

VA National Precision Oncology Program

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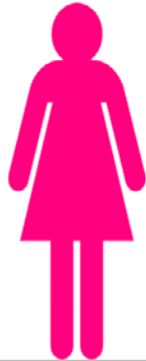
Professor of Medicine, Duke University Medical Center

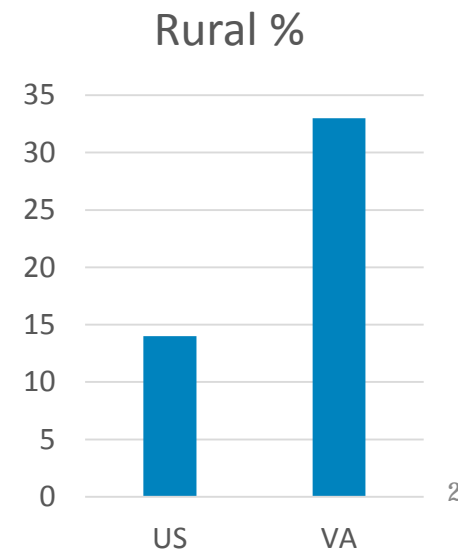
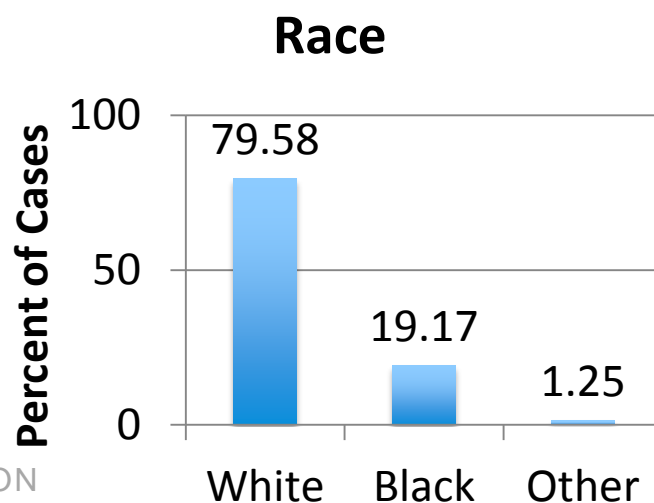
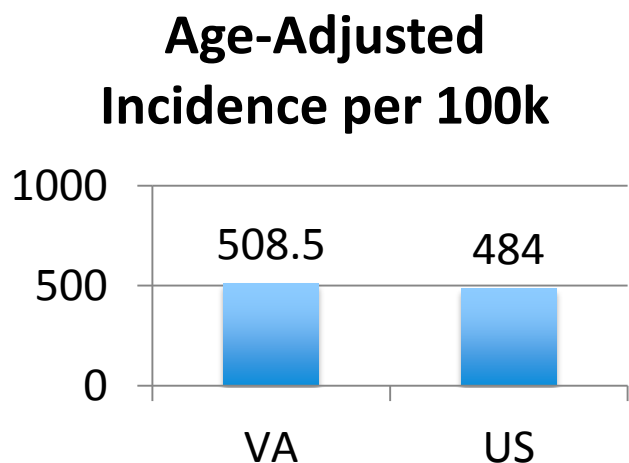
Disclosures: Personal: none; Institutional: Gift from IBM

National Academy of Medicine, NCPF; October 30, 2018

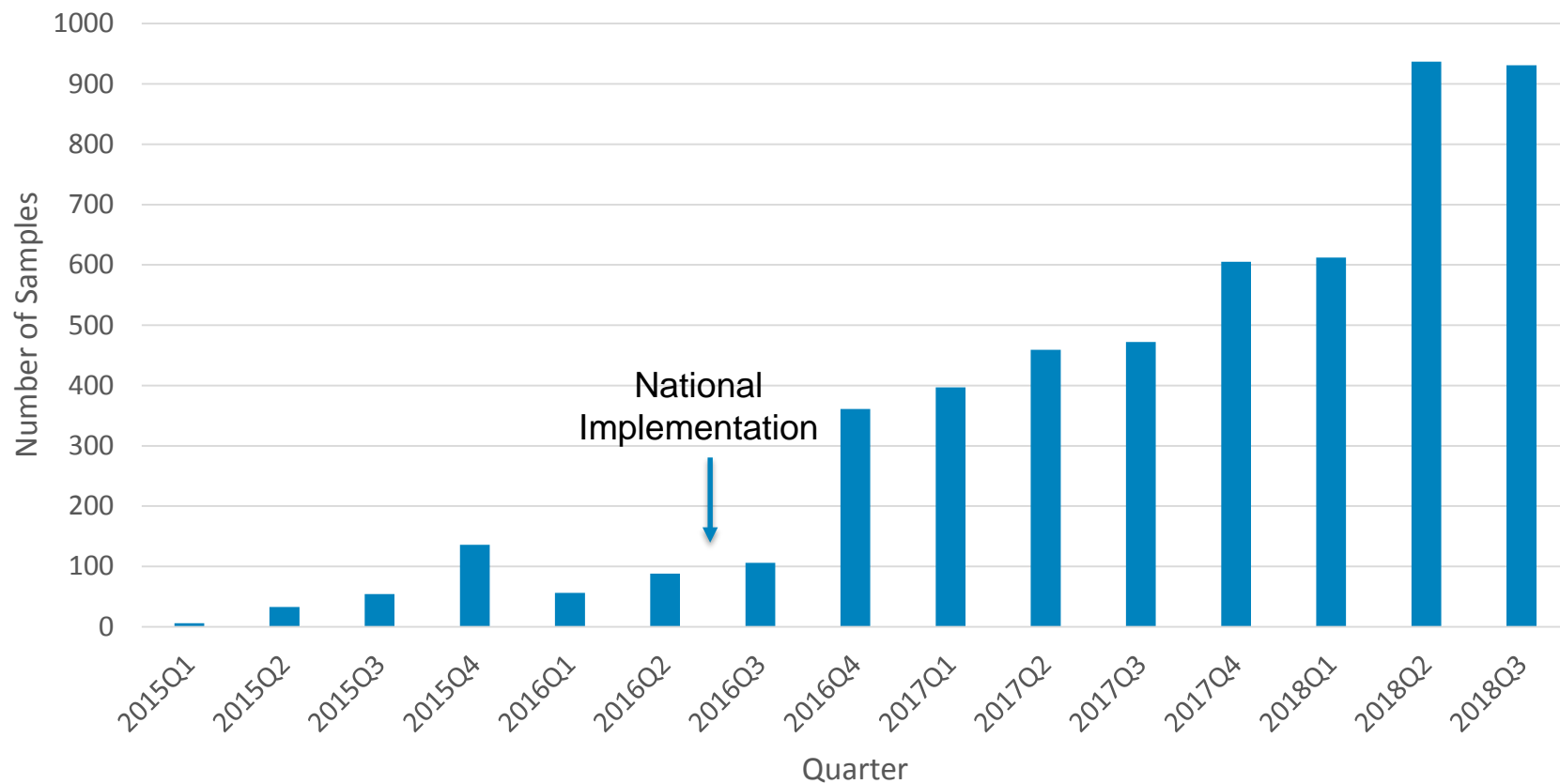


Most Common Cancers by Sex in Veterans Affairs patients, 2010

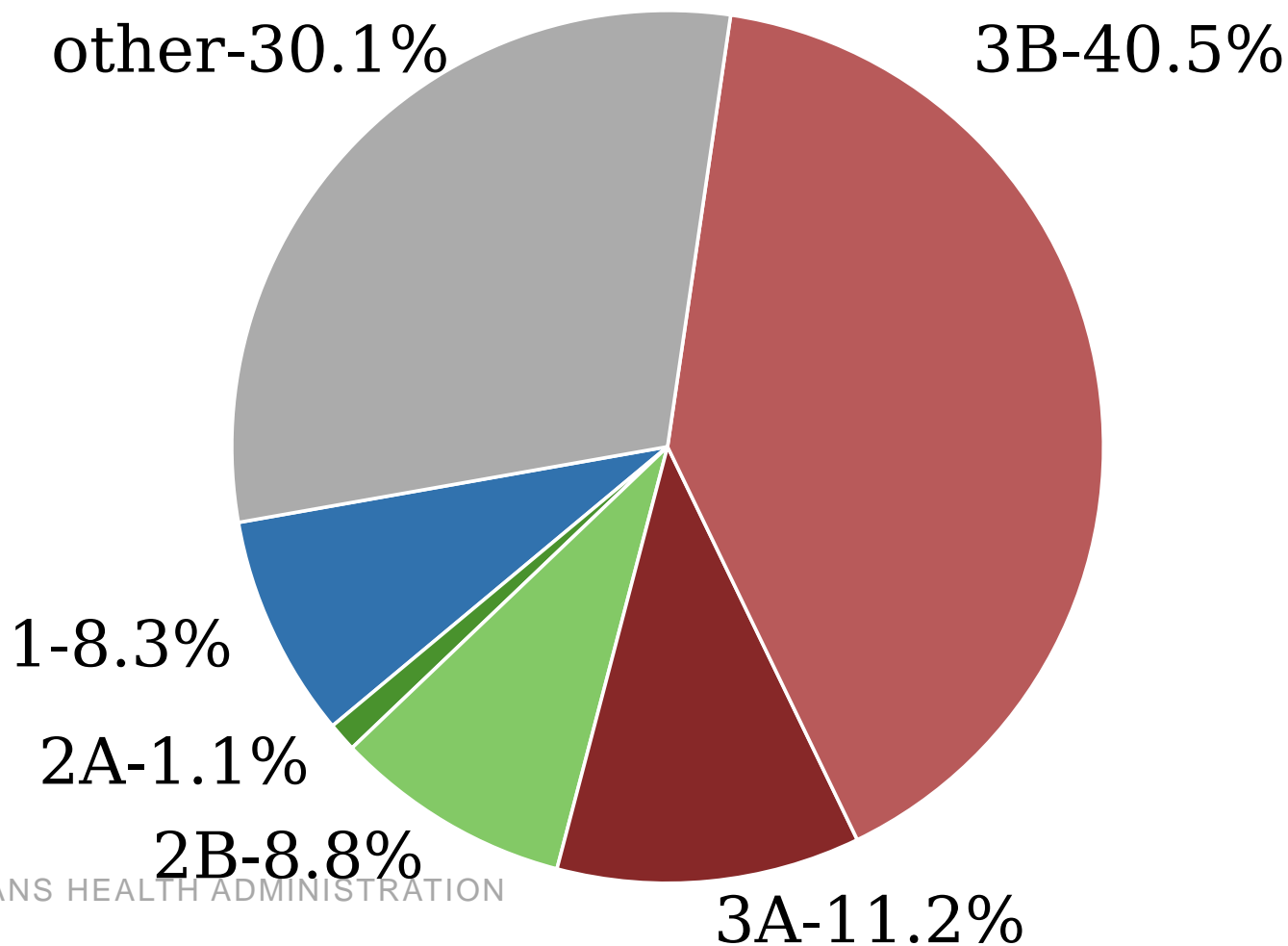
	n	%	Males	Females		n	%
Prostate	13,438	30%			Breast	402	30%
Lung & bronchus	8,019	18%			Lung & bronchus	197	15%
Colon & rectum	3,705	8%			Colon & rectum	88	7%
Kidney & pelvis	1,733	4%			Uterine corpus	75	6%
Melanoma	1,674	4%			Melanoma	59	4%
Liver	1,553	3%			Thyroid	53	4%
All Sites	44,836	97%			All Sites	1,330	3%



VA National Precision Oncology Program Samples per Quarter since Inception

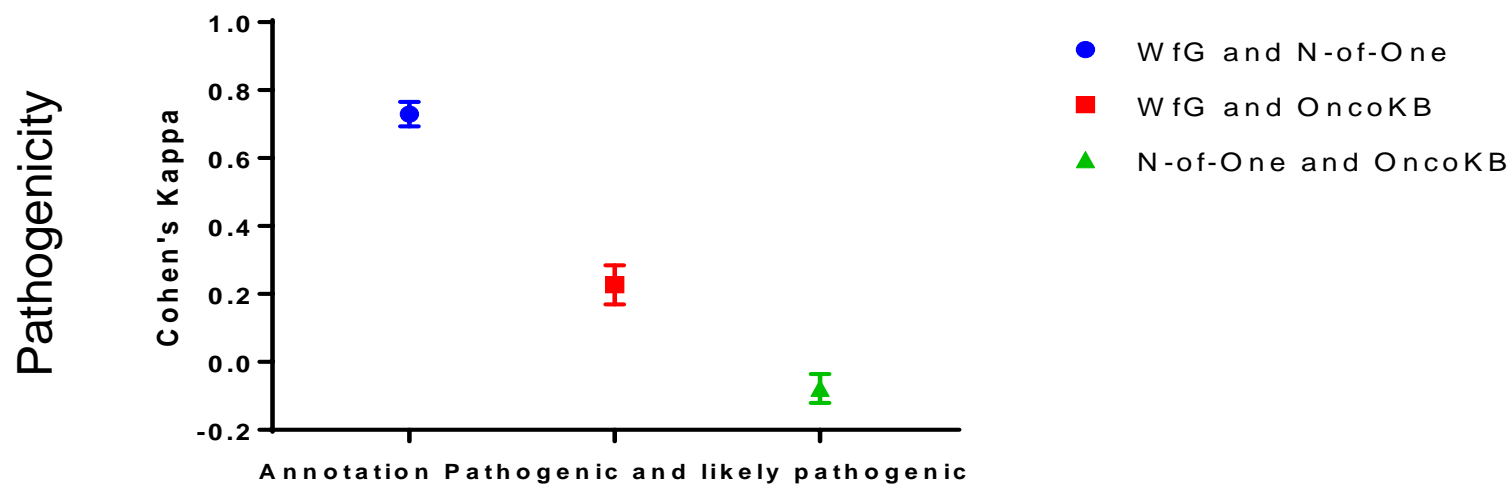


VA National Precision Oncology Program: Highest Level of Evidence



Comparison of Annotation Services for VA National Precision Oncology Program

1227 Gene Variants seen in VA NPOP samples from January 2015 to October 2017



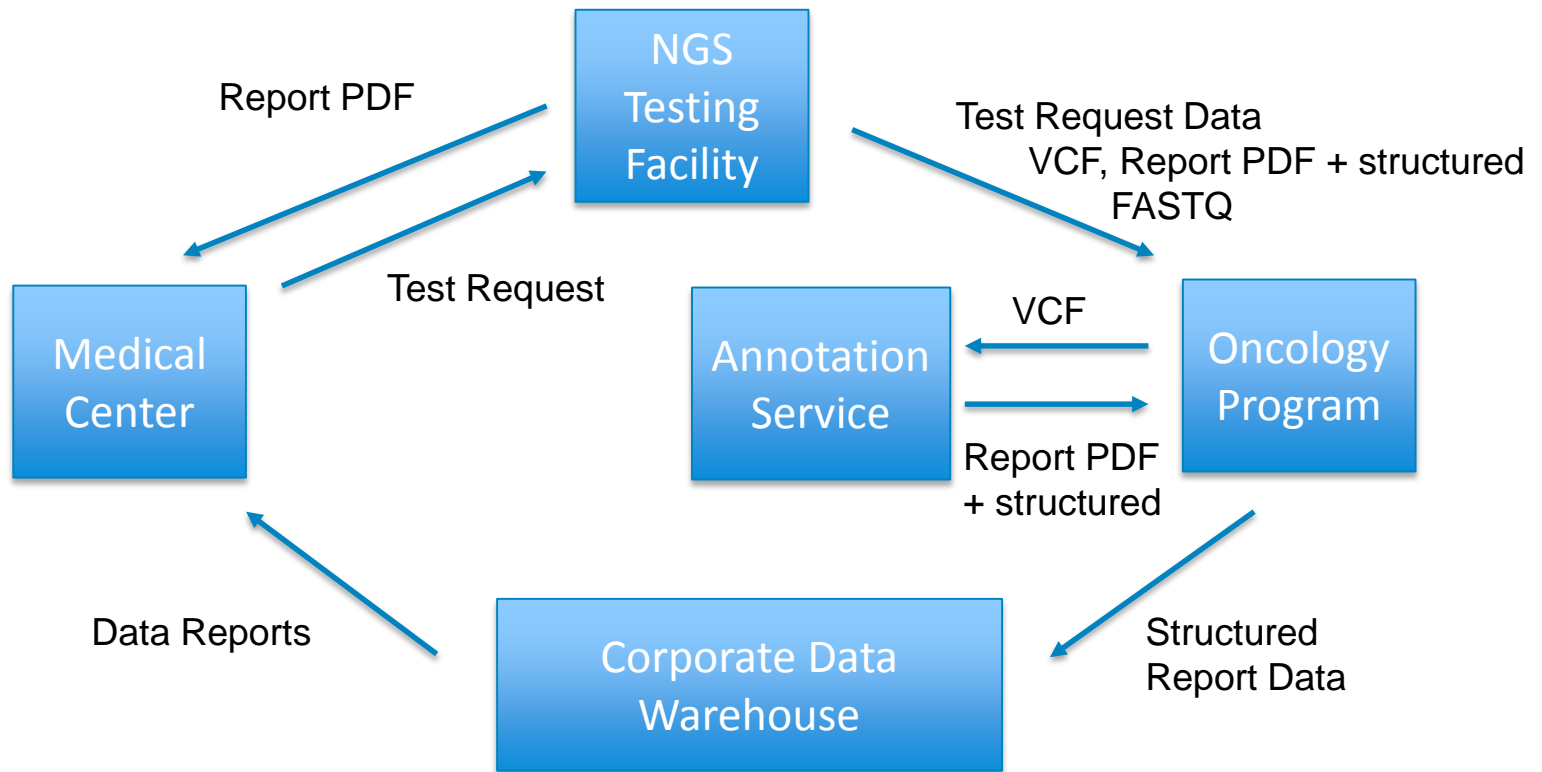
Actionability

WfG and OncoKB
Level 1 Recommendations only
Kappa: 0.190 (95% CI 0.101, 0.278)

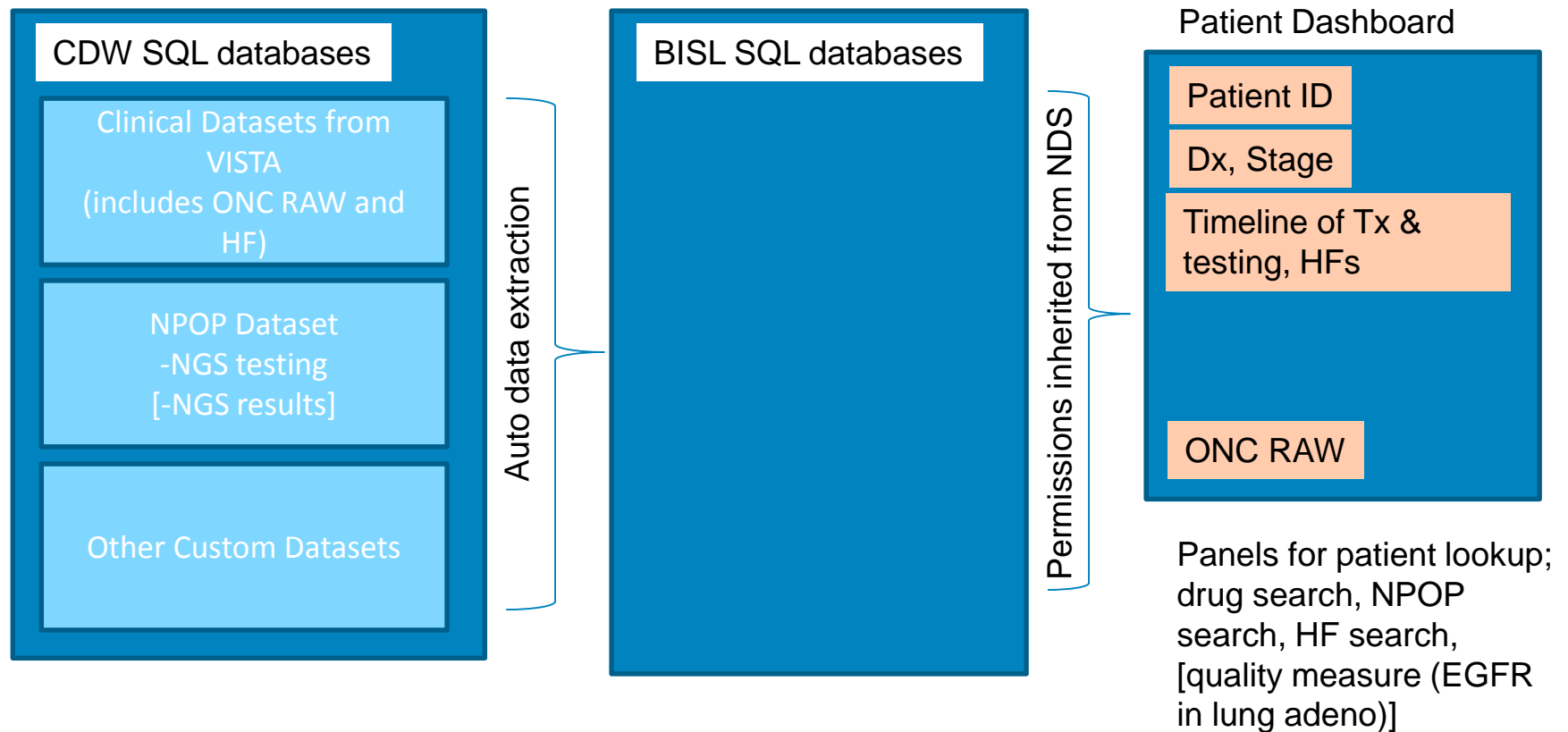
VA National Precision Oncology Program Services

- E-consult service
 - On-demand asynchronous patient-specific expert advice
- National Molecular Tumor Board
 - Case-based synchronous virtual educational conference
- Database for research
 - Proposals to develop genomic ML algorithms to predict for response or resistance to all therapies (not relying on a single mutation) in NSCLC and colorectal cancer
 - Proteomic studies to layer over genomic data to improve prediction of response to targeted/immunotherapies
- Genomic Medicine Service e-consults available for genetic counseling

VA National Oncology: Data Flow



Dashboards for Clinical (and Research) Data





DEPARTMENT OF
VETERANS AFFAIRS

TO CARE FOR HIM WHO SHALL
HAVE BORNE THE BATTLE AND
FOR HIS WIDOW, AND HIS ORPHAN
A. LINCOLN

Acknowledgements

VA Oncology Team

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