

ASHP BEST PRACTICES AWARD

Impact of a Pharmacist-Centered, Multi-Site Precision Oncology Program (POP)

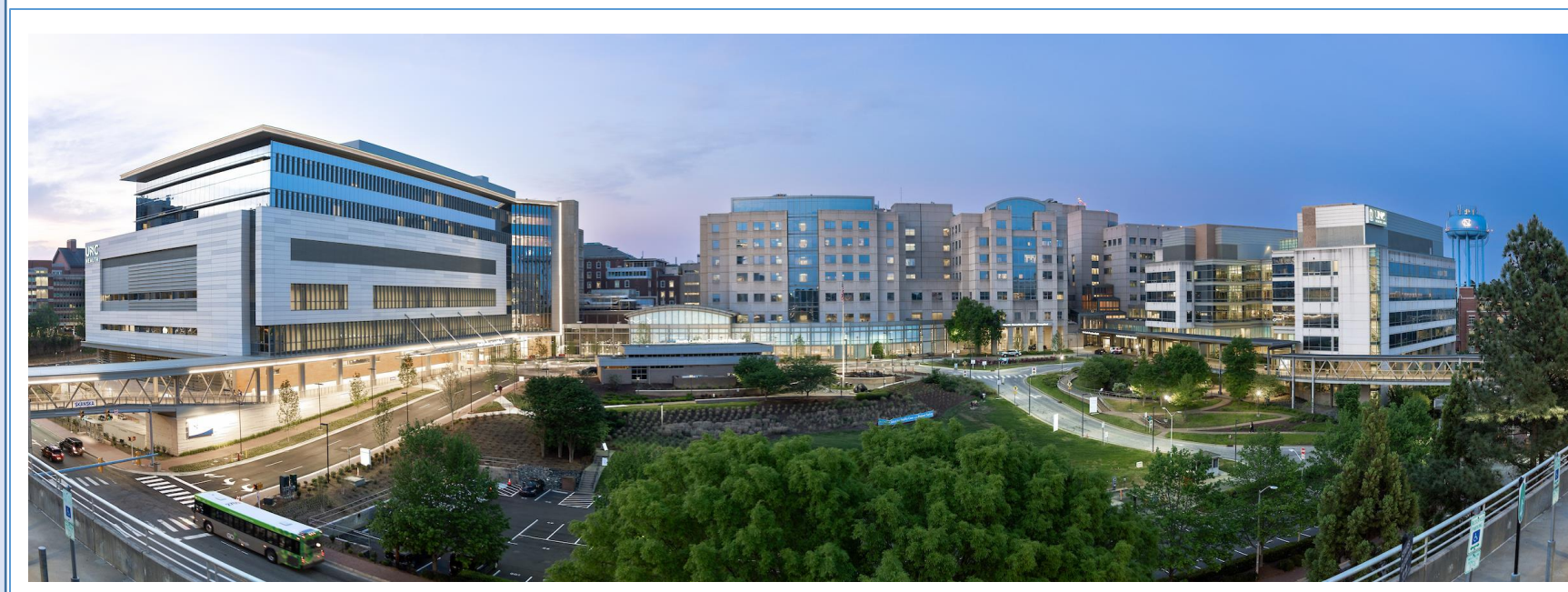
Amber Cipriani, PharmD, BCOP
Jaime Richardson, RN BSN, OCN, CCRP
Crystal Dula, RN
Daniel J Crona, PharmD, PhD
Maurice Alexander, PharmD, BCOP
Elizabeth Tinoco, PharmD, MS
John Valgus, PharmD, MHA, BCOP

UNC Health
Chapel Hill, NC
Lenoir, NC



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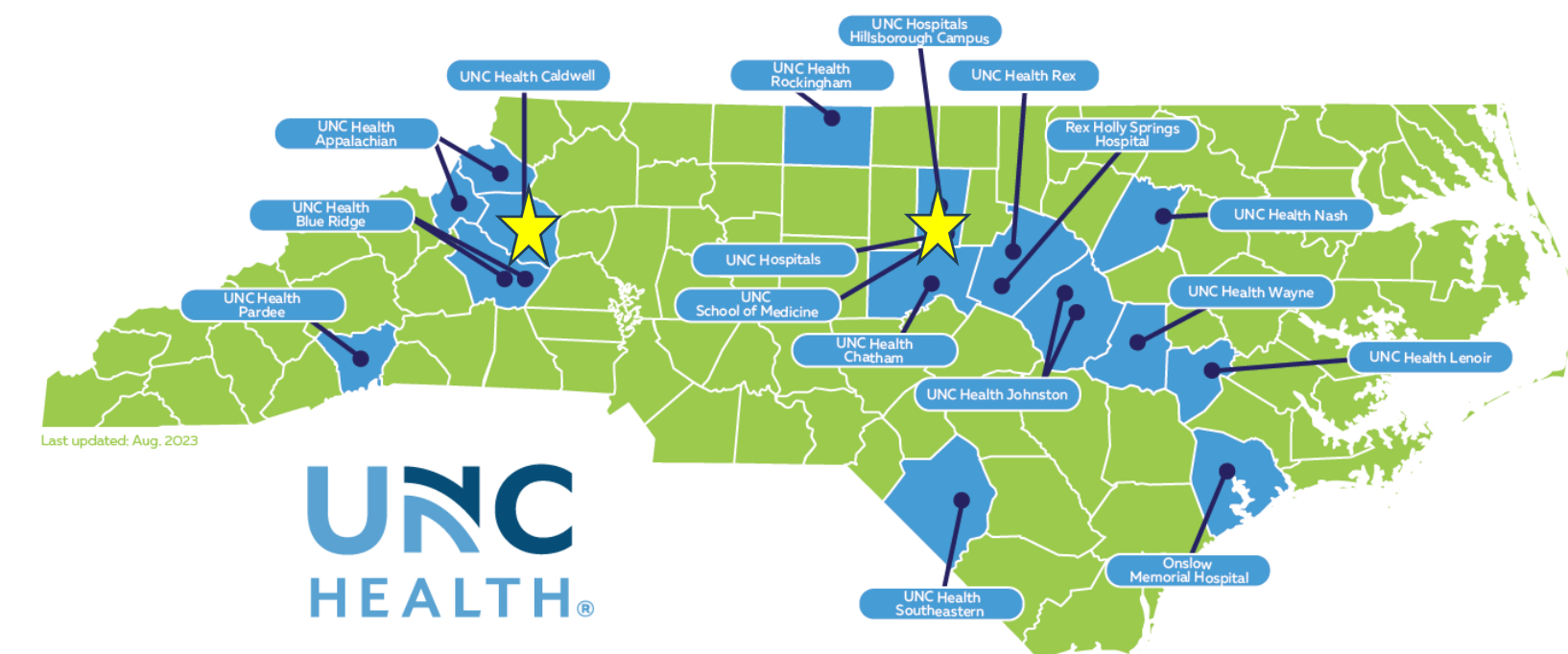


Introduction

UNC Hospitals

- Academic Medical Center in Chapel Hill with outpatient services across North Carolina
 - 850 licensed beds
 - >13,000 teammates

UNC Health System



- North Carolina's largest academic health system committed to transformational change as it seeks to improve North Carolinians' health in the 21st century.
 - 16 hospitals, 4,453 licensed beds
 - >43,000 Teammates
 - 2,875 Employed MDs
 - > 800 clinic locations across North Carolina
- McCreary Cancer Center
 - Community Cancer Center serving Western NC
 - 1 medical oncologist, 4 NP providers

Background

- The application of molecular biomarkers to guide cancer treatment selection approaches may result in dramatic improvements in survival and quality of life for patients¹
- Despite this promise, precision oncology has significant challenges that often preclude implementation:²
 - ensuring appropriate comprehensive molecular testing is completed
 - supporting correct interpretation of the genomic testing results by expert personnel
 - creating provider time to collate new data in a rapidly developing field
 - providing administrative services that can support patient access to biomarker-directed therapies

Description of the Program

Program Goals

- Assist clinicians in the effective use of molecular testing technologies
- Provide expertise on emerging targeted therapies
- Support medication access to biomarker-directed therapies through evidence-based recommendations
 - High need to complete appeals when drugs used off-label (39/81; 48%)

Development of E-consult Services

- The program was founded as a multi-disciplinary molecular tumor board (MTB) that held live conferences open to entire system
- Challenges: live attendance, physician workload for case presentations, lack of EHR documentation
- Established an ambulatory e-consult order to provide a billable, peer-to-peer consultation on biomarker directed treatments and/or interpretation of molecular results
 - Site-specific credentialing pursued for billing
- Developed and validated a strength of recommendations table to standardize approach
 - Considers clinical evidence and individualized risk/benefit

FIGURE 1: POP E-consult workflow

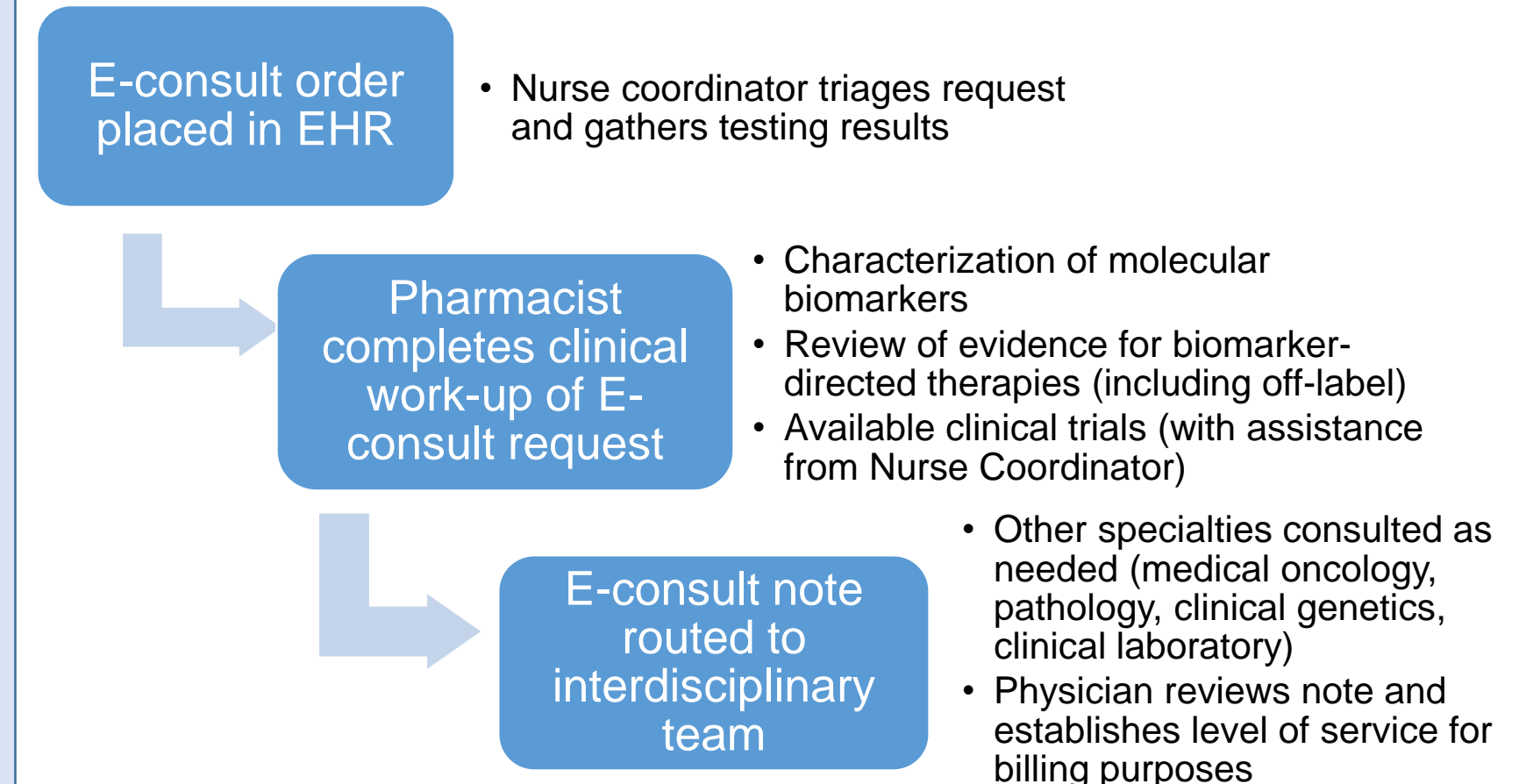


TABLE 1: POP E-consult cases (n=200)

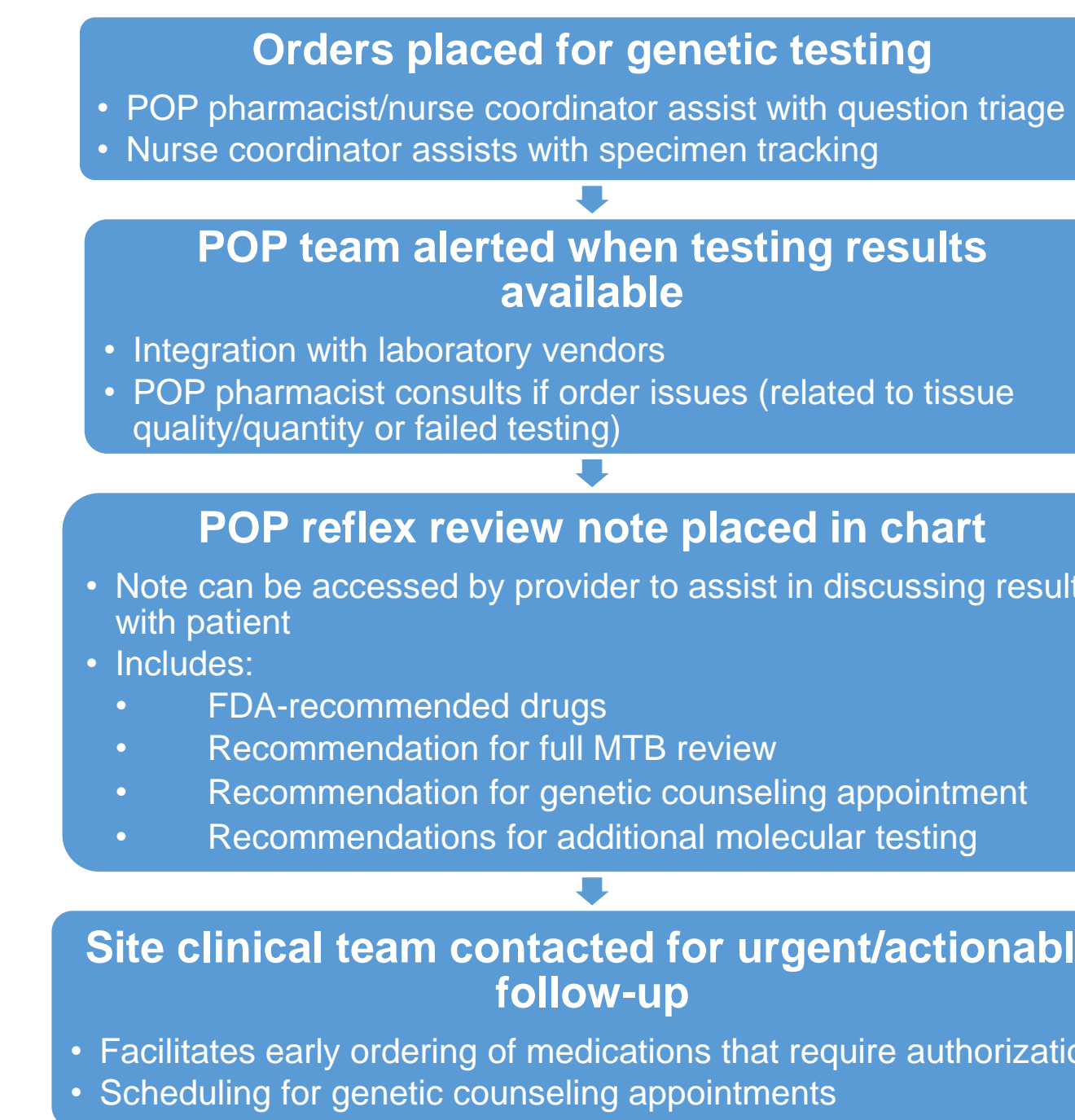
Referring provider site	n (%)
Academic medical center	144 (72%)
Community site (5 distinct sites)	56 (28%)
Reason for consult	
Interpretation of genetic testing results	18 (9%)
Request for biomarker-directed treatment options	184 (92%)
Recommendations provided by POP team	
ON-label biomarker-directed therapy	27 (14%)
OFF-label biomarker directed therapy	108 (54%)
Potential clinical trial	103 (52%)
Additional tumor molecular testing recommended	52 (26%)
Genetic counseling/germline testing recommended	28 (14%)

Experience with the Program

Reflexive Pharmacist Review of Testing Results

- Engagement and testing rates at community sites lower than academic medical center³
 - Consult-based model requires provider time and decision-making
- POP partnered with a community site to aid in appropriate molecular testing selection and to provide reflexive review of testing results for targeted drugs with high levels of evidence (OncoKB Level 1⁴)
- Pharmacist review serves as clinical decision support and does not require physician review

FIGURE 2: Reflexive pharmacist review workflow



Results of reflex review services

- Integration of tumor genetic testing into clinical workflow
- Increased use of RNA-sequencing (2 actionable fusions identified)
- 44% (6/18) of patients eligible for treatment were initiated on therapy

TABLE 2: Reflexive Pharmacist reviews at a community site (n=100)

Tumor types evaluated	n (%)
Lung	49 (49%)
Gastrointestinal	22 (22%)
Breast	9 (9%)
Other	20 (20%)
Recommendations provided by POP Pharmacist	
ON-label biomarker directed therapy	18 (18%)
Recommend POP E-consult for OFF-label treatment	22 (22%)
Additional tumor molecular testing recommended	39 (39%)
Genetic counseling/germline testing recommended	19 (19%)

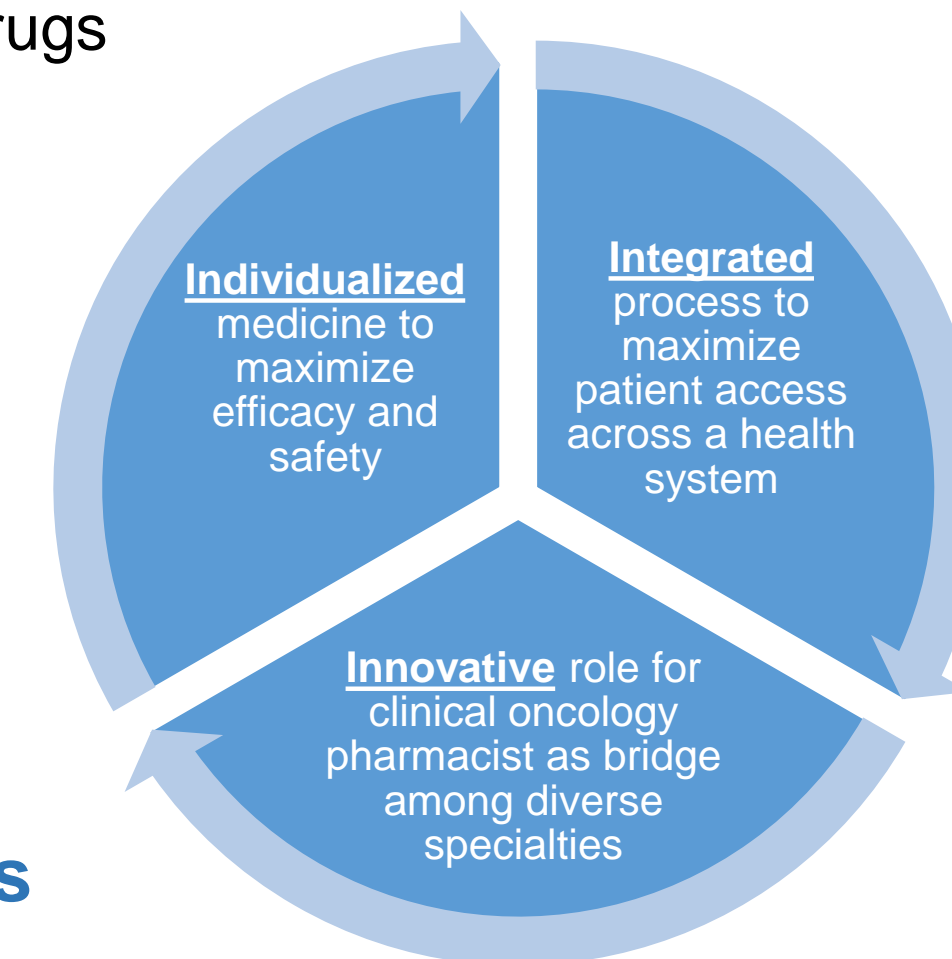
Discussion / Conclusion

E-consult services allow for accessible support for providers on complex cases

- Increased patient access to off-label medications and clinical trials
- Allows for shared expertise across a broad health-system
- Potentially revenue-generating service
- Reflexive expert pharmacist review supports equitable use of molecular testing and access to targeted therapies
- Promotes stewardship of molecular testing and biomarker-directed drugs

Recognition of the pharmacist as a precision medicine expert

- Expanded interdisciplinary collaborations (pathology, genetics, clinical laboratory)



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