

Experience of a Genetic Testing Laboratory with a Customizable Hereditary Cancer Panel

Jessica Profato, MS, CGC, Michelle Jackson, MS, CGC, Holly LaDuca, MS, CGC

Ambry Genetics; Aliso Viejo, CA

BACKGROUND

- A variety of hereditary cancer multigene panel tests (MGPT) are available including customizable tests.
- Utilization of pre-determined panel options is most common; however, customized panels may be preferred in some cases.
- This study aims to describe ordering trends with a customizable hereditary cancer panel.

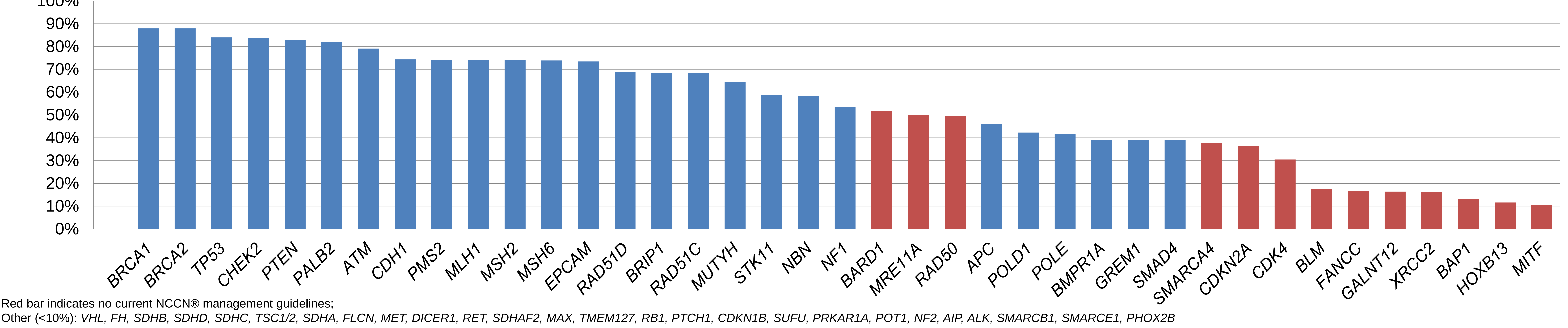
METHODS

- CustomNext-*Cancer* orders of up to 55 or 67 genes between July and December 2016 were retrospectively reviewed (N=1945).
- Orders of only one gene (N=19) and of all available genes (N= 408) were excluded.
- Number and combination of genes, percentage of tests including each gene, and inclusivity of pre-determined panels were assessed.

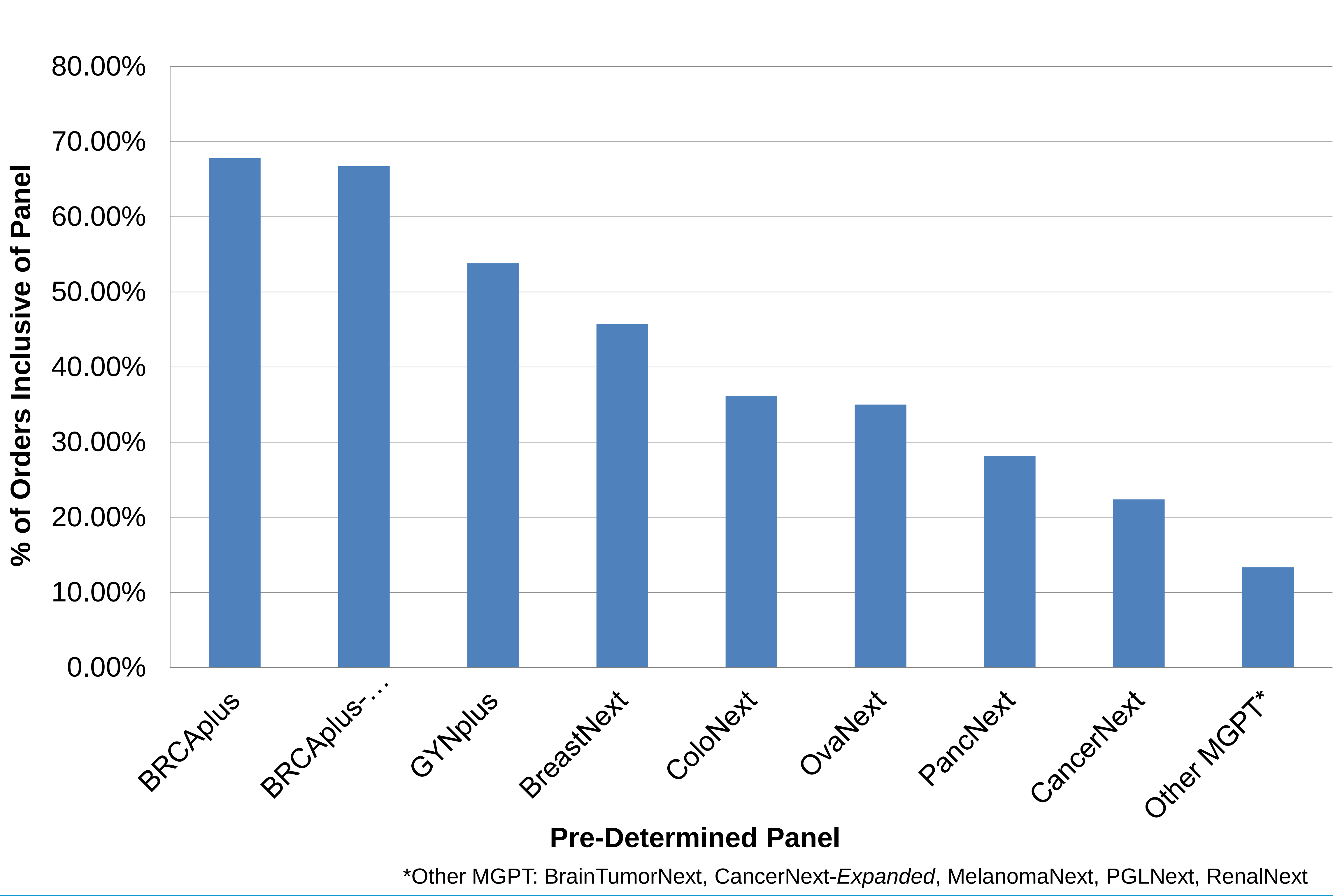
TAKE-HOME POINTS

- Customizable panels are being used in various ways including orders of all available genes, altering an existing panel, or creation of a unique panel.
- Providers were more likely to select genes with NCCN® management guidelines; however, *BARD1*, *MRE11A*, and *RAD50* were ordered in about 50% of cases.
- Genes ordered least frequently (<10% of orders) are associated with rare conditions/cancers.
- Further research is needed to understand the rationale for pursuing custom panels and the factors that influence the inclusion or exclusion of certain genes.

Frequency of Orders by Gene



Percentage of Orders Inclusive of Pre-Determined Panel



Number of Genes Ordered

