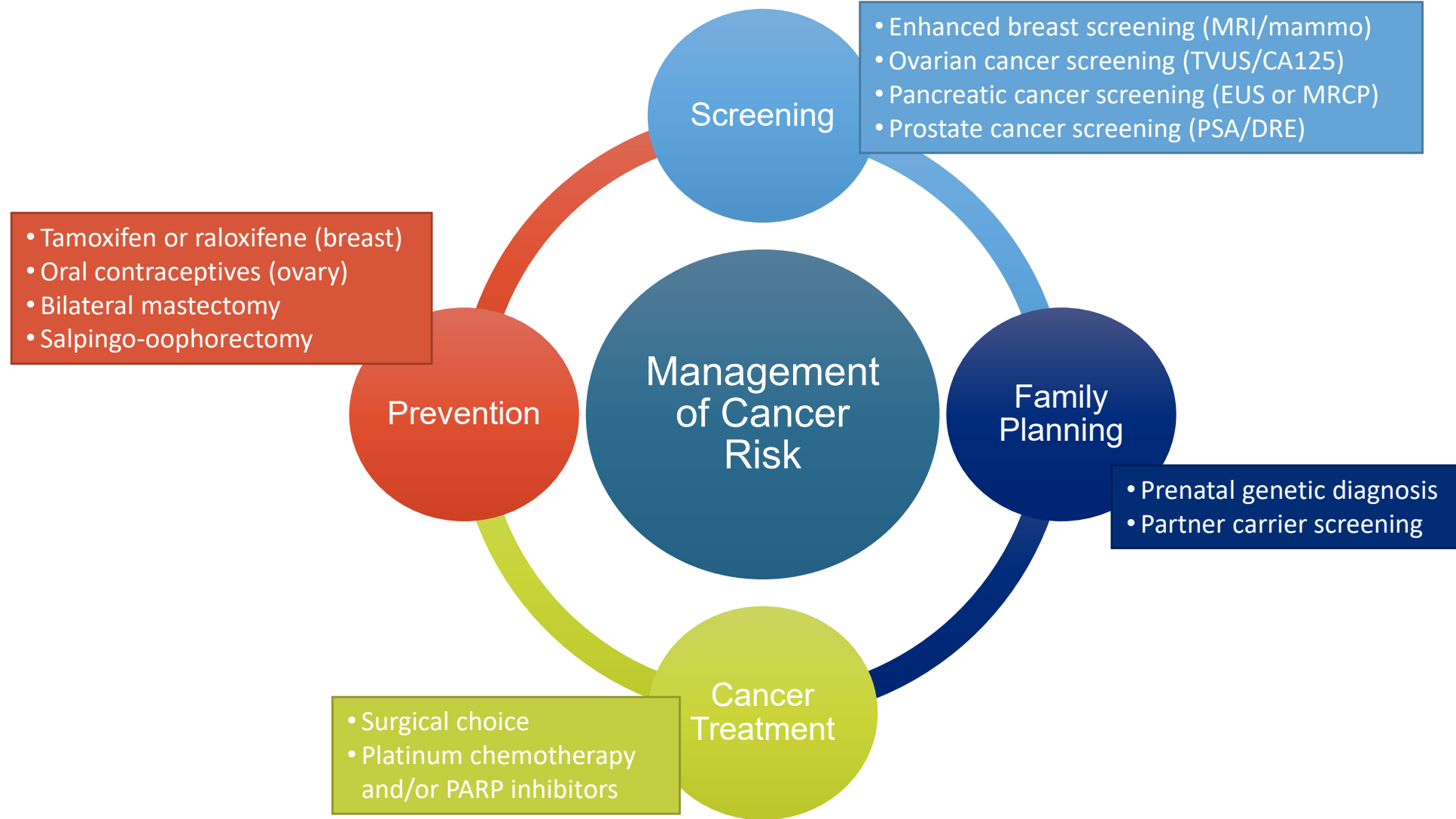
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# How are patients finding out about their cancer risk mutation?

Care Delivery	Genetic Testing/ Counseling	Who is involved?
Traditional Genetic Testing	Pre-test counseling -> testing -> Post-test counseling	GC w/wo Cancer Genetics Physician
Point of Care testing	Provider -> testing -> post-test counseling	Oncologist w/wo Genetic Counselor
Reproductive Planning	Incidental	Prenatal Geneticist
Tumor testing	Incidental	Oncologist
Research study	Incidental	None
Direct to consumer testing	DIY	None



# Implications of genetic testing - *BRCA1/2* germline mutation

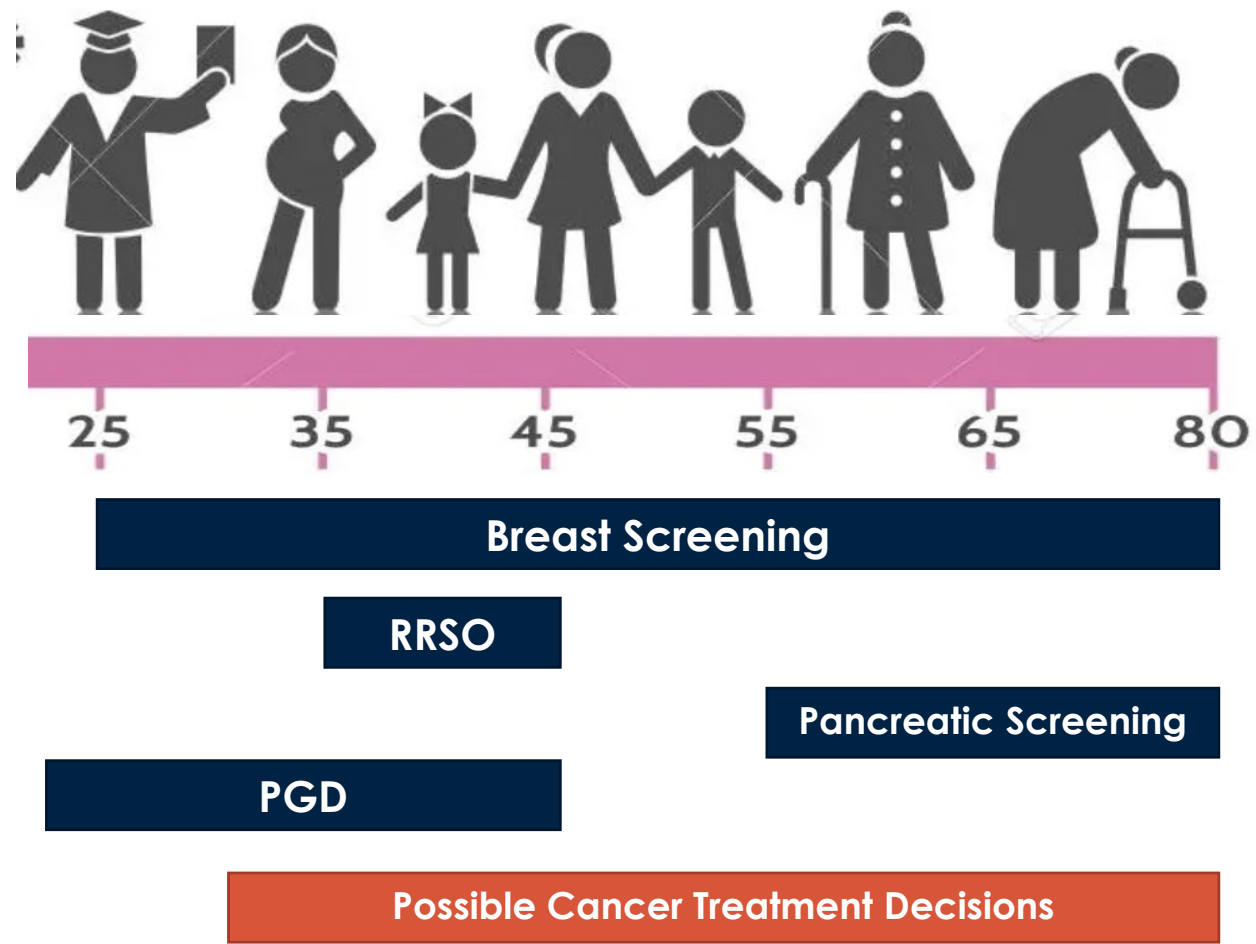


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# When is genetic care being provided?



# Who is providing genetic care?



## Genetic counselors

Depending on context, ~5% to over 50% of patients seen will have a genetic mutation

Trained in risk and counselling



## Oncologists

Depending on tumor type, ~1% to over 20% of patients seen will have a genetic mutation

Trained in clinical management of cancer



## Primary Care Physicians

Depending on ethnicity, <1% of patients see

Trained in clinical management focused on risk reduction



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