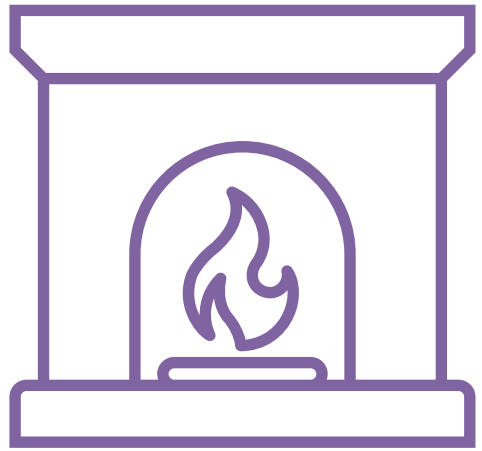
MOQC
JANUARY BIANNUAL MEETING
2023

Welcome

Keli DeVries, LMSW



Agenda

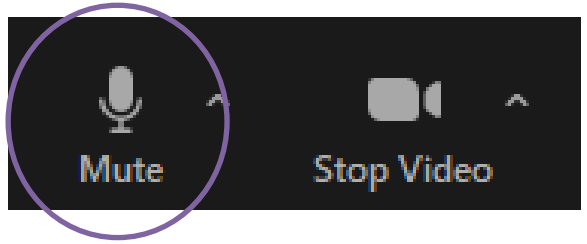
Morning Session | 9:00 – 11:45 am		
9:00 am	**Welcome & MOQC Updates** • MOQC Updates • POQC Update • Steering Committee Report • Palliative and End-of-Life Care Task Force Update	Keli DeVries, LMSW POQC Member Dawn M. Severson, MD Taylor Wofford, MD
9:30 am	**MOQC Performance & VBR Updates**	Jennifer Griggs, MD, MPH, FASCO
10:15 am	**Break—Mindfulness and Movement**	Vanessa Aron, BA, RYT
10:25 am	**The Voice of the Patient & Caregiver**	
10:35 am	**Keynote Presentation** **Oncology Stewardship: A Case-Based Discussion** Lydia Benitez, PharmD, BCOP College of Pharmacy, University of Michigan	
Lunch | 11:35 am-12:05 pm		
11:35 am	Break for lunch	
Afternoon Session | 12:05 – 2:25 pm		
12:05 pm	**Presentation from Arbor Research—MOQCLink Demo**	Keli DeVries, LMSW Arbor Research
12:35 pm	**Patient-Reported Outcomes--Update**	Chris Friese, PhD, RN, AOCN
12:55 pm	**Are We Delivering Equitable Care?**	Jennifer Griggs, MD, MPH, FASCO
1:15 pm	**Break**	
1:25 pm	**The Language of Cancer Care**	Tom Gribbin, MD
Close | 2:25 – 2:30 pm		
2:25 pm	Closing Items	Keli DeVries, LMSW

Introductions

Please rename yourself to include your

1) Full name
2) Organization
3) Pronouns

Reminder – How to Mute

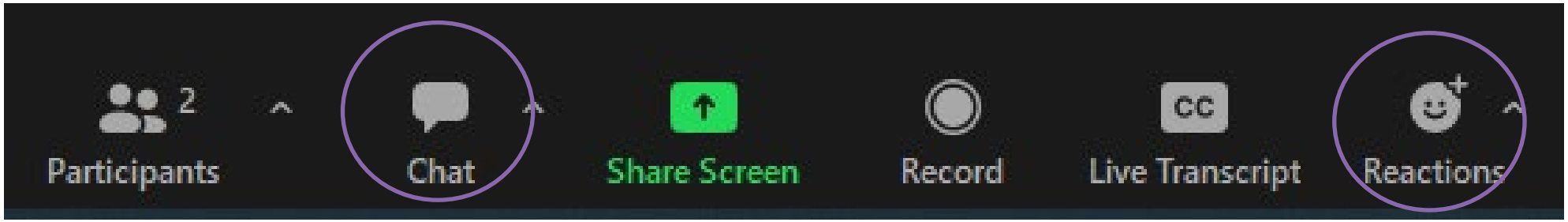


To mute your microphone

To unmute your microphone

***6 to mute/unmute**

Reminder – Chat



Use Chat to ask/answer questions
Add your reactions

Confidentiality Reminder

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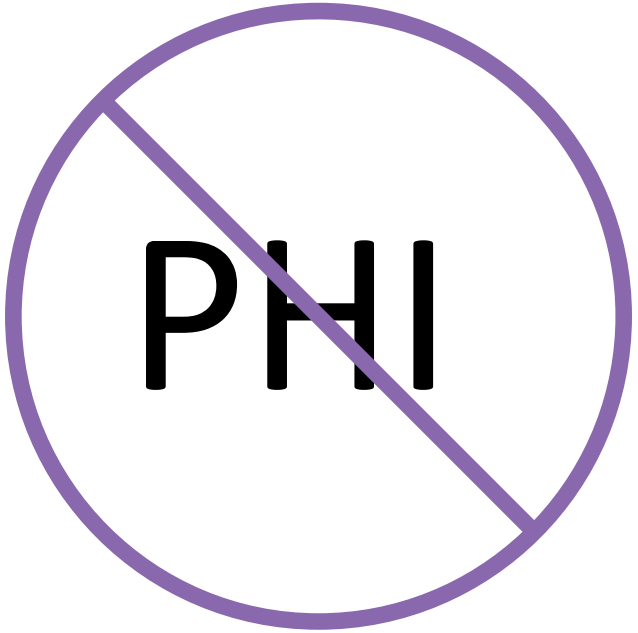

MOQC Team Members

To learn more about our team, visit https://moqc.org/moqc/about-moqc/

MOQC
MICHIGAN ONCOLOGY QUALITY CONSORTIUM

ARBOR RESEARCH
COLLABORATIVE FOR HEALTH

MOQCLink

Our new database!

- ☑ Testing
- ☑ Broad release by the end of July
- ☑ Abstractor training November 2022
- ☑ LIVE! January 2023

Testimonials

There are aspects of MOQC that bring in other voices that we don't, as clinicians, sometimes hear in that way because we see them in the patient exam room. But to have patient representation at MOQC also helps because it allows us to get some feedback, as clinicians, from the group that we need to address.

PHYSICIAN

Each meeting, we share, we collaborate, and we celebrate the success that's being done around the state. I feel that MOQC really supports the practice, which then allows us to go back and support the patient.

SOCIAL WORKER

MOQC has given us the opportunity to benchmark our quality data against other cancer programs throughout the state. This helps us to identify opportunities for improvement.

PRACTICE MANAGER

https://umich.qualtrics.com/jfe/form/SV_06VDGWqXExJExnM

Continuing Education Credits

This meeting has been approved for 4.75 CEU

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In support of improving patient care, this activity is planned and implemented by The National Center for Interprofessional Practice and Education Office of Interprofessional Continuing Professional Development (OICPD) and The Michigan Oncology Quality Consortium. The National Center OICPD is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC) to provide continuing education for the healthcare team.

Physicians: The National Center OICPD designates this activity for a maximum of **4.75** *AMA PRA Category 1 Credit(s)*™. Physicians should only claim credit commensurate with their participation.

Nurses: Participants will be awarded up to **4.75** contact hours of credit for attendance at this activity.

Nurse Practitioners: The American Academy of Nurse Practitioners Certification Program (AANPCP) accepts credit from organizations accredited by the ACCME and ANCC.

Pharmacists and Pharmacy Technicians: This activity is approved for **4.75** contact hours (.**475** CEU)

Social Workers: As a Jointly Accredited Organization, the National Center OICPD is approved to offer social work continuing education by the Association of Social Work Boards (ASWB) Approved Continuing Education (ACE) program. Organizations, not individual courses, are approved under this program. State and provincial regulatory boards have the final authority to determine whether an individual course may be accepted for continuing education credit. The National Center OICPD maintains responsibility for this course. Social workers completing this course receive up to **4.75** continuing education credits.

Athletic Trainers: The National Center OICPD (JA#: 4008105) is approved by the Board of Certification, Inc. to provide continuing education to Athletic Trainers (ATs). This program is eligible for a maximum of ***4.75*** Category A hours/CEUs. ATs should claim only those hours actually spent in the educational program.

IPCE: This activity was planned by and for the healthcare team, and learners will receive **4.75** Interprofessional Continuing Education (IPCE) credits for learning and change

IPCE CREDIT™

UNIVERSITY OF MINNESOTA

POQC Update Video

https://youtu.be/YE0Tf2yeM7I

Steering Committee Report

Dawn Severson, MD

Steering Committee Report

- **MOQC Certification Update**
  - Proposal is with BCBSM leadership
  - We will be soliciting input from all MOQC practices

- **June Med Onc Biannual Meeting**
  - Focus on palliative care
  - Please invite your palliative care colleagues!
    Friday, June 16, 2023 in Midland

Steering Committee Report

- **Generating Trusted Data**
  - MOQCLink, our new database and our relationship with Arbor Research will allow us to add & change measures
  - Abstractors are undergoing training to increase accuracy of abstraction & to harmonize data collection
  - We will collect feedback from our abstractors in real time
- **Centering Equity**
  - New Equity Task Force will meet quarterly
  - If you are interested in joining, please let anyone at the Coordinating Center know

Palliative Care and End-of-Life Task Force Update

Taylor Wofford, MD

Palliative Care and End-of-Life Task Force

- Palliative Radiation pathways

- Expanded questionnaire: https://umich.qualtrics.com/jfe/form/SV_bHDSah3bYGqCLUW

- June Biannual Meeting will focus on palliative care
  - June 16, 2023
  - Ideas? Please reach out to Natalia Simon nsimon@moqc.org

MOQC Practice Performance & VBR Updates

Jennifer J. Griggs, MD, MPH

2022 Medical Oncology Measures

MOQC Pathway Measure	VBR Measure
Completeness of race and ethnicity data	x
Complete family history documented for patients with invasive cancer	
Smoking status recorded in medical record	x
Tobacco cessation counseling administered, or patient referred in past year	x
Chemotherapy intent (curative vs non-curative) documented before or within 2 weeks	
GCSF administered to patients who received chemotherapy for non-curative intent (lower score – better)	
NK1RA & olanzapine for high emetic risk chemotherapy	x
NK1RA for low or moderate emetic risk cycle 1 chemotherapy (lower score – better)	x
Hospice enrollment	x
Enrolled in Hospice for over 7 days	
Enrolled in Hospice for over 30 days	
Hospice enrollment within 7 days of death (lower score – better)	x
Chemotherapy administered within the last 2 weeks of life (lower score - better)	

2022 Value-Based Reimbursement Summary

Region-Level

Meet 3 of 4

• NK1RA & olanzapine given with high emetic risk chemotherapy	25%
• NK1RA given for low or moderate emetic risk cycle 1 chemotherapy	10%
• Hospice enrollment	50%
• Hospice enrollment within 7 days of death	30%

3% Opportunity

Collaborative-Wide

Meet 2 of 2

• Tobacco cessation counseling administered or patient referred in past year	75%
• Smoking status recorded in medical record	90%

2% Opportunity

Practice-Level

Meet 2 of 2

• Meet all 4 region-level measures	
• Complete race and ethnicity data	90%

2% Opportunity

2023 Medical Oncology Measures: Changes

New VBR Measure	VBR Measure
Complete family history documented for patients with invasive cancer	x

Measures Retiring from VBR	VBR Measure
Completeness of race and ethnicity data	
Smoking status recorded in medical record	

2023 Value-Based Reimbursement Summary

Region-Level

Meet 4 of the following 5

• NK1RA & olanzapine given with high emetic risk chemotherapy	30%
• NK1RA given for low or moderate emetic risk cycle 1 chemotherapy	10%
• Hospice enrollment	60%
• Hospice enrollment within 7 days of death	35%
• Complete family history documented	35%

3% Opportunity

Collaborative-Wide

• Tobacco cessation counseling administered or patient referred in past year	70%

2% Opportunity

Practice-Level

- Meet all 5 region-level measures

2% Opportunity

Additional Criteria for Receiving VBR

Level	Criteria
Practice Level	At least **one physician and one practice manager** from the practice must attend **both** MOQC regional meetings and **at least one** biannual meeting during that year
Physician Level	Provider must be enrolled in PGIP for at least one year

VBR Examples

Additional VBR: Participation in POEM

Collaborative Level (2%)
Tobacco Cessation - Meet All + Attendance

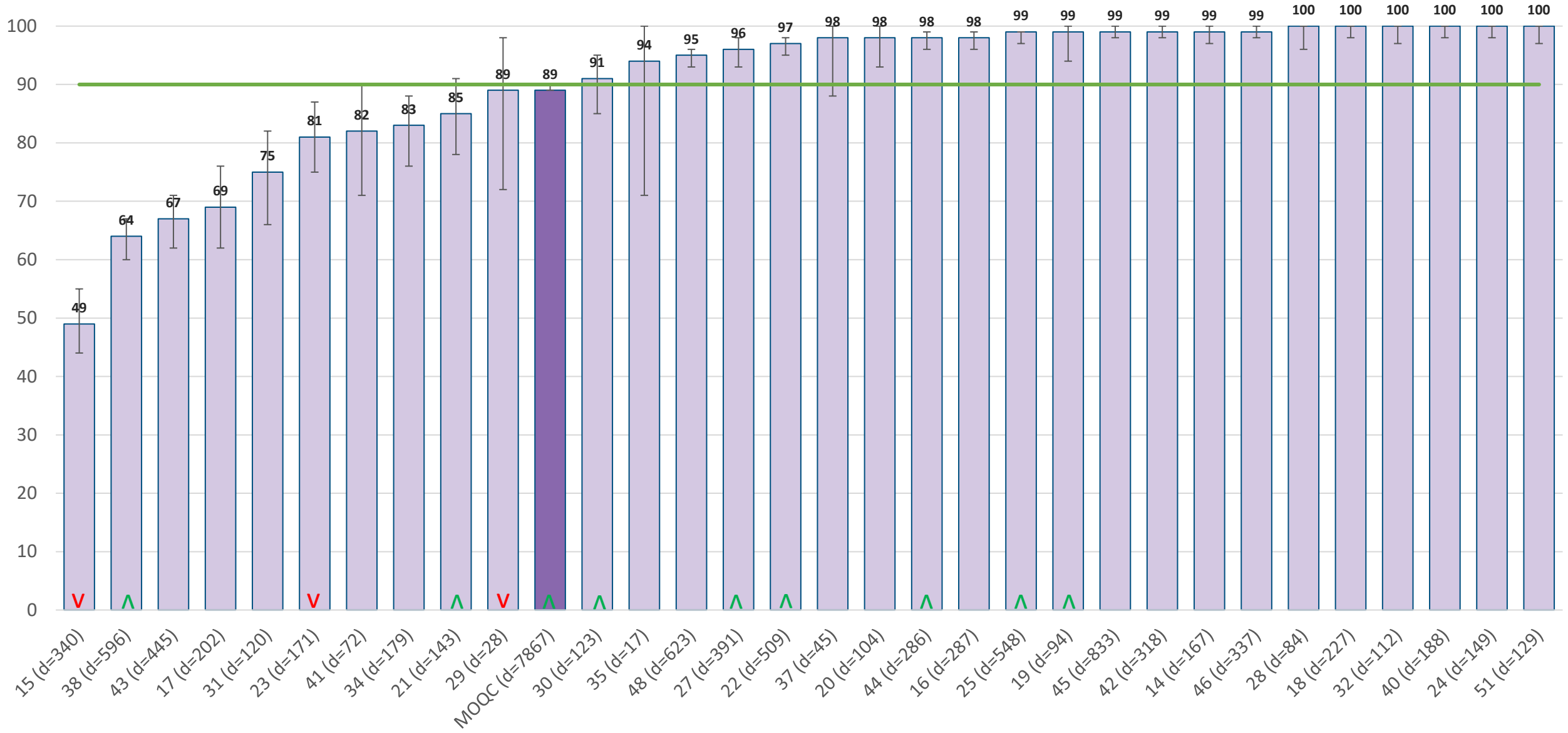
	Attendance	Race & Ethnicity	Hospice Enrollment	Hospice Enrollment 7 days	NK1RA for LEC	NK1RA for HEC	Tobacco Cessation Counseling	Smoking Status Recorded	Eligibility
COLLABORATIVE	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Met	Met	Ineligible
Region-Level (3%) VBR Measures - Meet 3 of 4 + Attendance									
	Attendance	**Race & Ethnicity**	**Hospice Enrollment**	**Hospice Enrollment 7 days**	**NK1RA for LEC**	**NK1RA for HEC**	**Tobacco Cessation Counseling**	**Smoking Status Recorded**	**Eligibility**
REGION EXAMPLE	Not Applicable	Not Applicable	Met	Not Met	Met	Met	Not Applicable	Not Applicable	Eligible
Practice-Level (2%) Race/Ethnicity - Meet All + Attendance									
	Attendance	**Race & Ethnicity**	**Hospice Enrollment**	**Hospice Enrollment 7 days**	**NK1RA for LEC**	**NK1RA for HEC**	**Tobacco Cessation Counseling**	**Smoking Status Recorded**	**Eligibility**
PRACTICE EXAMPLE #1	Eligible	Met	Met	Met	Not Met	Not Met	Not Applicable	Not Applicable	Ineligible
PRACTICE EXAMPLE #2	Eligible	Met	Met	Met	Met	Met	Not Applicable	Not Applicable	Eligible
PRACTICE EXAMPLE #3	Ineligible	Met	Met	Met	Met	Met	Not Applicable	Not Applicable	Ineligible

Measures

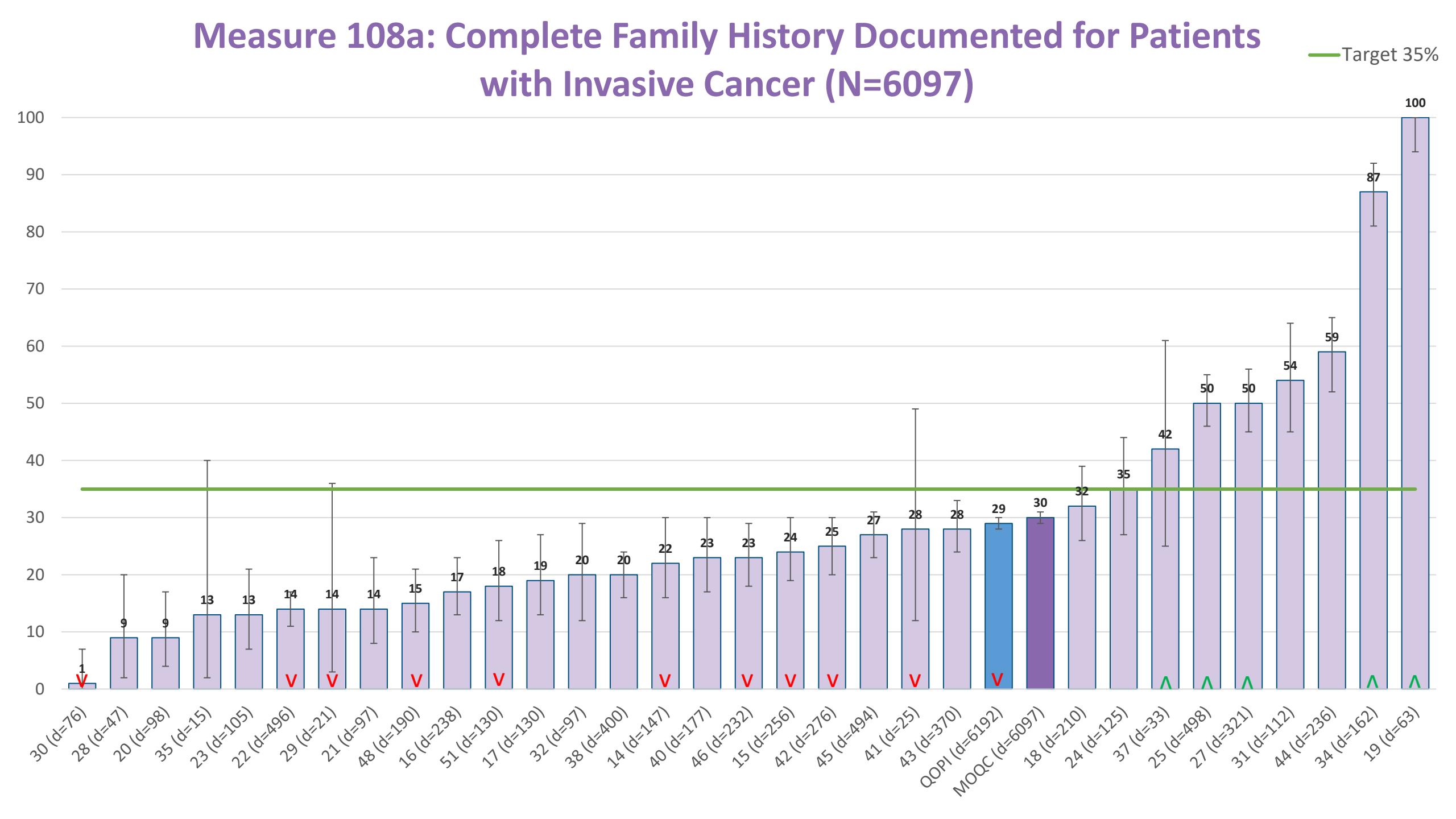
- ^ or ˅ indicates statistically significant **improvement or worsening** in performance between time periods ($p < 0.05$)
- Practices with no eligible cases in the denominator and/or missing data from one of the time periods are not shown

VBR Measure

Completeness of Race and Ethnicity Data (N=7867)

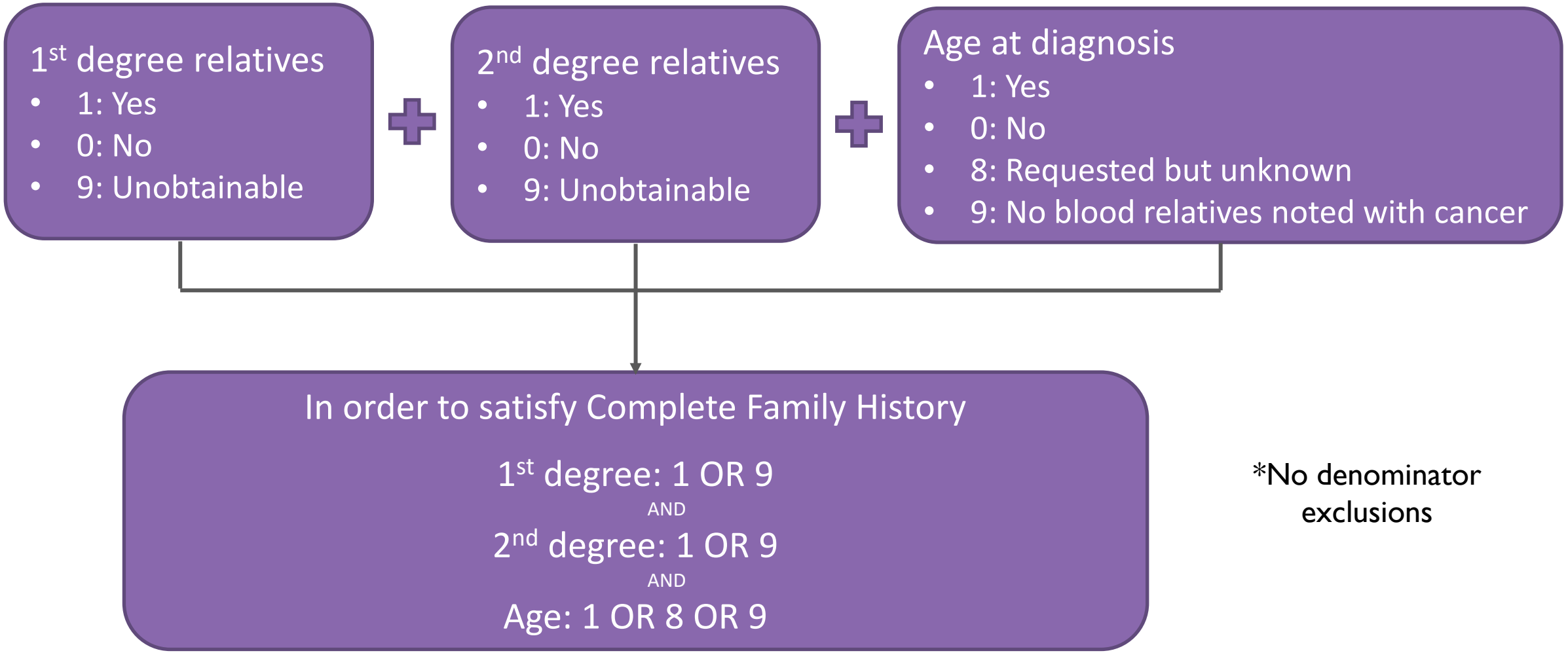


Measure 108a: Complete Family History Documented for Patients with Invasive Cancer (N=6097)



Complete Family History

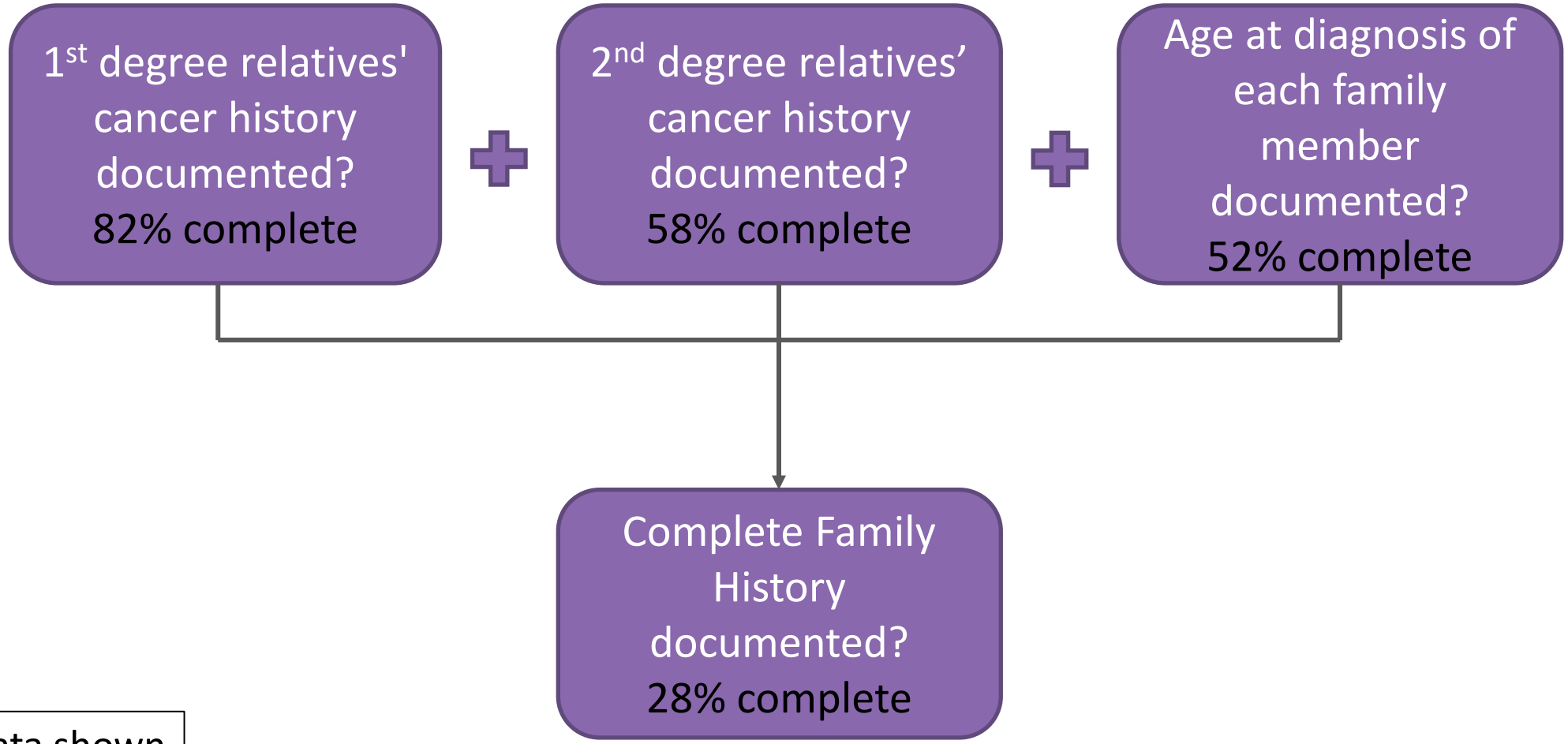
How is this measure constructed?



*No denominator exclusions

Complete Family History

How is this measure constructed?



*2021 data shown

Poll #1

Complete Family History

Poll | 1 question | 81 of 109 (74%) participated

1. How many cancer-affected family members must have age (or unknown age) documented? (Single Choice) *

81/81 (100%) answered

Age is not part of complete family history	(2/81) 2%
50% of family members with cancer	(7/81) 9%
75% of family members with cancer	(1/81) 1%
All family members with cancer	(71/81) 88%

The MiGHT Family History Project is now open to all MOQC practices

MiGHT Project

Project goal

- To improve collection of a complete family history

Participation includes:

- Access to an electronic family history collection tool
- Resources and support for collecting a complete family history

MiGHT Project

Family History Tool Example Output

Michigan Genetic Hereditary Testing

Name:
MRN:

Respondent Summary

Ashkenazi	Both Parents
Endometrial or Uterine Cancer	35

Cancer Summary

Person	Cancer	Age
Mother	Breast Cancer	63
Maternal Grandmother	Lung Cancer	88
Maternal Grandfather	Kidney renal cell Cancer	62
Maternal Grandfather	Prostate Cancer	60
Paternal Grandfather	Lymphoma	89
Paternal Grandfather	Non-Melanoma Skin Cancer	75
Paternal Grandfather	Prostate Cancer	70
Paternal Aunt or Uncle 2	Non-Melanoma Skin Cancer	55

Premm 5 score

4.7%

The PREMM5 model is a clinical prediction algorithm that estimates the cumulative probability of an individual carrying a germline mutation in the MLH1, MSH2, MSH6, PMS2, or EPCAM genes. Mutations in these genes cause Lynch syndrome, an inherited cancer predisposition syndrome.

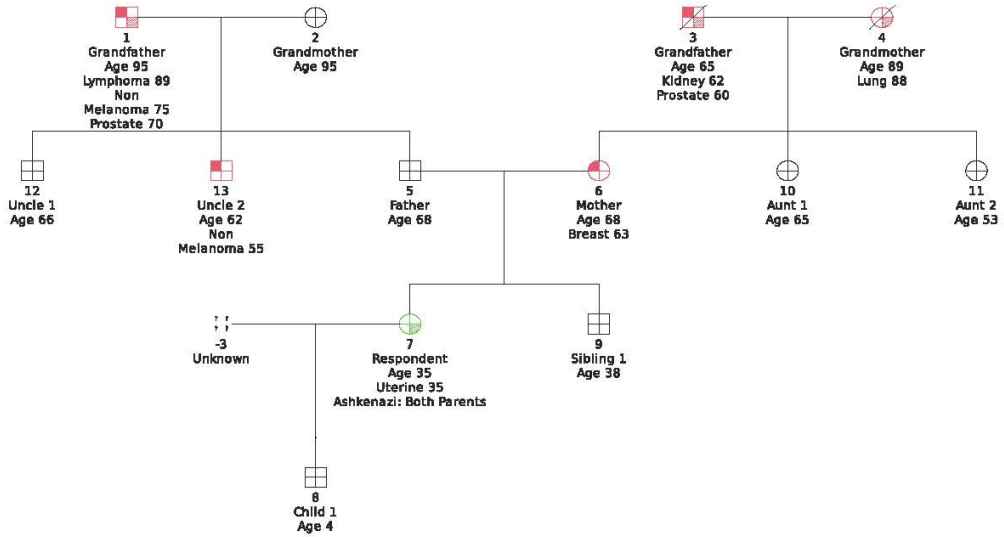
PREMM scores are based on initial patient survey input and for preliminary risk assessment purposes only.

Family history and PREMM scores should be confirmed (https://premm.dfci.harvard.edu) prior to use in clinical care.

Michigan Genetic Hereditary Testing

Name:
MRN:

Patient Pedigree

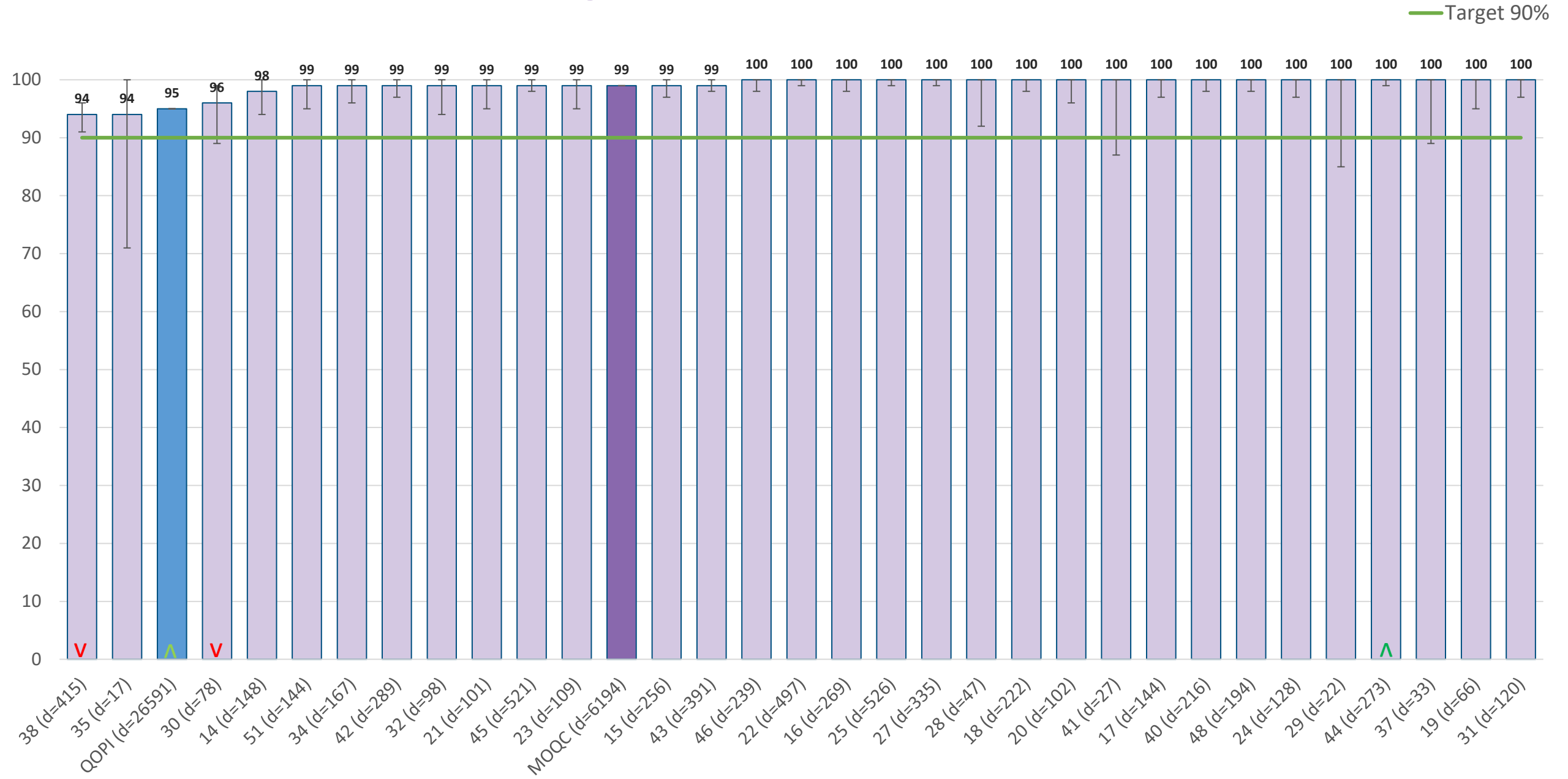


green = respondent
red = family member with cancer

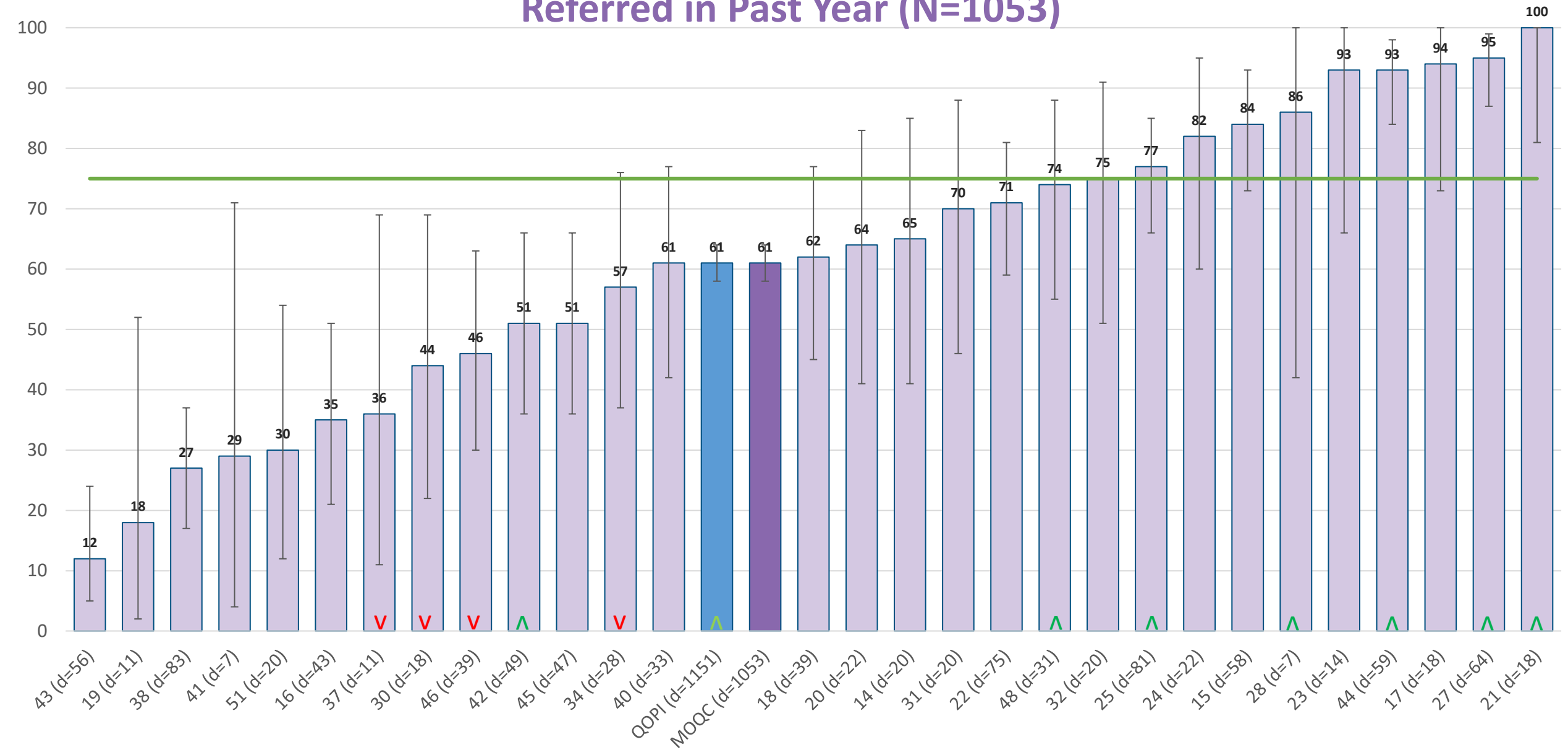
MiGHT Project

- If interested in learning more or participating, email
  - Shayna Weiner at shaynaw@med.umich.edu
  - or moqc@moqc.org

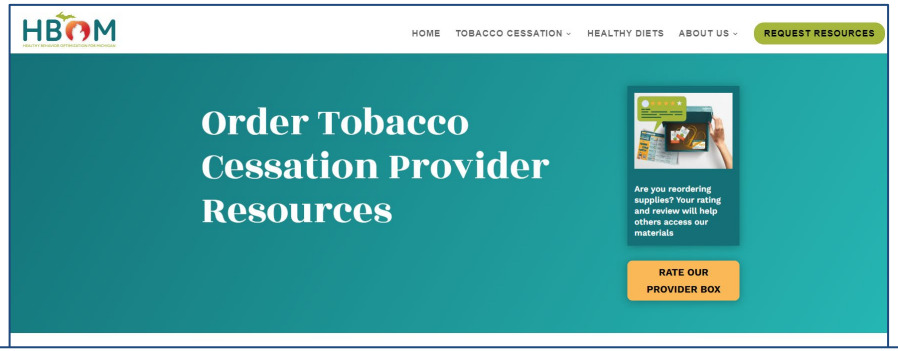
Measure 101a: Smoking Status Recorded in Medical Record (N=6194)

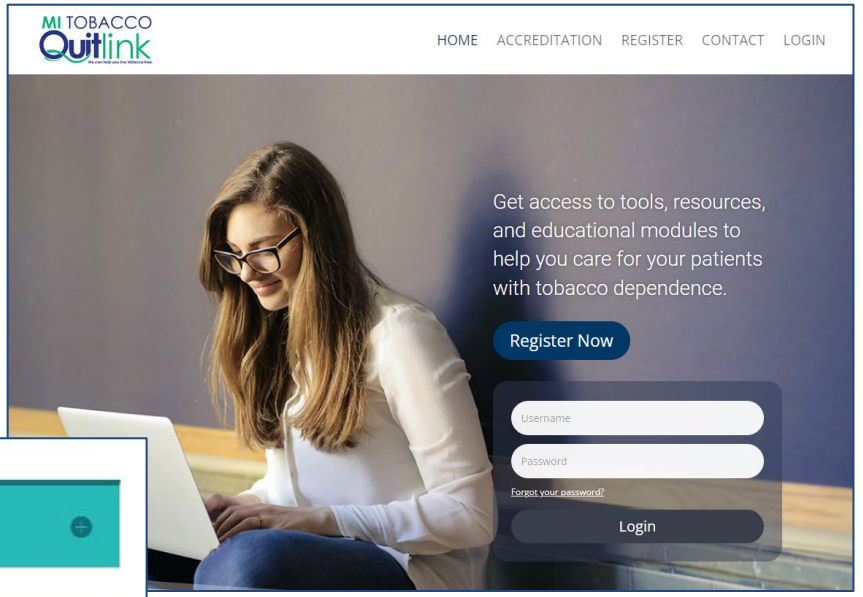


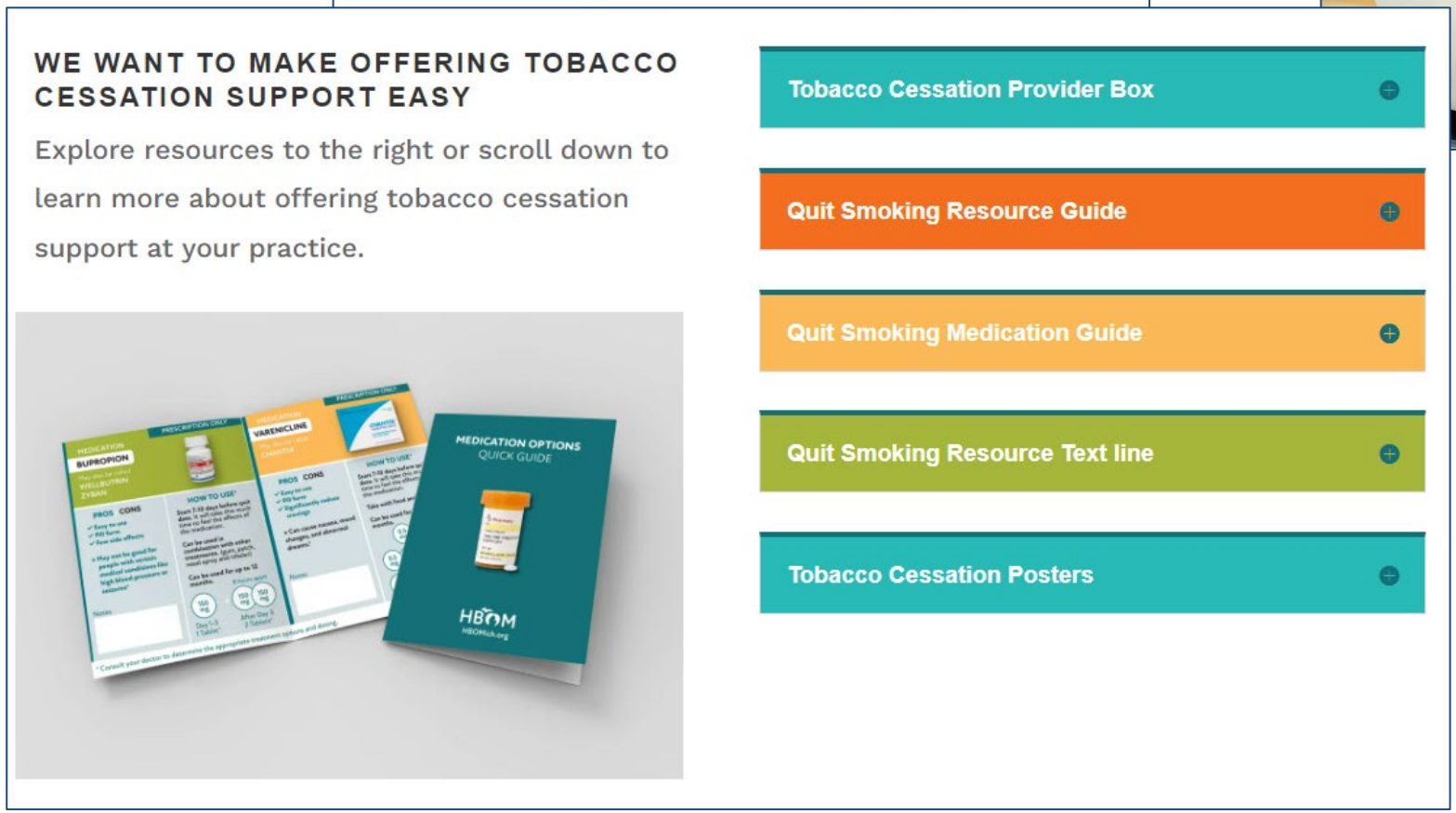
Measure 101b: Tobacco Cessation Counseling Administered or Patient Referred in Past Year (N=1053)



Tobacco Cessation Resources





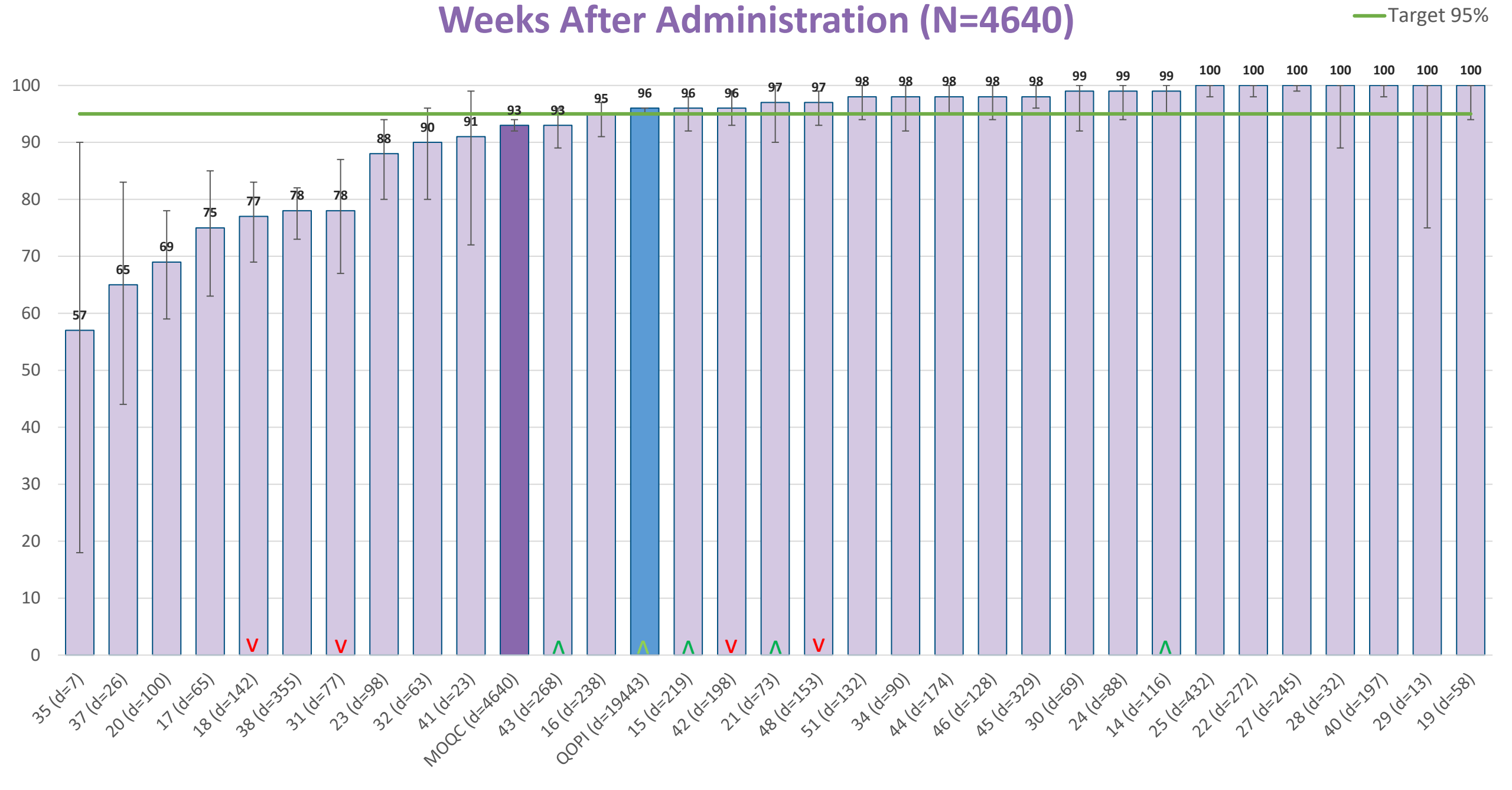


THE MICHIGAN TOBACCO QUITLINE

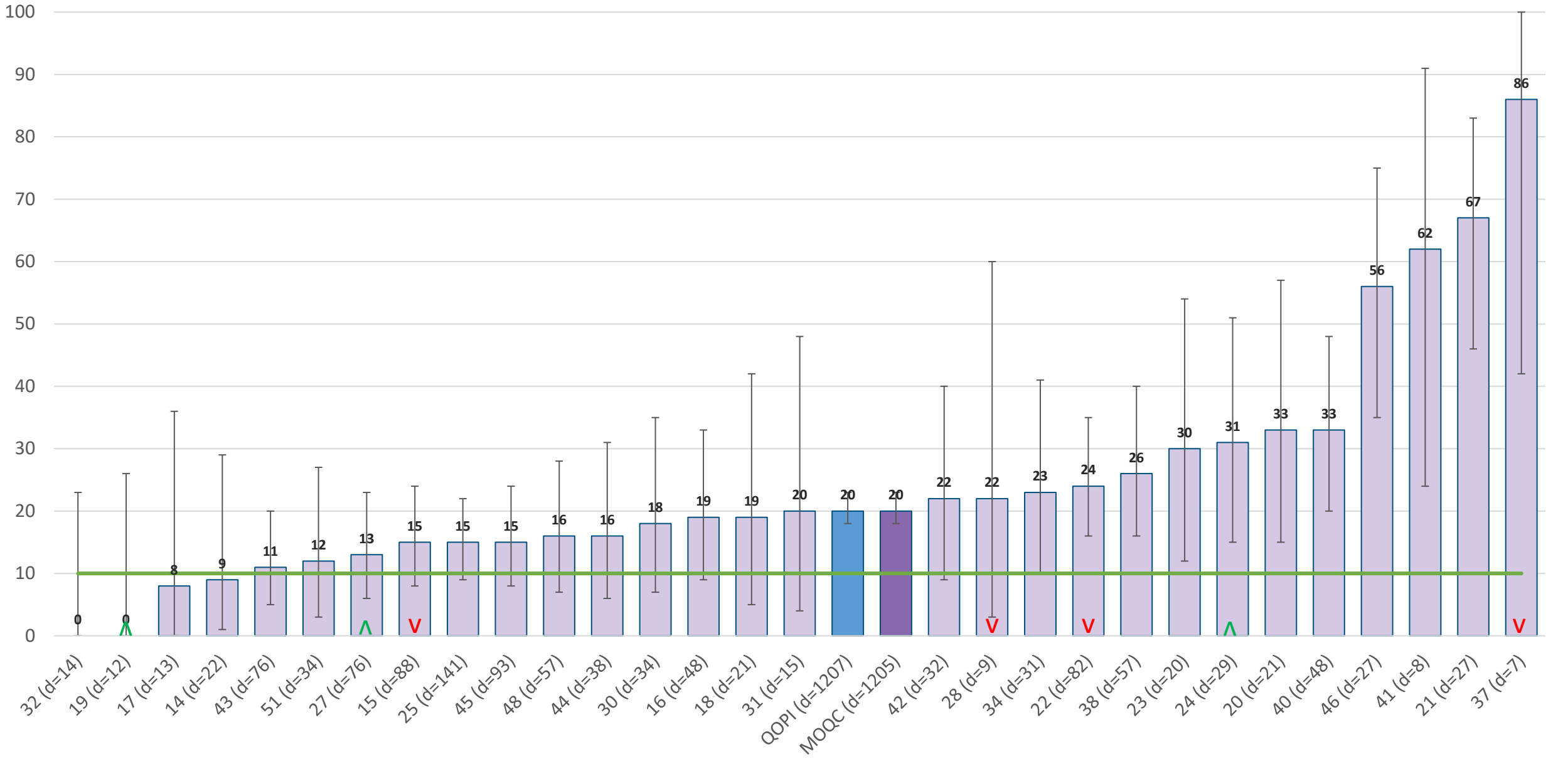
Website / Patient Referral / 1-800-QUIT-NOW

https://www.hbomich.org/

Measure 104: Chemotherapy Intent Documented before or within Two Weeks After Administration (N=4640)



Measure 111: GCSF Administered to Patients who Received Chemotherapy for Non-Curative Intent (lower score - better) (N=1205)



Poll #2

Growth Factor

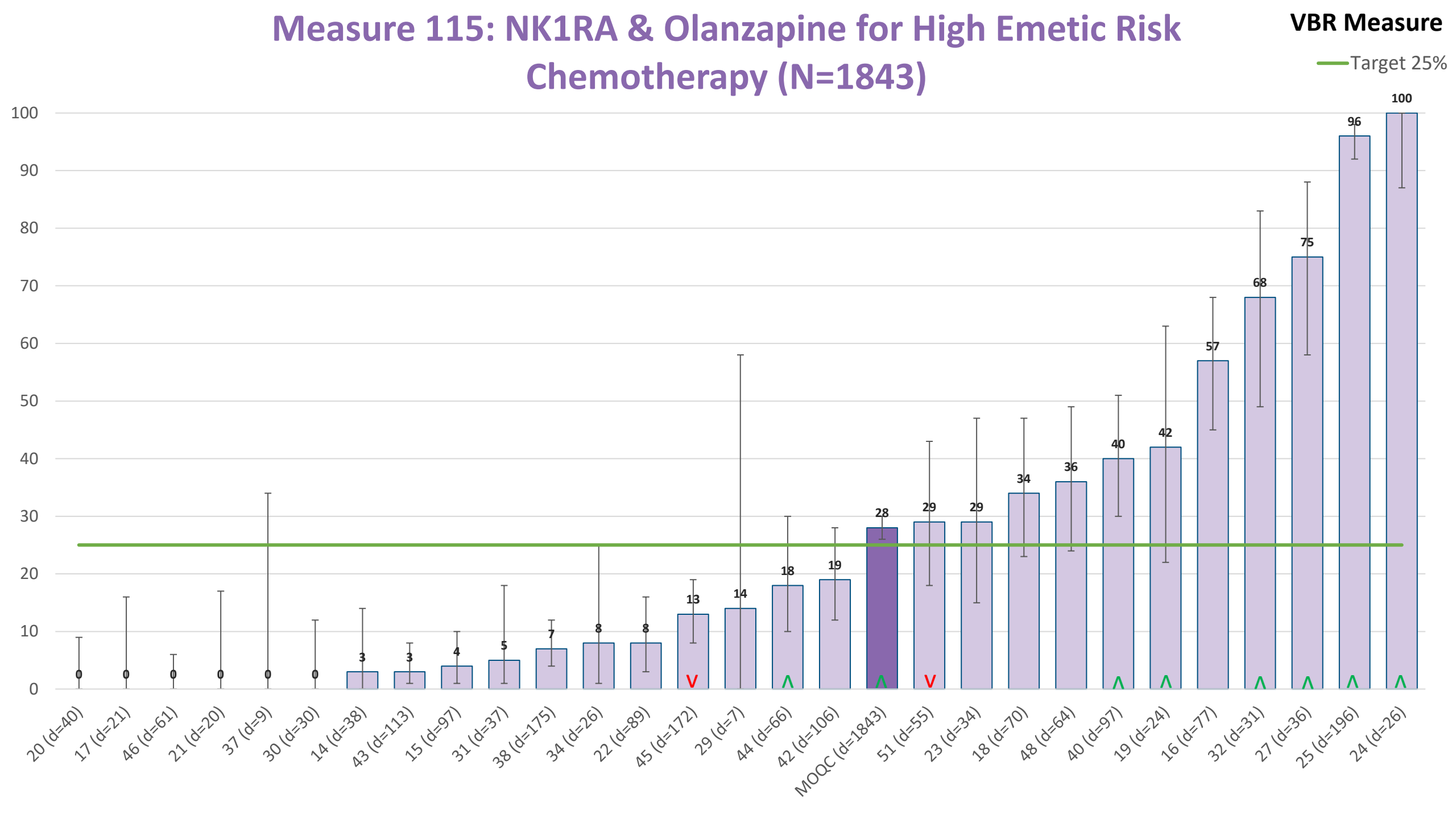
Poll | 1 question | 85 of 109 (77%) participated

1. GCSF should not be given in patients receiving chemotherapy for non-curative intent because: (Single Choice) *

85/85 (100%) answered

There is a low risk of side effects associated with GCSF administration	(3/85) 4%
The use of GCSF in a non-curative setting will not improve clinical outcomes	(74/85) 87%
GCSF administration lowers costs of care to the patient and healthcare system	(8/85) 9%
There is minimal impact on the patient/caregiver traveling to/from practices	(0/85) 0%

Measure 115: NK1RA & Olanzapine for High Emetic Risk Chemotherapy (N=1843)



Poll #3

Antiemetics

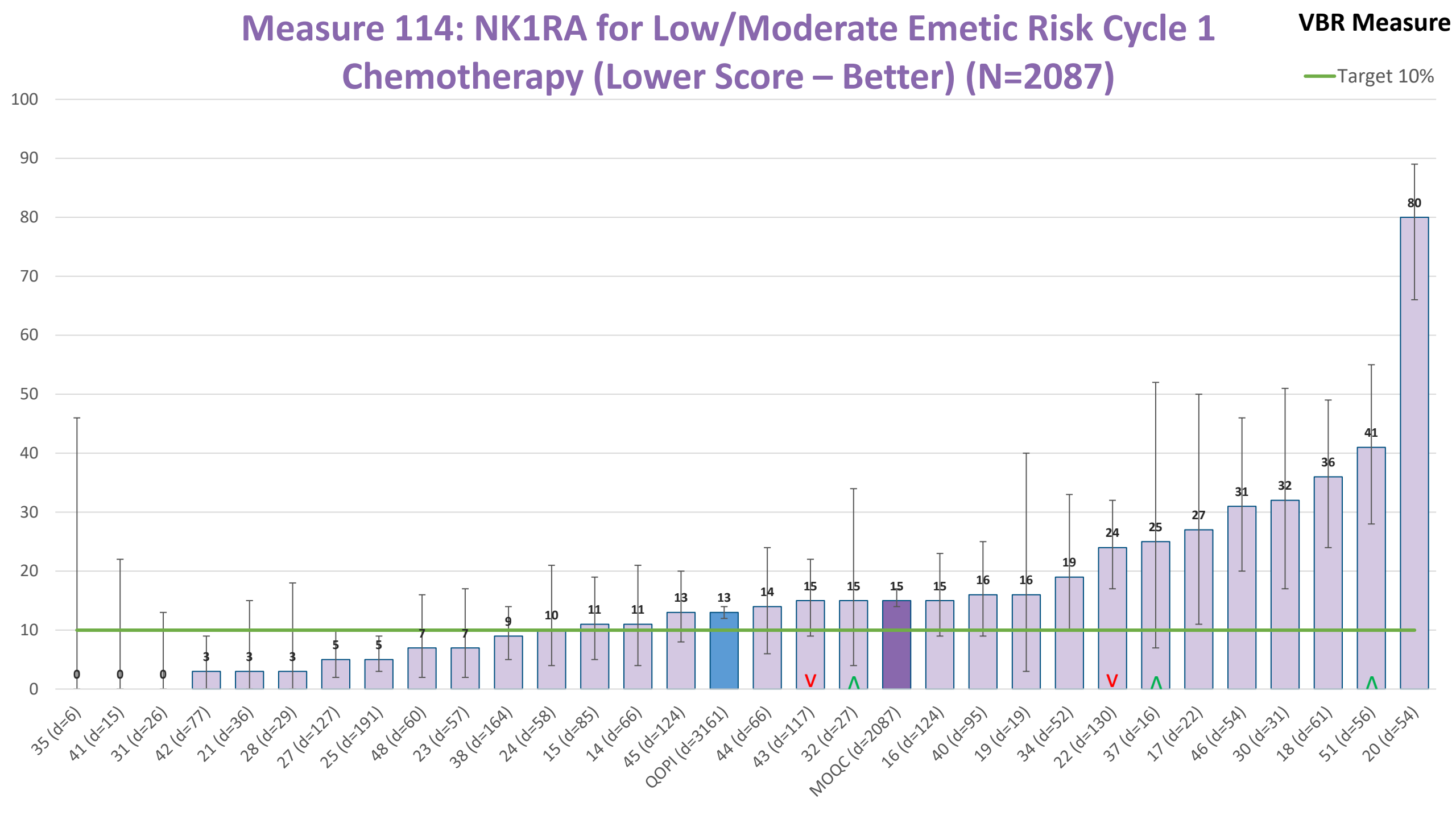
Poll | 1 question | 71 of 110 (64%) participated

1. A goal of this measure includes: (Single Choice) *

71/71 (100%) answered

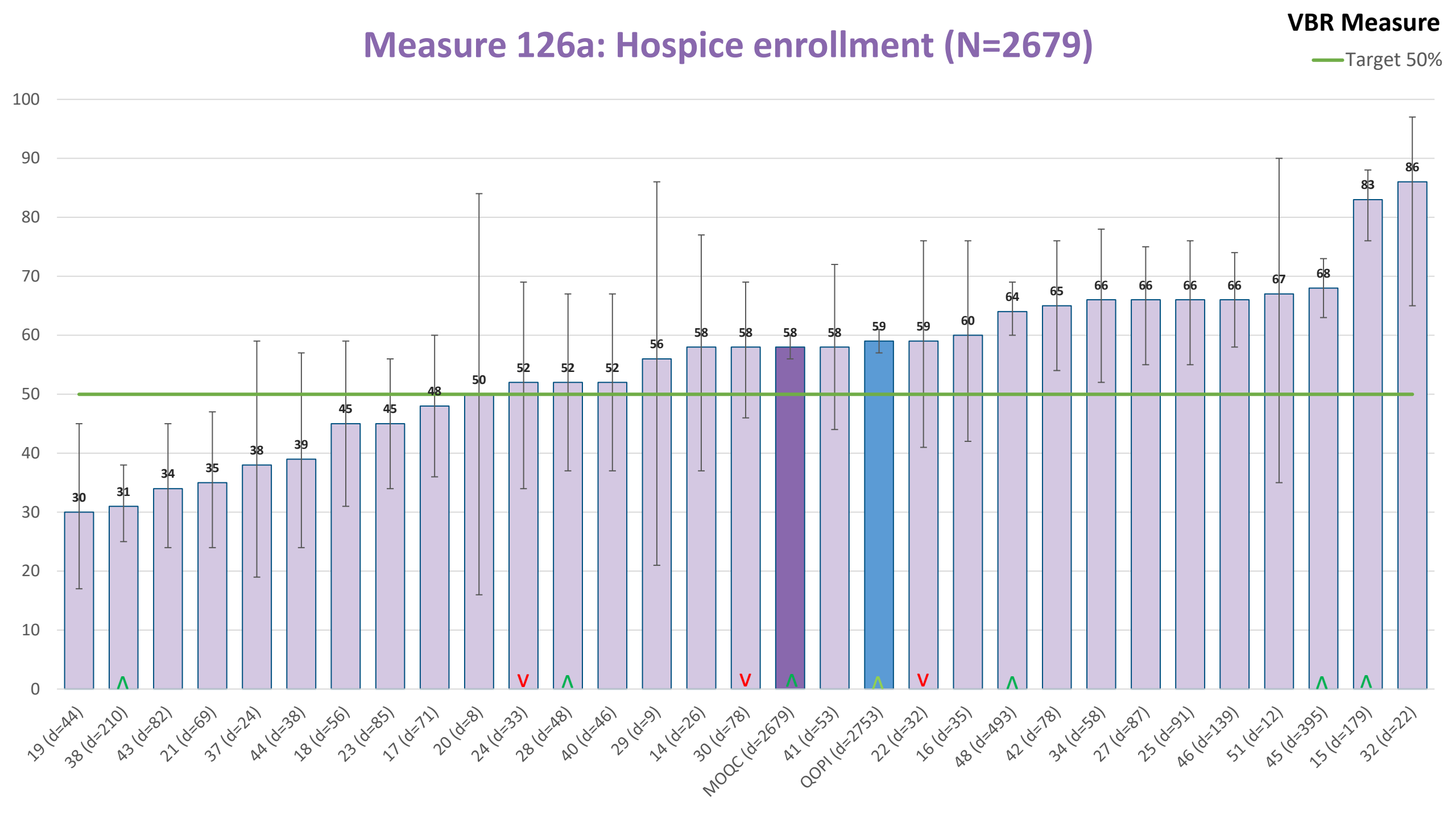
Decreasing the use of olanzapine	(8/71) 11%
Assessing frequency of unplanned medical care and hospitalizations	(10/71) 14%
Assessing the use of guideline-concordant prescribing	(46/71) 65%
Decreasing the use of high emetic risk chemotherapy	(7/71) 10%

Measure 114: NK1RA for Low/Moderate Emetic Risk Cycle 1 Chemotherapy (Lower Score – Better) (N=2087)

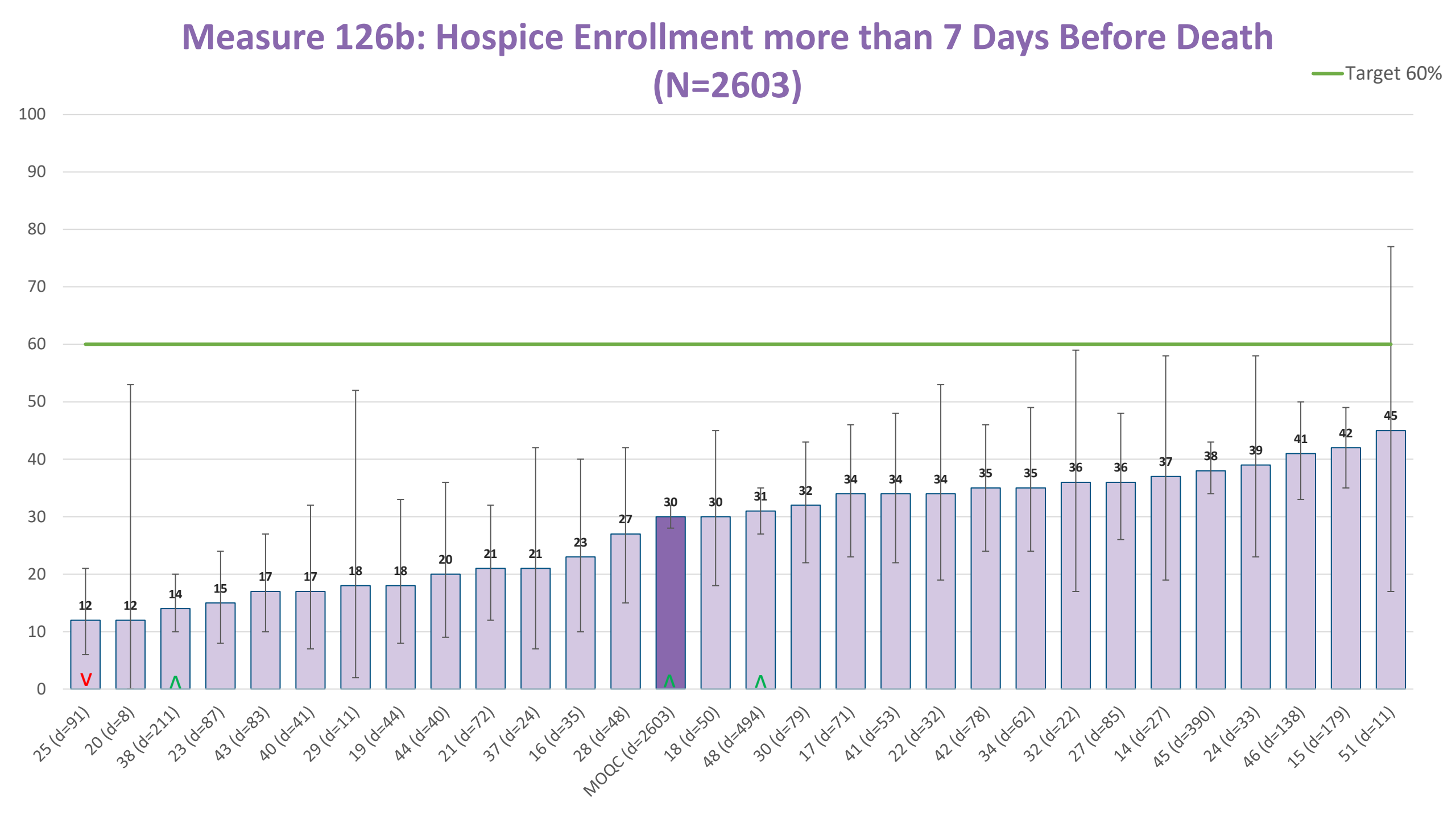


EOL Measures

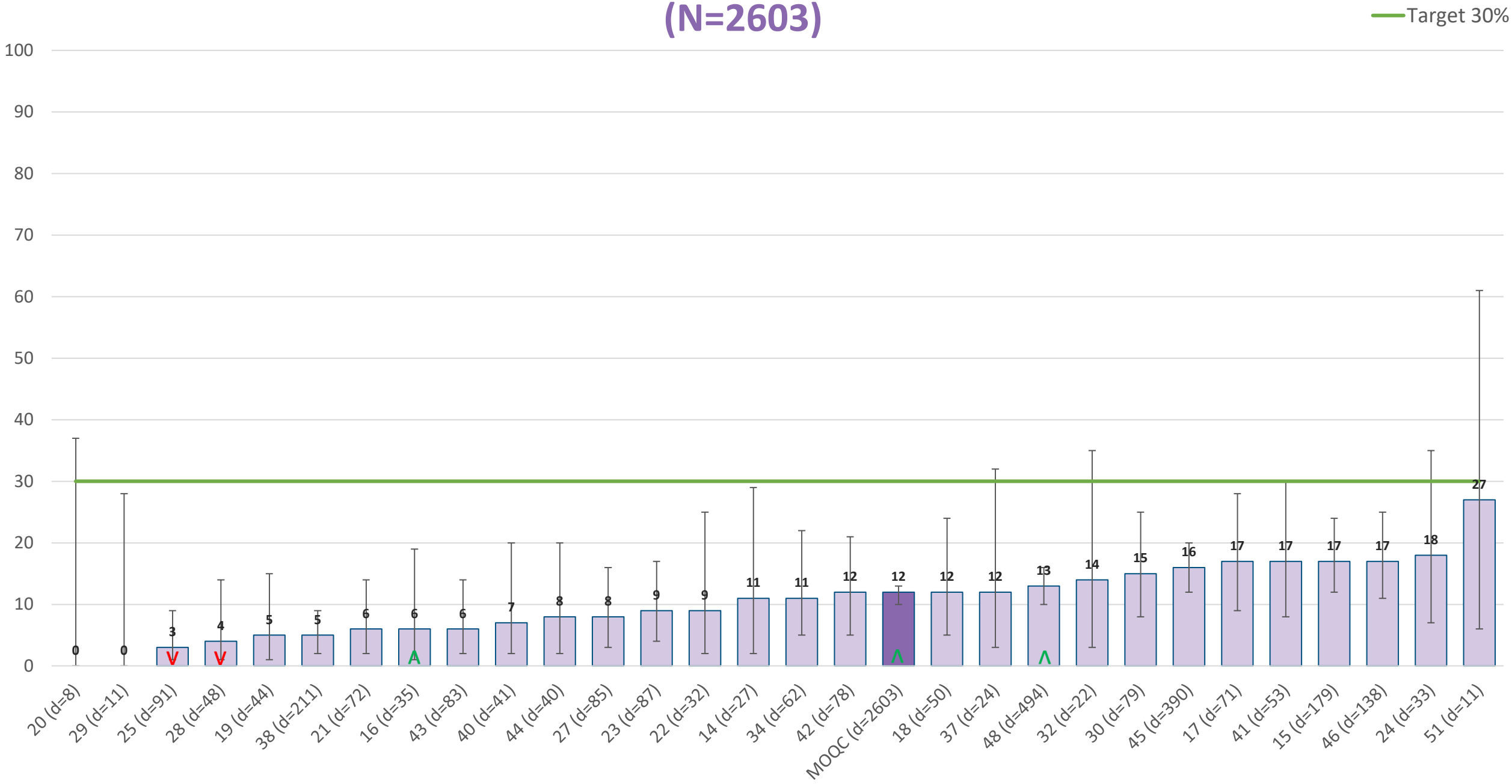
Measure 126a: Hospice enrollment (N=2679)



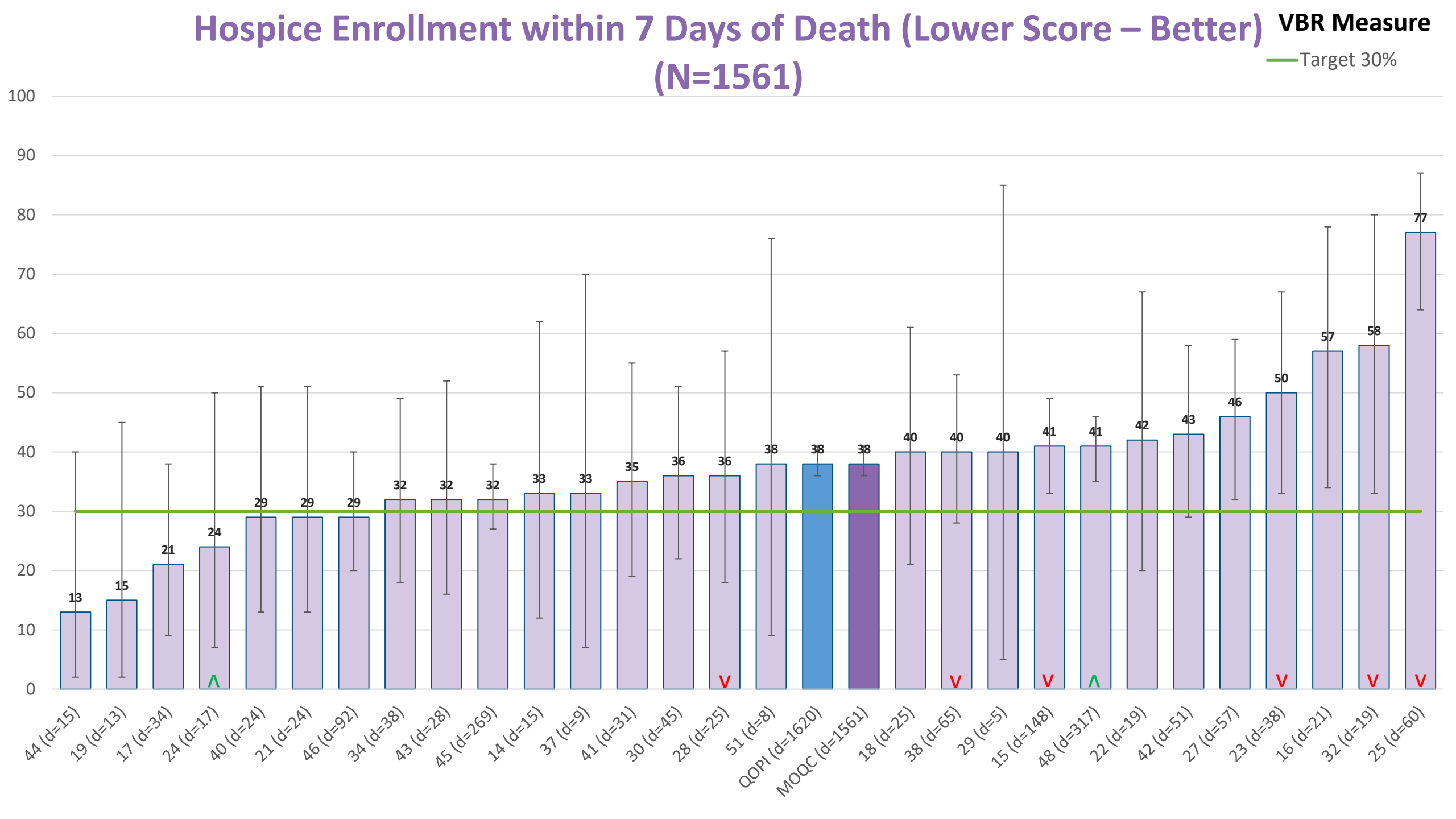
Measure 126b: Hospice Enrollment more than 7 Days Before Death (N=2603)



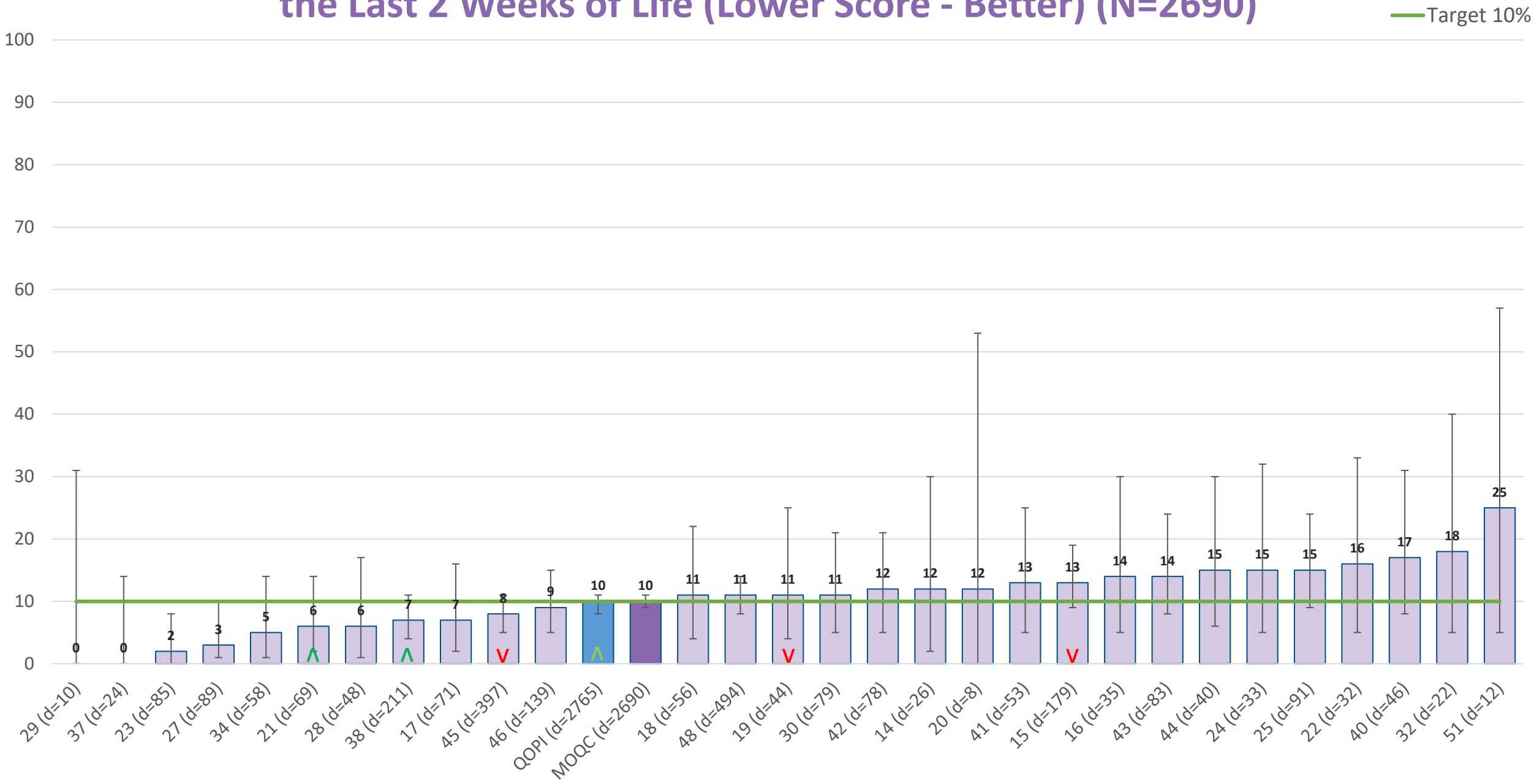
Measure 126c: Hospice Enrollment more than 30 Days Before Death (N=2603)



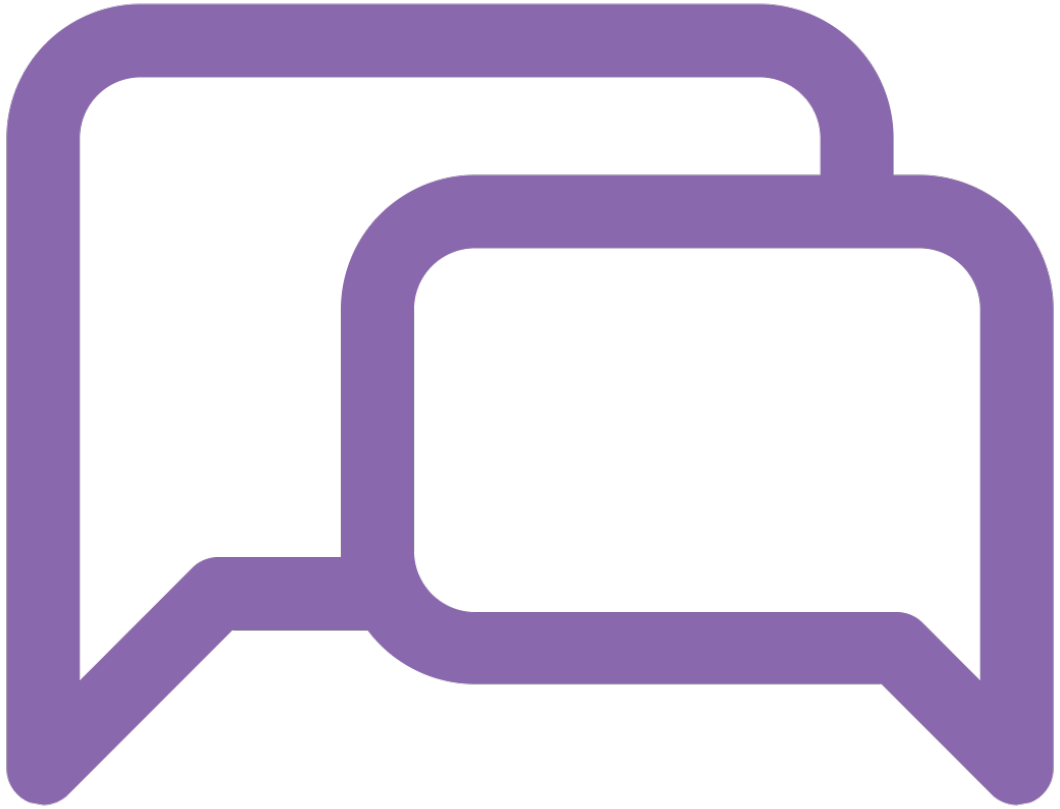
Hospice Enrollment within 7 Days of Death (Lower Score – Better) (N=1561)

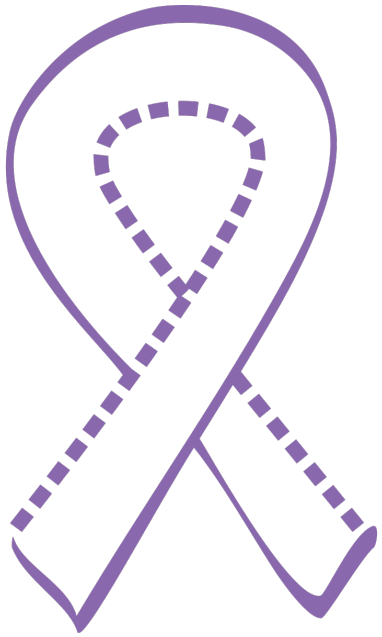


Measure 127: Chemotherapy Administered within the Last 2 Weeks of Life (Lower Score - Better) (N=2690)



Discussion





The Voice of the Patient and Caregiver

ONCOLOGY STEWARDSHIP: A CASE-BASED DISCUSSION

Lydia Benitez, PharmD, BCOP

Clinical Assistant Professor & Leukemia Pharmacy Specialist

Michigan Medicine & University of Michigan College of Pharmacy

Learning Objectives

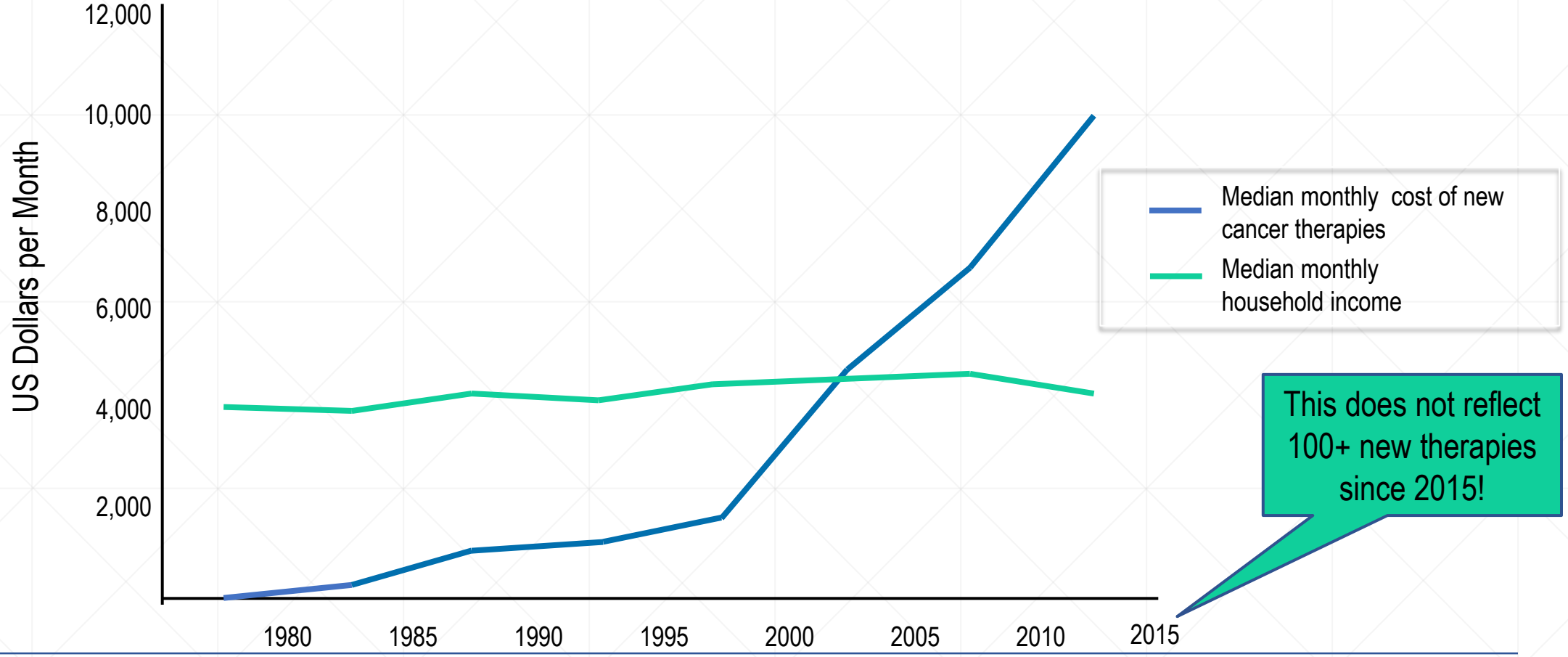
Describe oncology stewardship

Discuss new approvals in hematology space in the context of oncology stewardship

Develop a plan for applying oncology stewardship into your practice

Lydia Benitez, PharmD, BCOP discloses no relevant financial relationships with any entity producing, marketing, re-selling, or distributing health care goods or services consumed by, or used on, patients.

Price of Cancer Therapy and Income



Prasad V, et al. *Nat. Rev Clin Oncol*. 2017;14(6):381-390.

Audience Poll Question #1

For drugs approved between **Jan 2015 and Dec 2020**, what is the median annual drug cost of a course of therapy? (across all tumor types)

A. $50,000
B. $100,000
C. $150,000
D. $200,000

Miljkovic et al. *JAMA Intern Med*. 2022;182(12):1319-1320.

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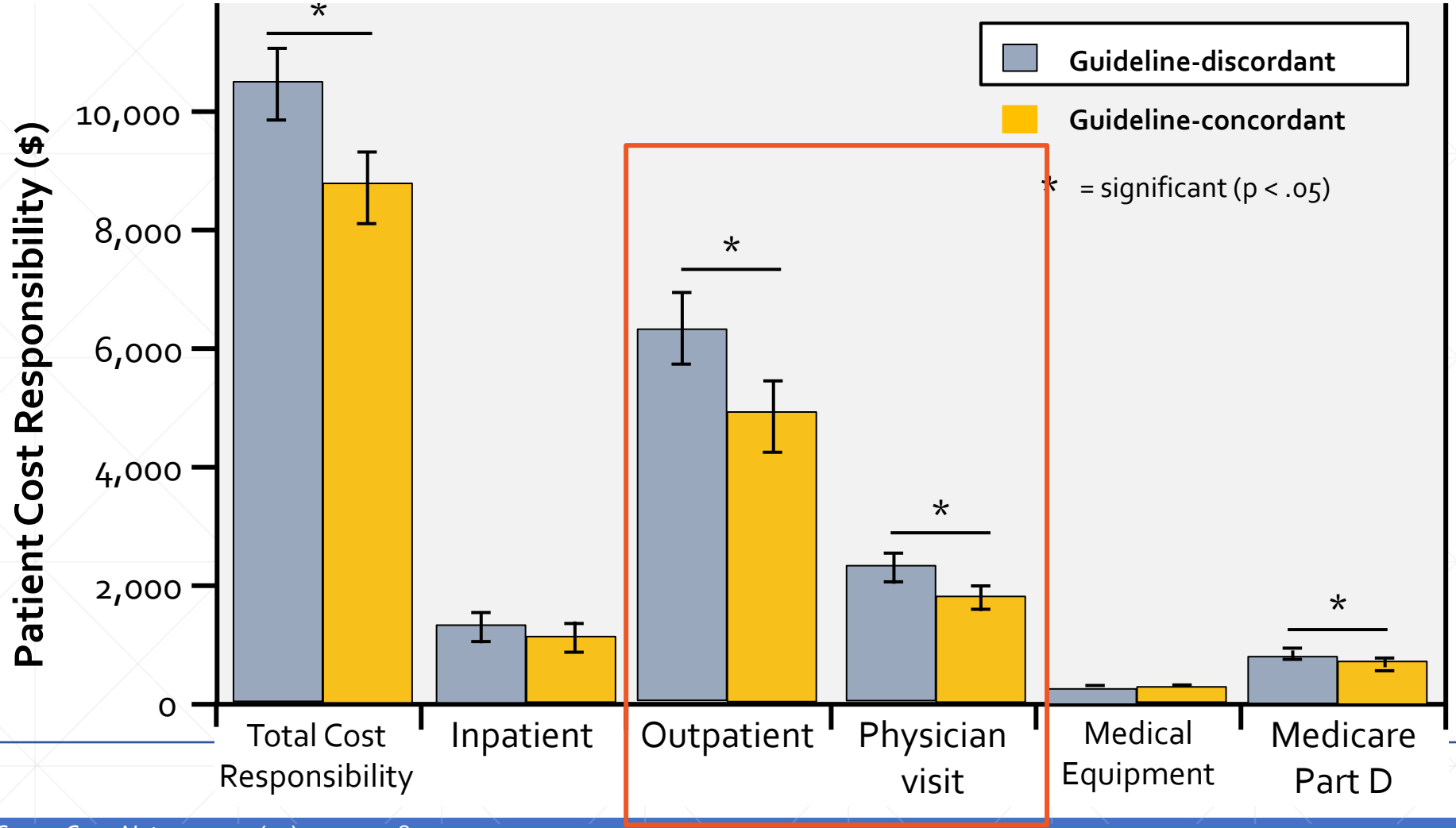
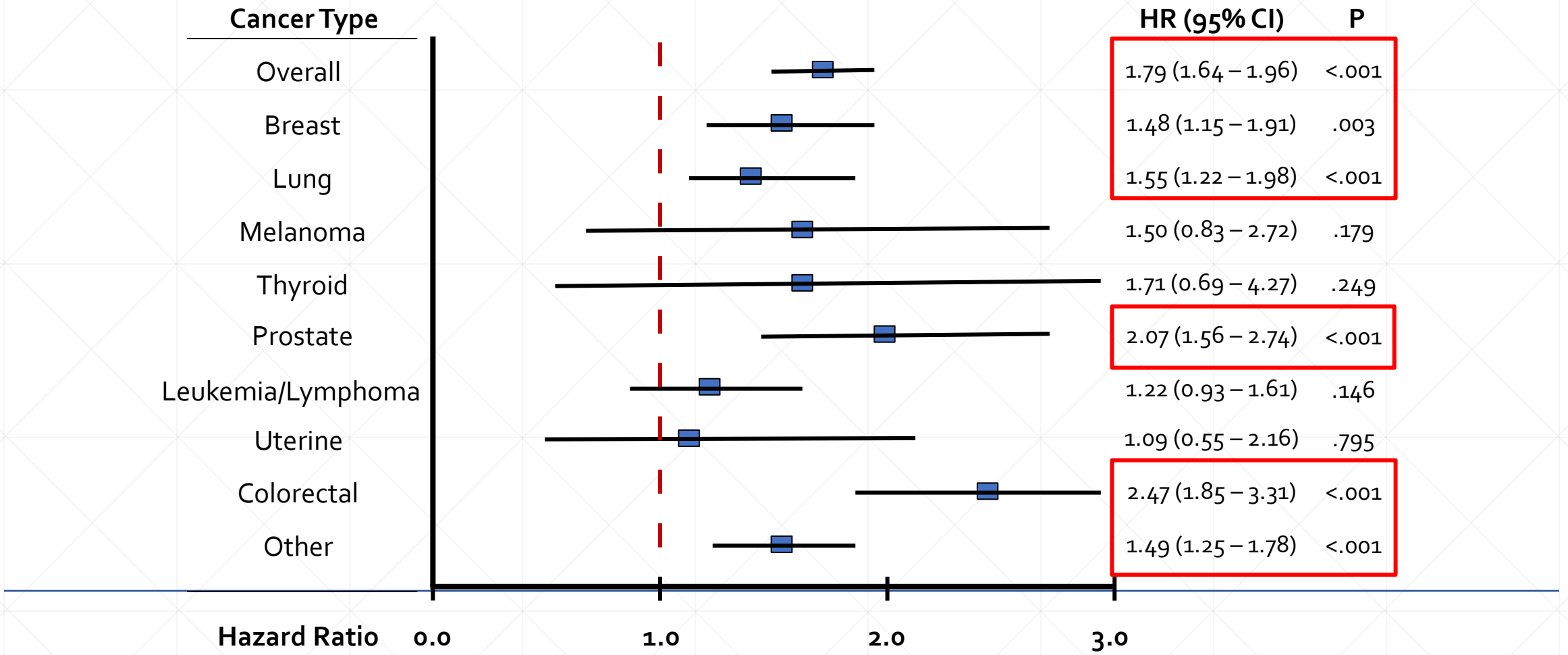
Miljkovic et al. *JAMA Intern Med*. 2022;182(12):1319-1320.

Out-of-Pocket Costs of Cancer Treatment



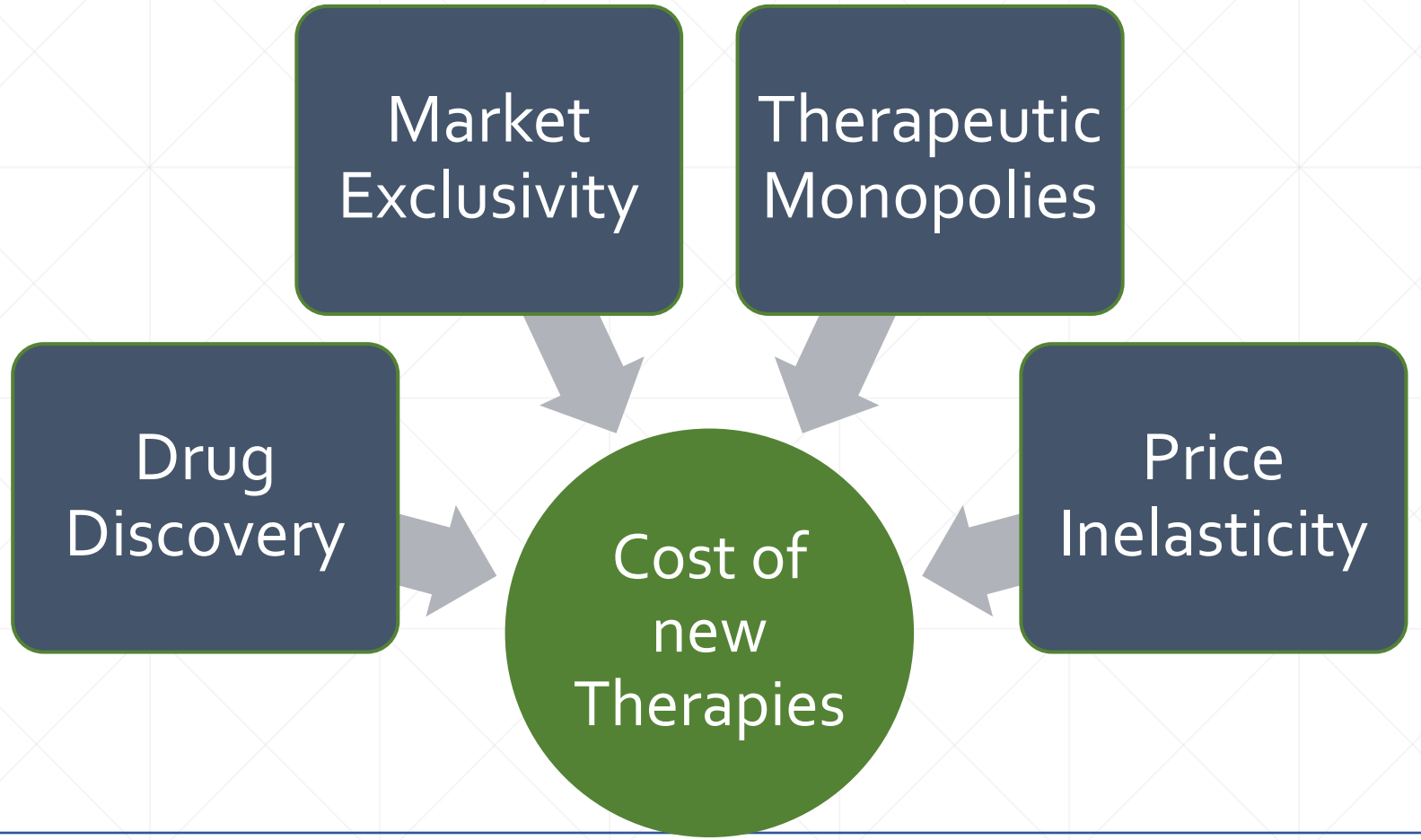
Williams et al, *J Natl Compr Canc Netw* 2019;17(10):1221-1228.

Impact of Financial Toxicity on Survival



Adapted from: Ramsey et al. *J Clin Oncol* 2016;34(9):980-986.

Factors Influencing Cost in Oncology



Ramsey SD, et al. *J Clin Oncol* .2016;34(9):980-6.
Siddiqui M, et al. *Mayo Clin Proc*. 2012;87:935-43.

What is Oncology Stewardship?

A set of coordinated strategies to improve the use of antineoplastic agents with the goal of enhancing patient health outcomes while reducing financial toxicity

Developed with guidance from The Society of Healthcare Epidemiology of America
https:// shea-online.org/index.php/practice-resources/priority-topics/antimicrobial-stewardship

New Approvals through Stewardship Lens

01. Efficacy	If there is a **clear winner** then this should become the standard of care
02. Toxicity	Efficacy is comparable thus we choose the treatment with **less toxicities** to improve quality of life and decrease unplanned hospitalizations
03. Cost	**ONLY** if efficacy and toxicities are comparable, choose the lowest cost treatment to the payer/patient

Adapted from Lancet.2016;388: 111-113 and ViaOncology, LLC.

Incorporating Stewardship into your Practice

Evaluate	Critically evaluate **formulary additions**
Standardize	Facilitate standardization of **treatment plans** for diseases
Do not shy away	Discuss **financial toxicity** regularly with your team and patients
Promote	Promote interventions that **optimize quality of life**
Encourage	Encourage **rational use** of medications & palliative services

A New Therapy for Multiply-Refractory Multiple Myeloma

Outcomes that matter at end-of-life

Clinical Scenario #1 –

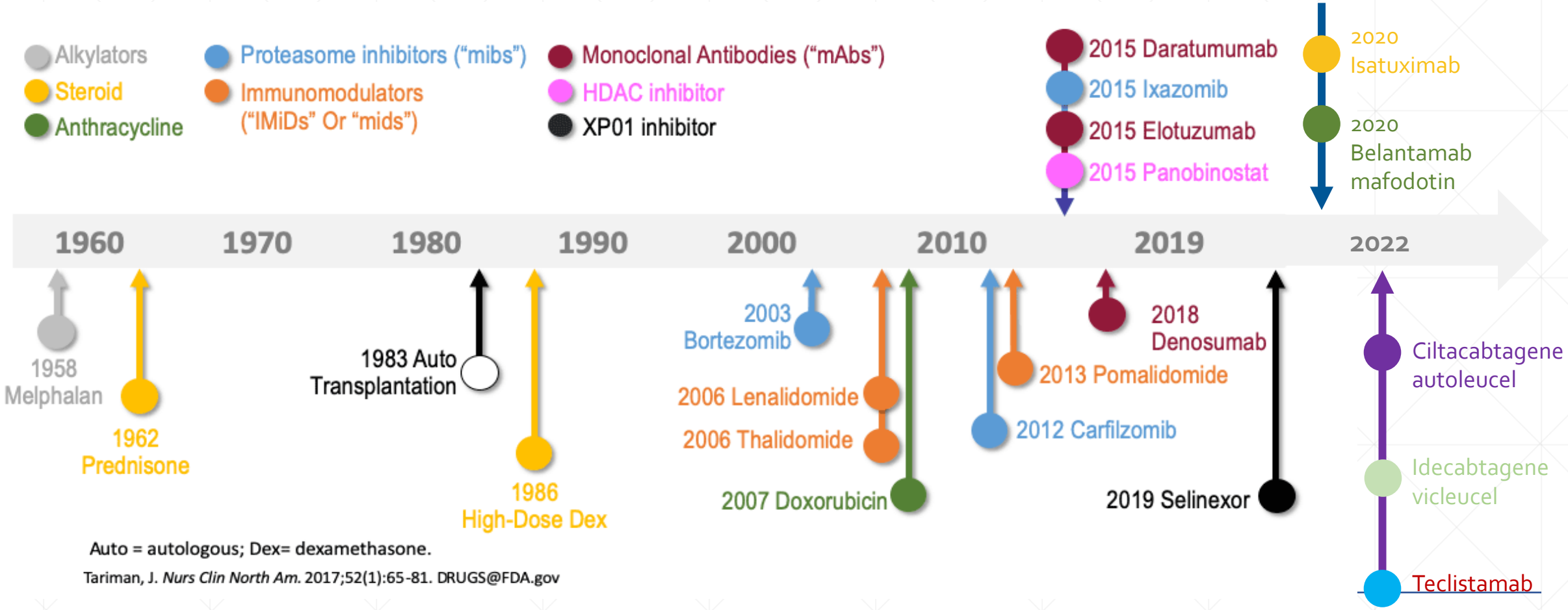
AP is a 75-year-old man with IgG κ multiple myeloma in fourth relapse

Relevant Disease Characteristics:

- PMH: hypertension, Type II diabetes mellitus, peripheral vascular disease
- Standard risk cytogenetics
- **Prior therapies:**
  - Bortezomib, lenalidomide, dexamethasone (RVD) → AutologousHCT → lenalidomide maintenance (18 months) → relapse after 40 months
  - Carfilzomib, lenalidomide, dexamethasone → VGPR lasting 22 months complicated by intermitted neutropenia
  - Daratumumab, pomalidomide, dexamethasone → VGPR lasting 10 months

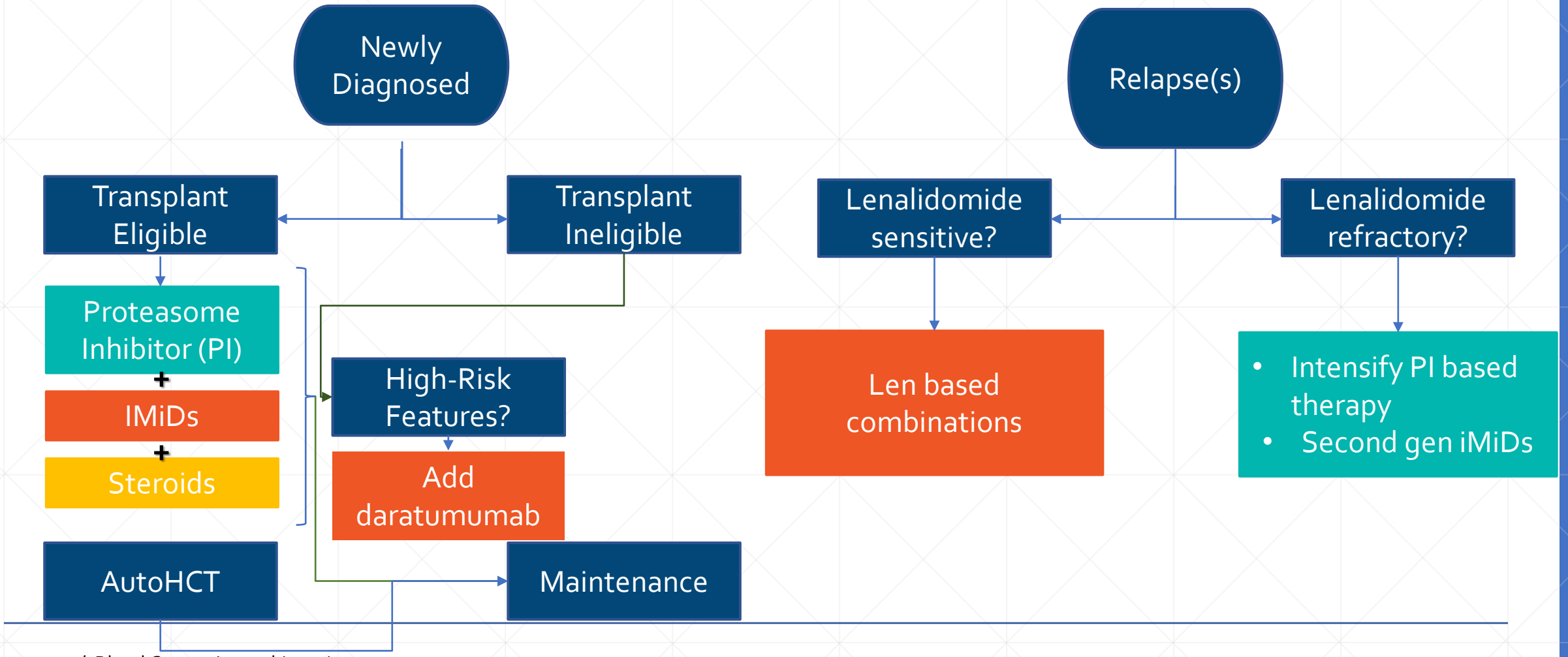
AP is not able to travel to a site where clinical trials are available and is not a candidate for CAR-T cell therapy.

Timeline of Advances in Multiple Myeloma



https://www.myeloma.org/multiple-myeloma-drugs

Simplified Therapeutic Pathway for MM



Rajkumar *et al.* Blood Cancer Journal (2020) 10:94

Options in Triple-Class Relapse

- Depth of response and length of remission decrease with subsequent lines of therapy
- Challenging subsets
  - Ineligible for autologous hematopoietic cell transplant
  - Adverse disease characteristics (*e.g.*, del(17)(p))
- Patients with "penta-refractory" myeloma or more have dismal prognosis (median survival ~1-3 months)
- Options include
  - Non-CAR-T BCMA-based therapies
  - CAR-T cell (BCMA directed)
  - XPO1-inhibitor (Selinexor)

Selinexor

STORM trial

Patients with triple class refractory Multiple Myeloma*

- ECOG 0-1
- Adequate renal, hepatic and hematopoietic function

***n* = 122** →

Selinexor 80 mg and dexamethasone 20 mg
days 1 and 3, weekly in 4-week cycles until progression/death or discontinuation

*Measurable MM after therapy with PI (bortezomib and carfilzomib), iMiDs (lenalidomide and pomalidomide), steroids, and an alkylating agent AND most refractory to at least one drug in each class of PI, IMiD, daratumumab, glucocorticoid and last therapy received.

Phase II Open-label single arm trial **Primary Outcome: Overall Response Rate**

Chari, et al. *NEJM*. 2019 Aug 22;381(8):727-738

Audience Poll Question #2

For drugs approved between **Jan 2015 and Dec 2020**, agents approved through comparative studies were associated with higher price-tag than those approved via single-arm trials?

A. True
B. False

Miljkovic et al. *JAMA Intern Med*. 2022;182(12):1319-1320.

Audience Poll Question #2

For drugs approved between **Jan 2015 and Dec 2020**, agents approved through comparative studies were associated with higher price-tag than those approved via single-arm trials?

A. True

B. **False**

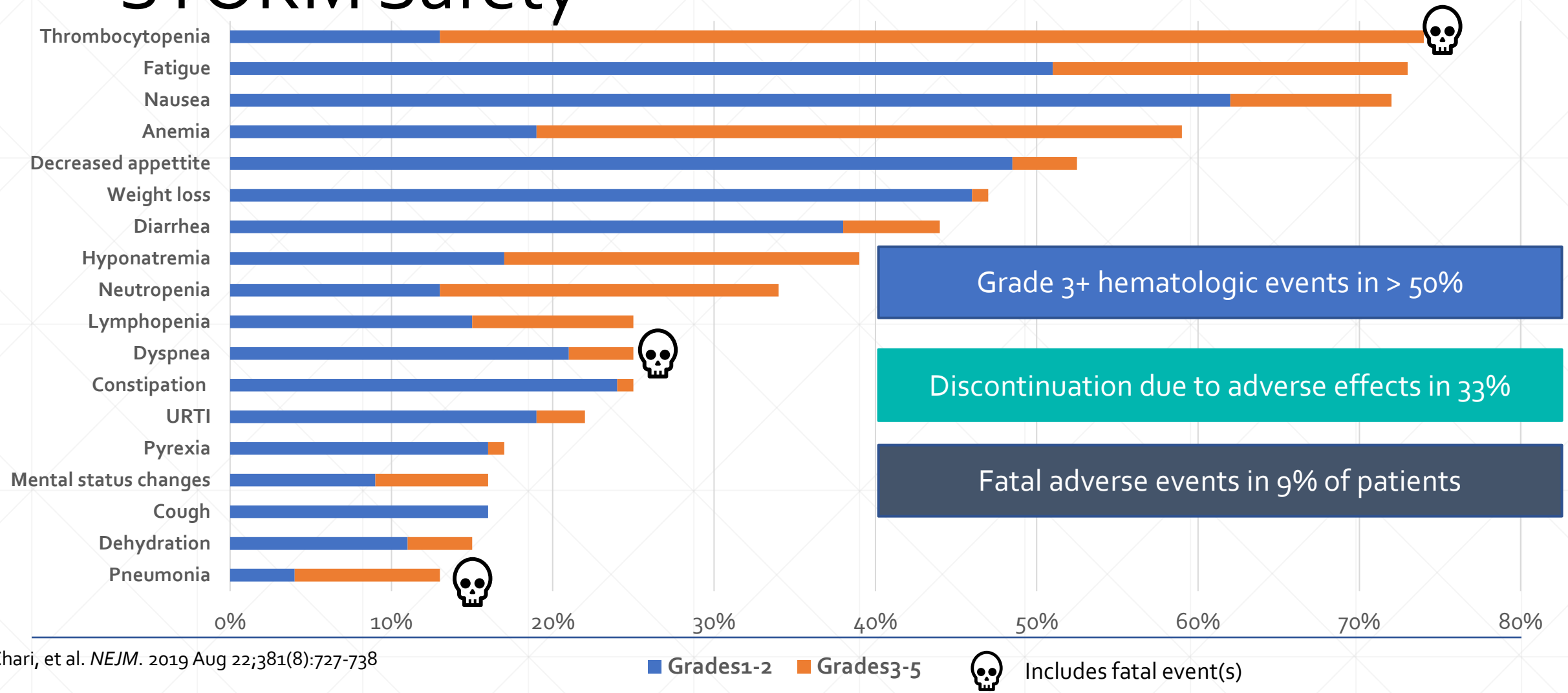
Miljkovic et al. *JAMA Intern Med*. 2022;182(12):1319-1320.

STORM Efficacy Outcomes

Demographics & Disease Characteristics	(n=122)
Age, median (range)	65 yrs (40-86)
Disease duration, median (range)	6.6 yrs (1-23.4)
Prior therapies, median (range)	**7 (3-18)**
Daratumumab combinations, n(%)	86 (70)
Stem-cell transplantation, n(%)	102 (84)
CAR-T, n(%)	2 (2)
High-risk features, n (%)	**65 (53)**
Refractory (DOES NOT imply combination), n(%)	
Carfilzomib, pomalidomide, and dara	**117 (96)**
Carfilzomib, lenalidomide, pomalidomide, dara	101 (83)
Bortezomib, carfilzomib, pomalidomide, dara	94 (77)
Bortezomib, carfilzomib, lenalidomide, pomalidomide, dara	83 (68)

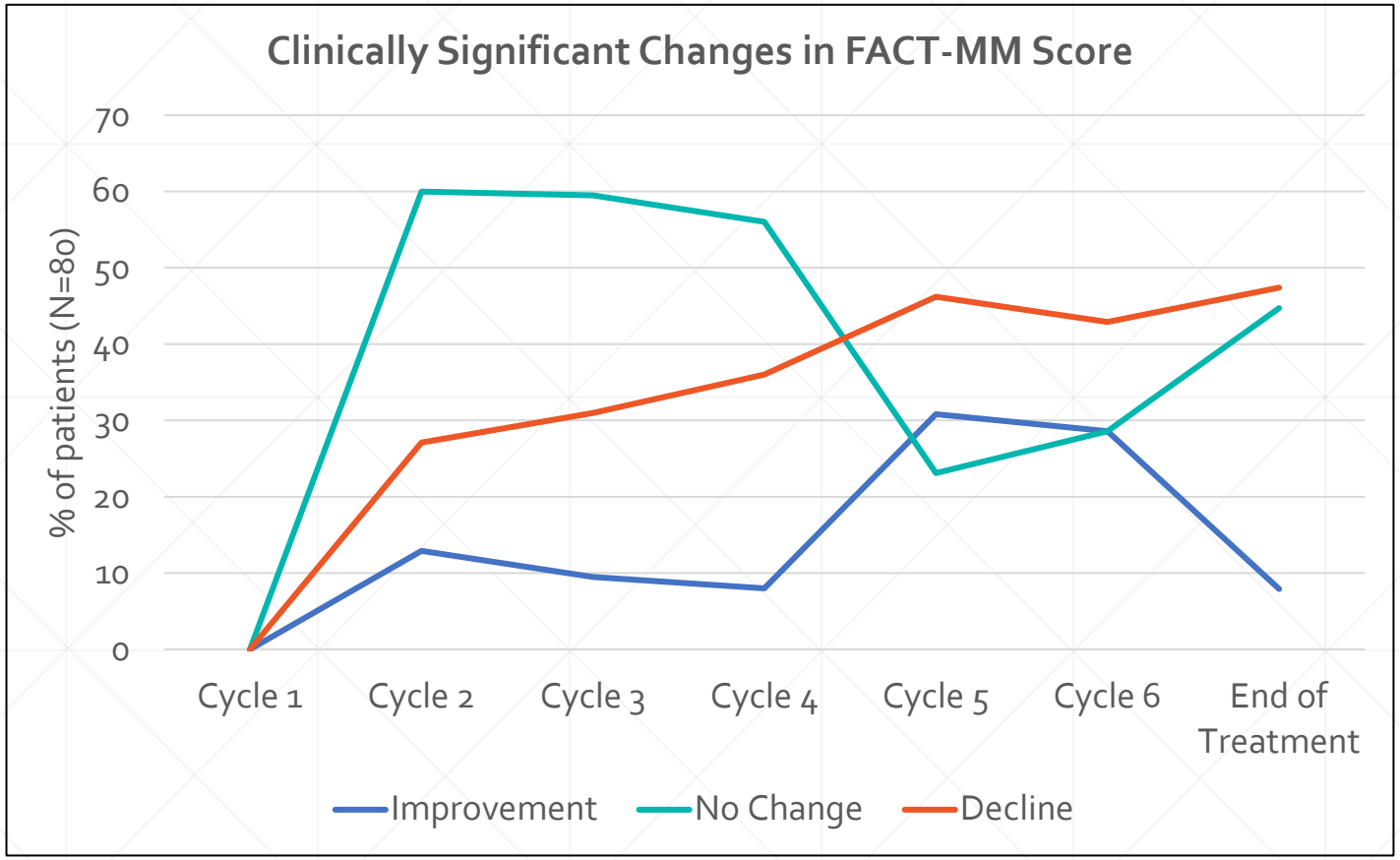
Response, %	N=122
Overall Response Rate	26.2
Stringent Complete Response	1.6
Very Good Partial Response	4.9
Partial Response	19.7
Duration of Response	4.4 months
Median Overall Survival	8.6 months

STORM Safety



Chari, et al. *NEJM*. 2019 Aug 22;381(8):727-738

Quality of Life Assessments & Supportive Care



Toxicity management recommendations

- Hematologic Toxicity
  - Antimicrobial prophylaxis ($)
  - Consideration for myeloid growth factor ($$$)
  - Consideration of TPO mimetic! ($$$$)
- Gastrointestinal Toxicities
  - High Emesis protocol antiemetics ($-$$)
  - Intravenous fluids in select patients ($$)

https://www.xpoviopro.com/assets/pdf/mm/MM-BOSTON-Dosing-Guide.pdf

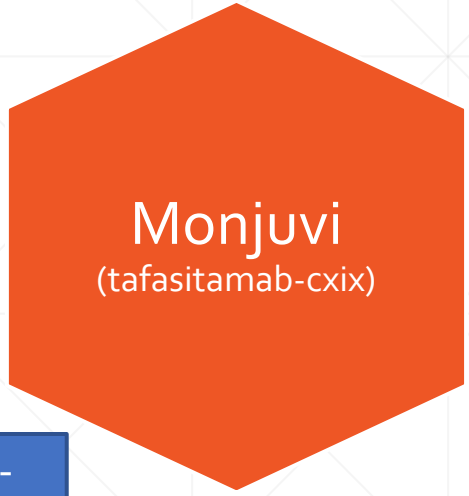
Selinexor 80 mg =
$26,859 per 4-week cycle*
*Wholesale Acquisition Cost

Tremblay et al. BMC Cancer (2021) 21:993.
REDBOOK. Micromedex.

Summarizing What We Know

01. Efficacy	• No data with regards to overall survival improvement in any setting • No comparative data for penta-refractory patients (against dex alone?) • Suboptimal comparator in 1-3 prior lines of therapy
02. Toxicity	• Significant toxicities leading to discontinuation/death in large % patients • Toxicities associated with large healthcare utilization near end of life • Quality of life worsened in a large % of patients receiving therapy
03. Cost	• Expensive oral therapy with potential to result in high co-pays for patients without access to grants/manufacturer funding support • Significant expenses expected from supportive care measures.

Parallels in other Tumor Types?



Relapsed/Refractory Large B-cell Lymphoma

Metastatic HER2+ Breast Cancer

Stewardship in End-of-Life Therapy Decisions

Evaluate	Critically evaluate **formulary additions**
Standardize	Facilitate standardization of **treatment plans** for diseases
Do not shy away	Discuss **financial toxicity** regularly with providers
Promote	Promote interventions that **optimize quality of life**
Encourage	Encourage **rational use** of medications & palliative services

Chimeric Antigen Receptor T-cell therapy for Diffuse Large B-cell Lymphoma

One size does not fit all

Clinical Scenario #3 –

TH 59-year-old man with a man with a history of high grade diffuse large B-cell lymphoma (DLBCL) being considered for CD-19 directed CAR-T cell therapy.

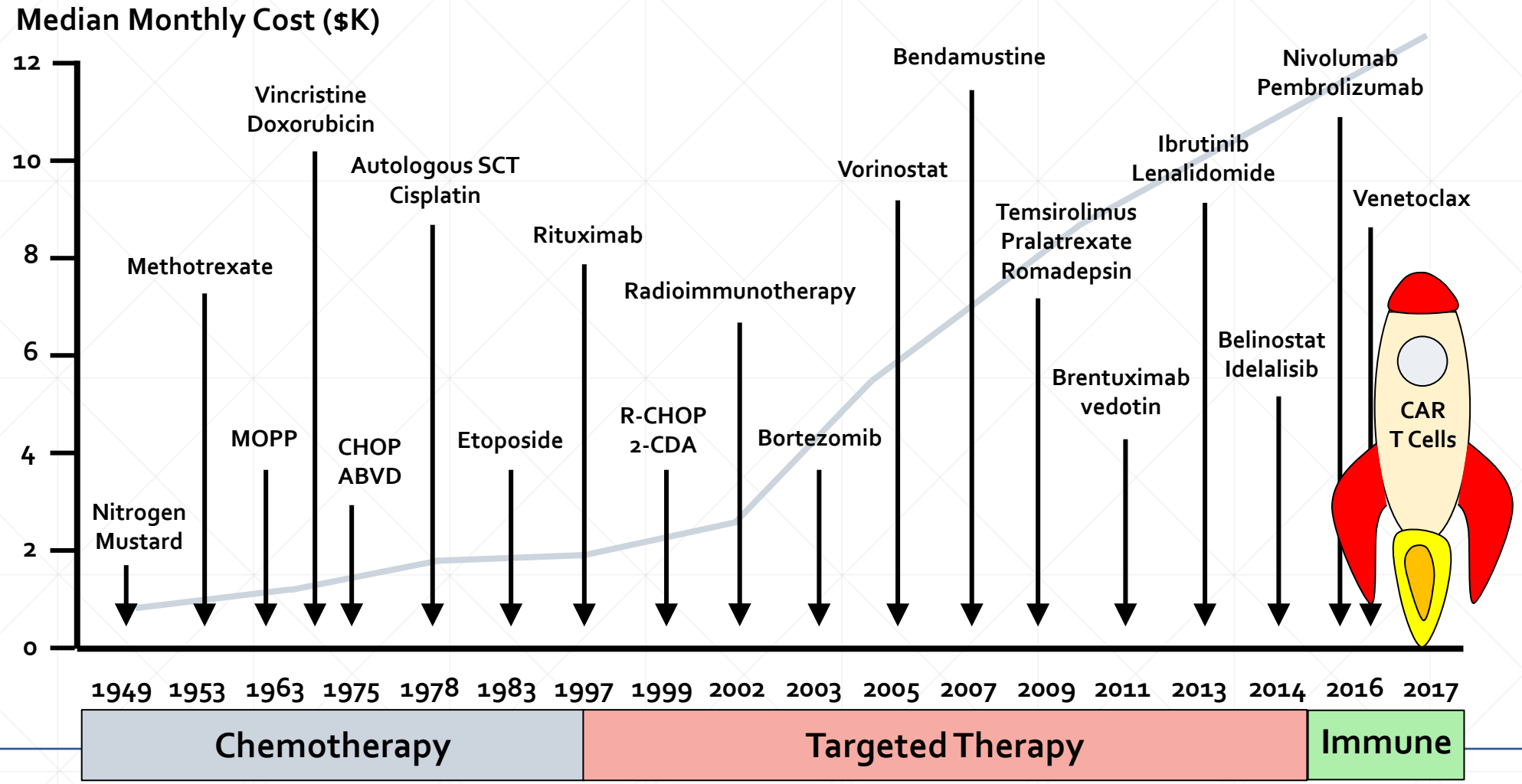
Relevant Patient Disease Characteristics:

- Biopsy reveals: Germinal Center lymphoma, MYC translocation and t(8;14)
- **Treatment History :** Dose Adjusted (R-EPOCH) with a CR in 2/2019→ Relapse in 7/2021 treated with RDHAP in CR after 2 cycles, receipt 3 total cycles → Patient relapsed while awaiting AutoHCT (10/7)
- PMH: none ECOG= 1

Plan: Bridge with Polatuzumab, Bendamustine, Rituximab then proceed to CAR-T cell therapy.

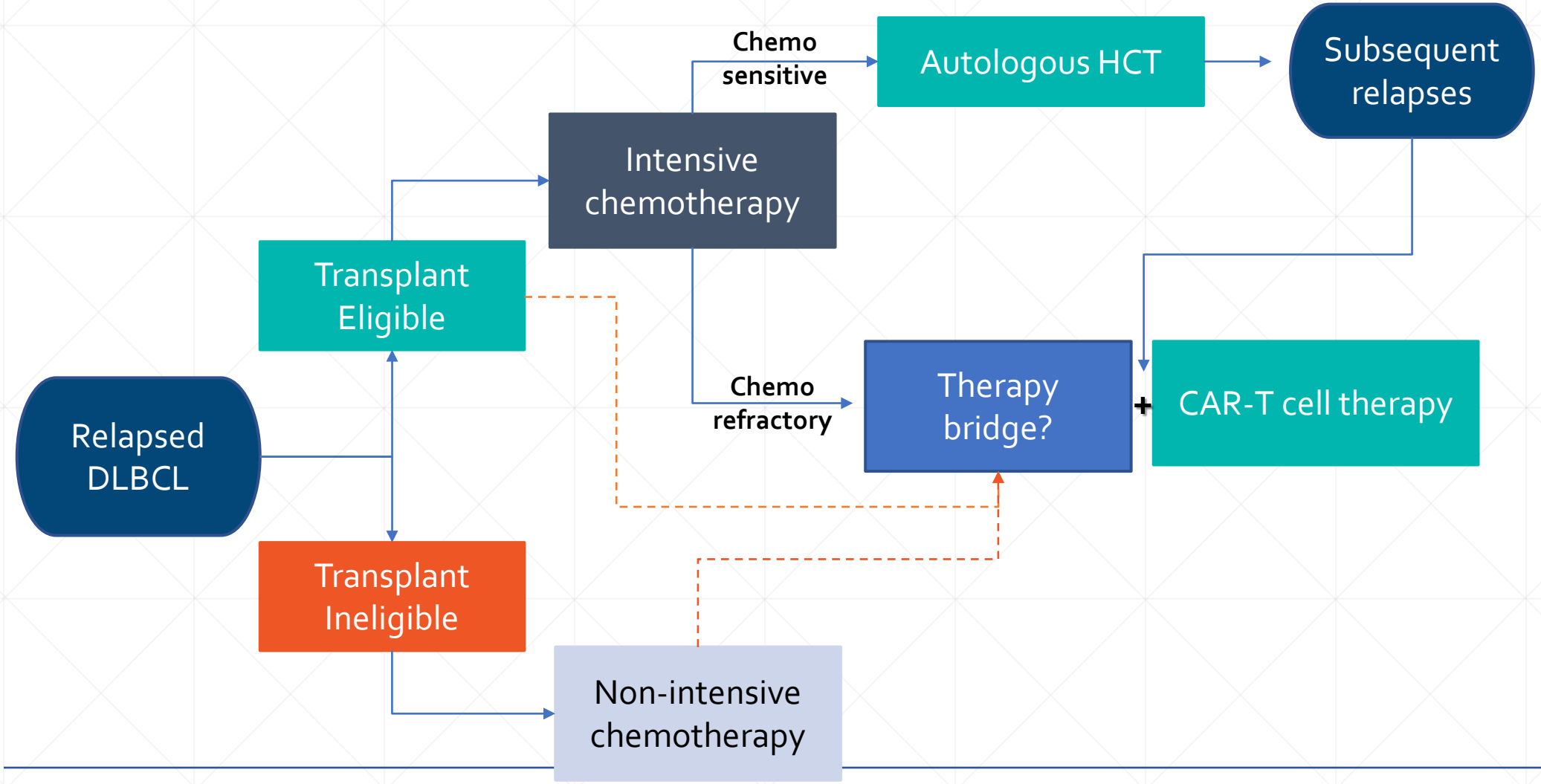
What outcomes can we expect from these interventions?

Lymphoma Drugs: Approval Timeline



Adapted from: Prasad et al, *Nature Rev Clin Oncol* 2017;14:381-390
Thanarajasingham et al, *Lancet Haematology* 2018

Simplified Pathway in Relapsed B-cell Lymphoma



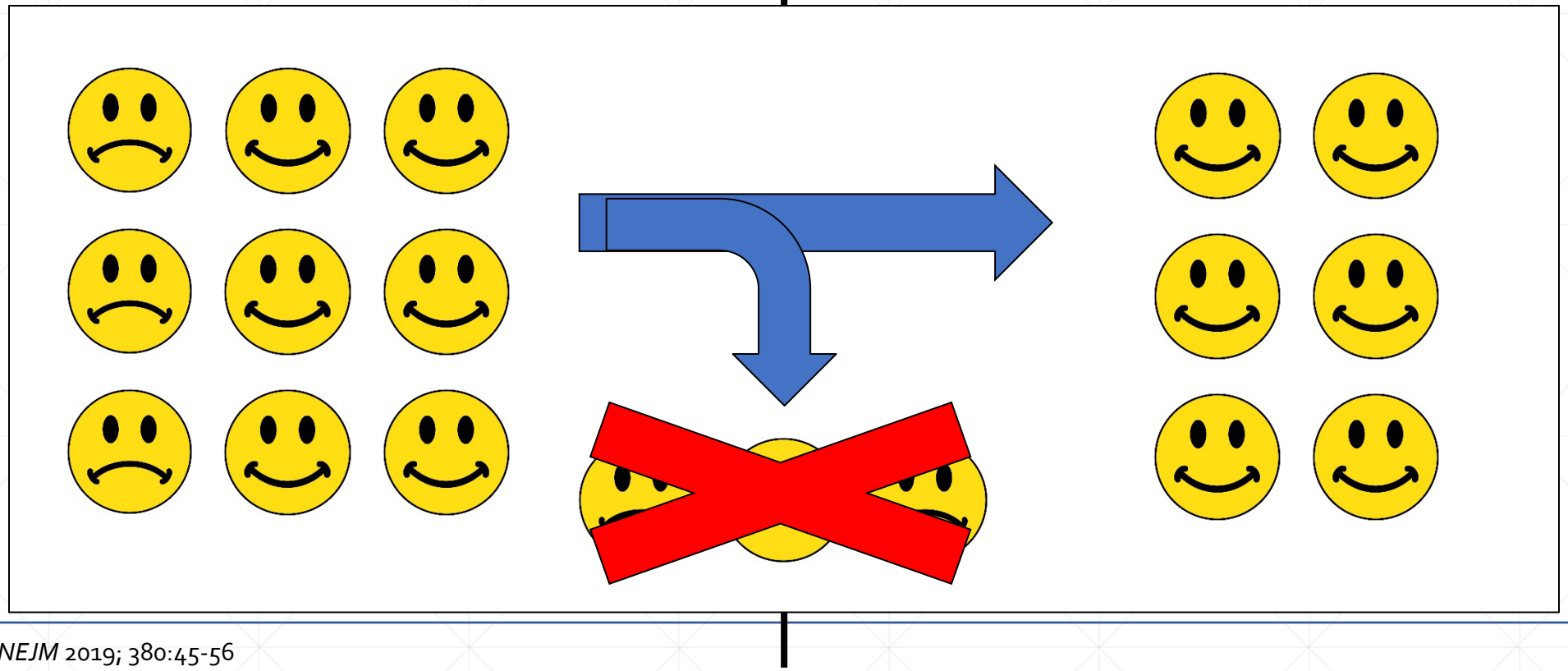
CD19+ CAR T Cell Therapy for R/R DLBCL

Axicabtagene ciloleucel (Yescarta)

ZUMA-1
Phase II, multicenter, open-label
Primary endpoint: ORR (CR + PR)

Tisagenlecleucel (Kymriah)

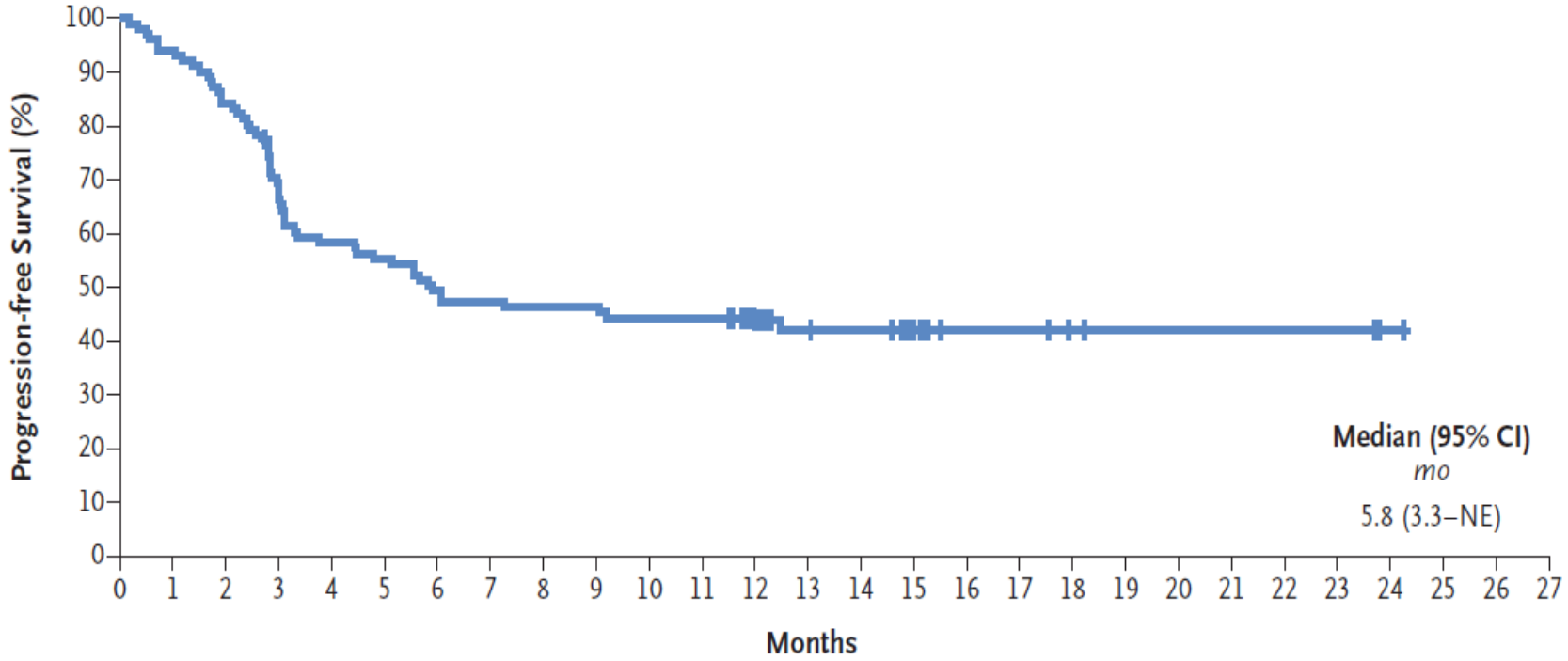
JULIET
Phase II, multicenter, open-label
Primary endpoint: ORR (CR + PR)



Schuster et al, *NEJM* 2019; 380:45-56
Neelapu et al, *NEJM* 2017; 377:2531-2544

Axicabtagene Ciloleucel (Yescarta)

ZUMA-1 Efficacy

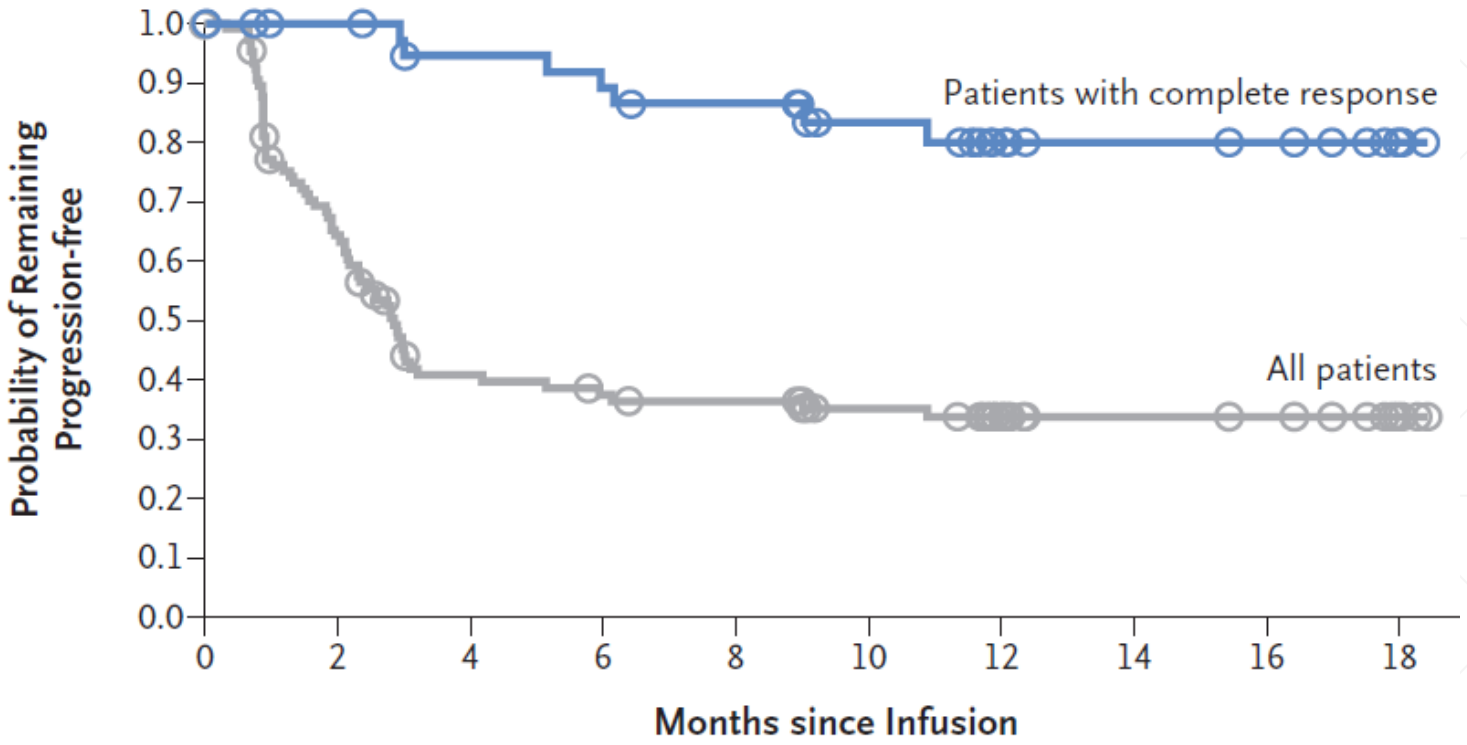


	ZUMA-1 (2017)	2019 long term f/u
ORR	82%	83%
CR rate	55%	58%
PFS (12 month, 24 month)	44%	** 72% **
OS (12 month, 24 month)	59%	50.5%

Neelapu et al, *NEJM* 2017; 377:2531-2544
Locke et al, *Lancet Oncol* 2019; 20:31-42

Tisagenlecleucel (Kymriah)

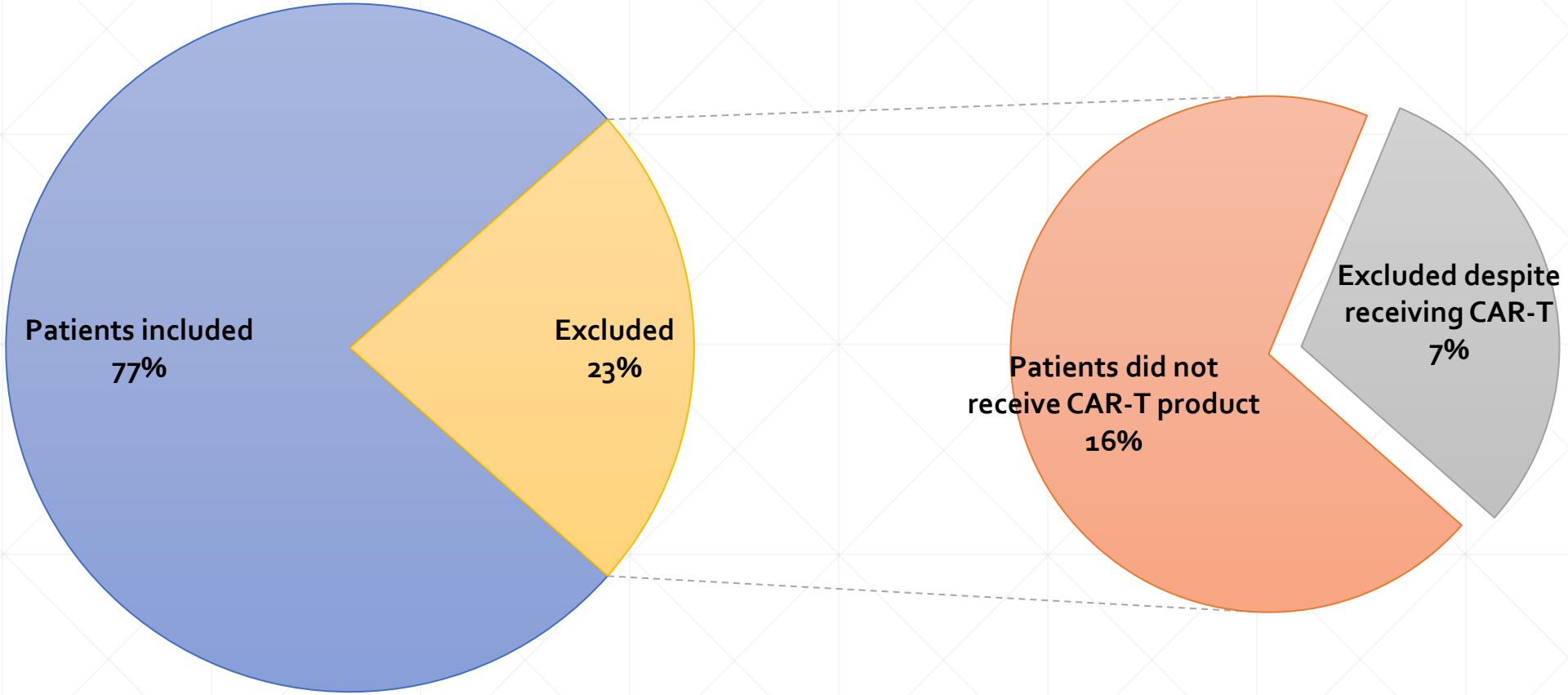
JULIET Efficacy



	JULIET (2019)
ORR	52%
CR rate	40%
PFS (12 month)	** 83% **
OS (12 month)	49%

Schuster et al, *NEJM* 2019; 380:45-56

Meta-Analysis of Outcome Reporting in CD-19 CAR-T Trials

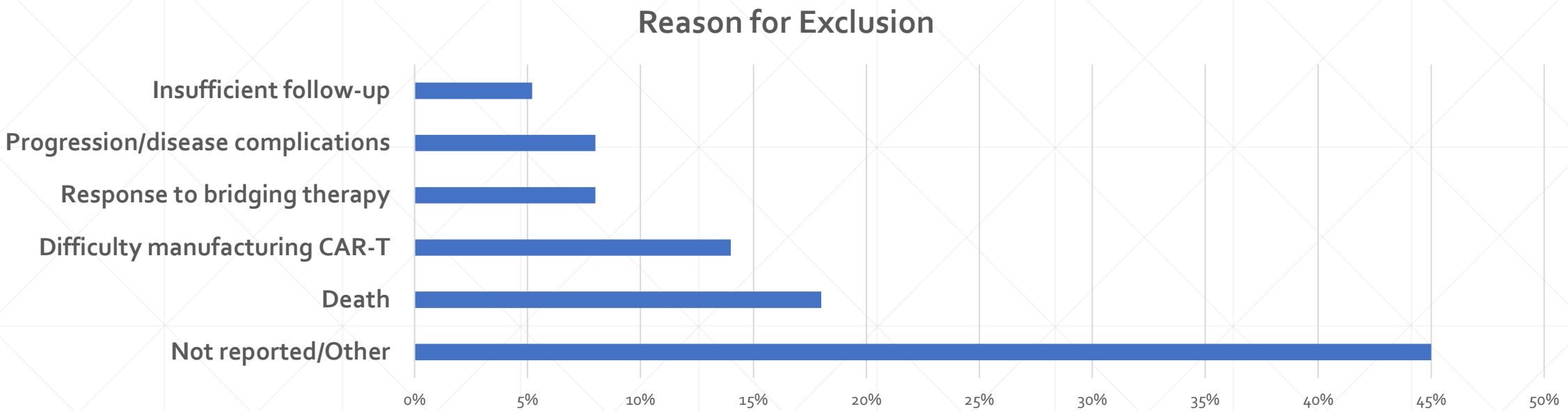


Mohyuddin, et al. *Eur J Cancer.* 2021 Oct;156:164-174.

Patients Excluded from Efficacy Analyses

52 studies with CD19 targeting CAR-Ts were evaluated for efficacy across intent to treat population

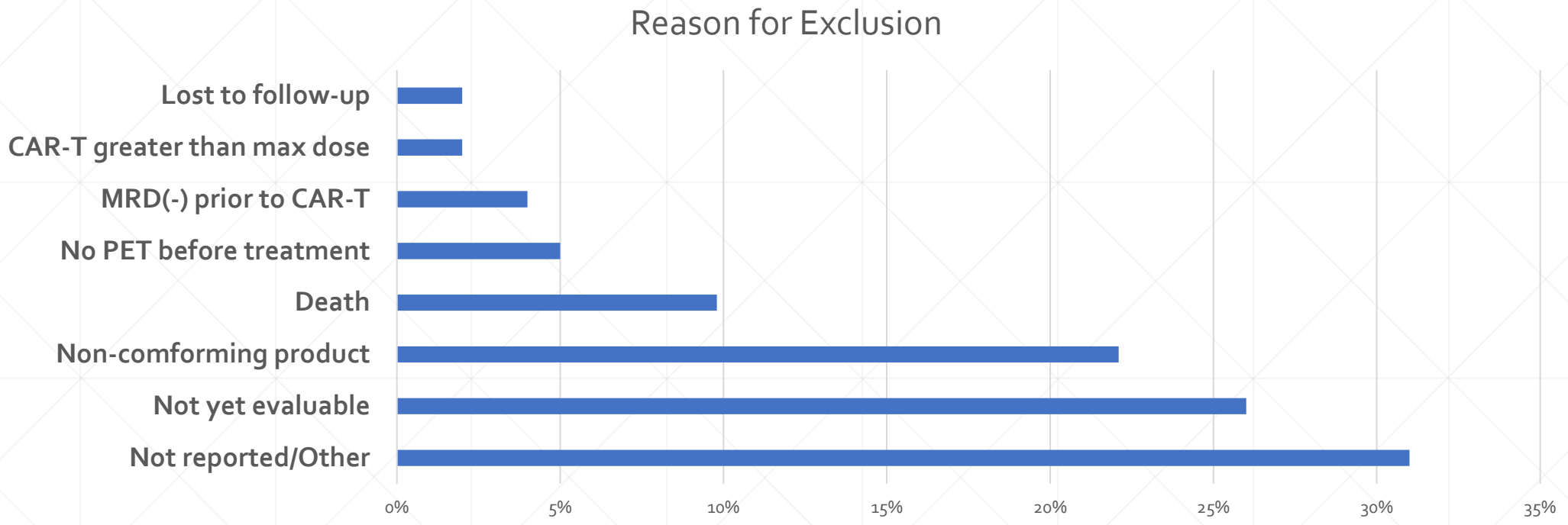
- 266/1649 (16%) patients were excluded from efficacy analyses due to not being treated



Mohyuddin, et al. *Eur J Cancer.* 2021 Oct;156:164-174.

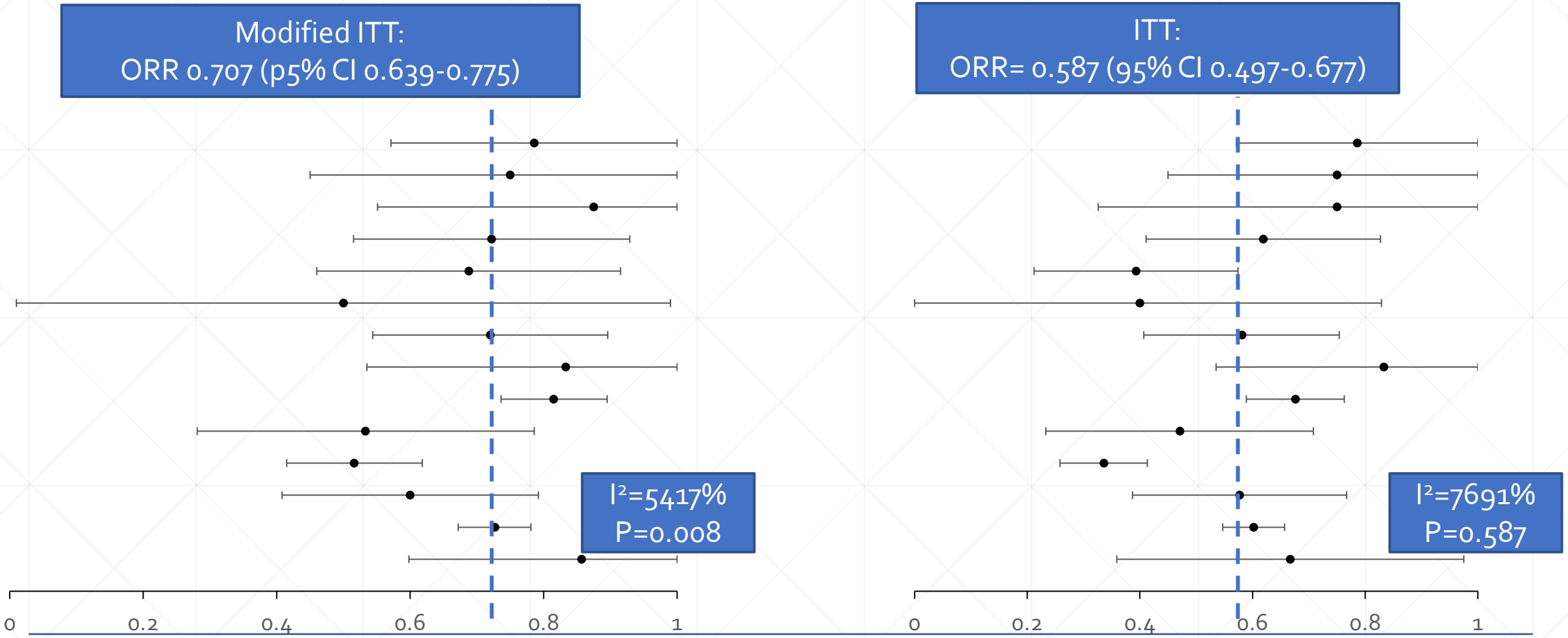
More Patients Excluded from Efficacy Analyses

Across 52 studies with CD19 targeted CAR-Ts, 113 patients were excluded from efficacy analyses **DESPITE** being treated



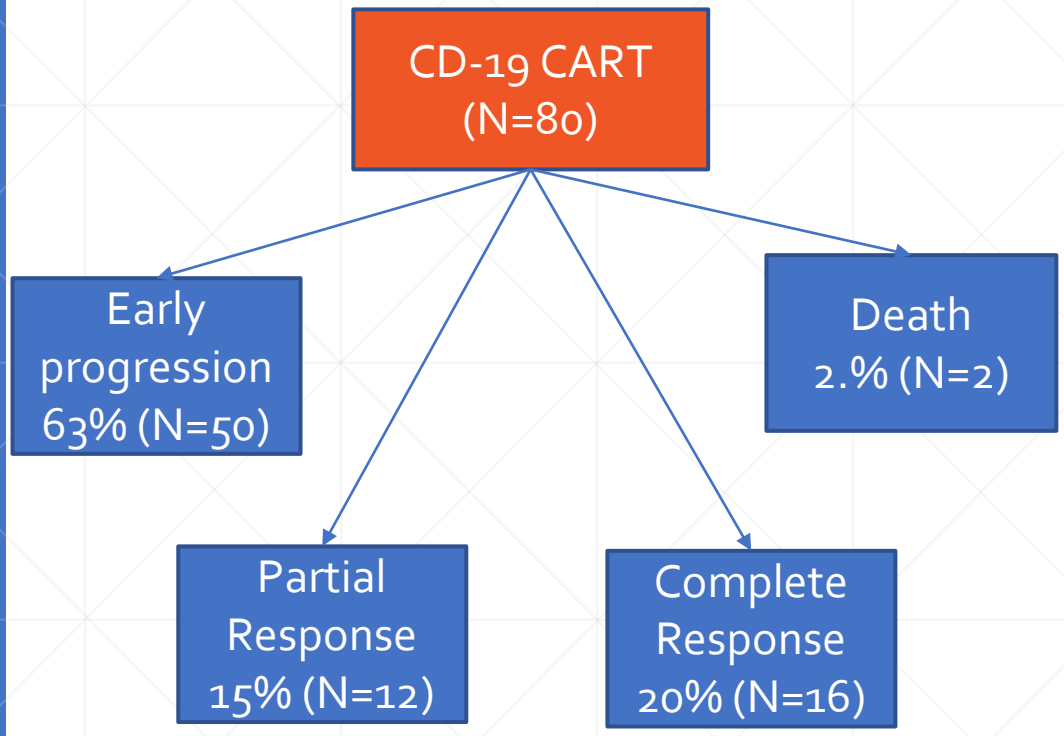
Mohyuddin, et al. *Eur J Cancer.* 2021 Oct;156:164-174.

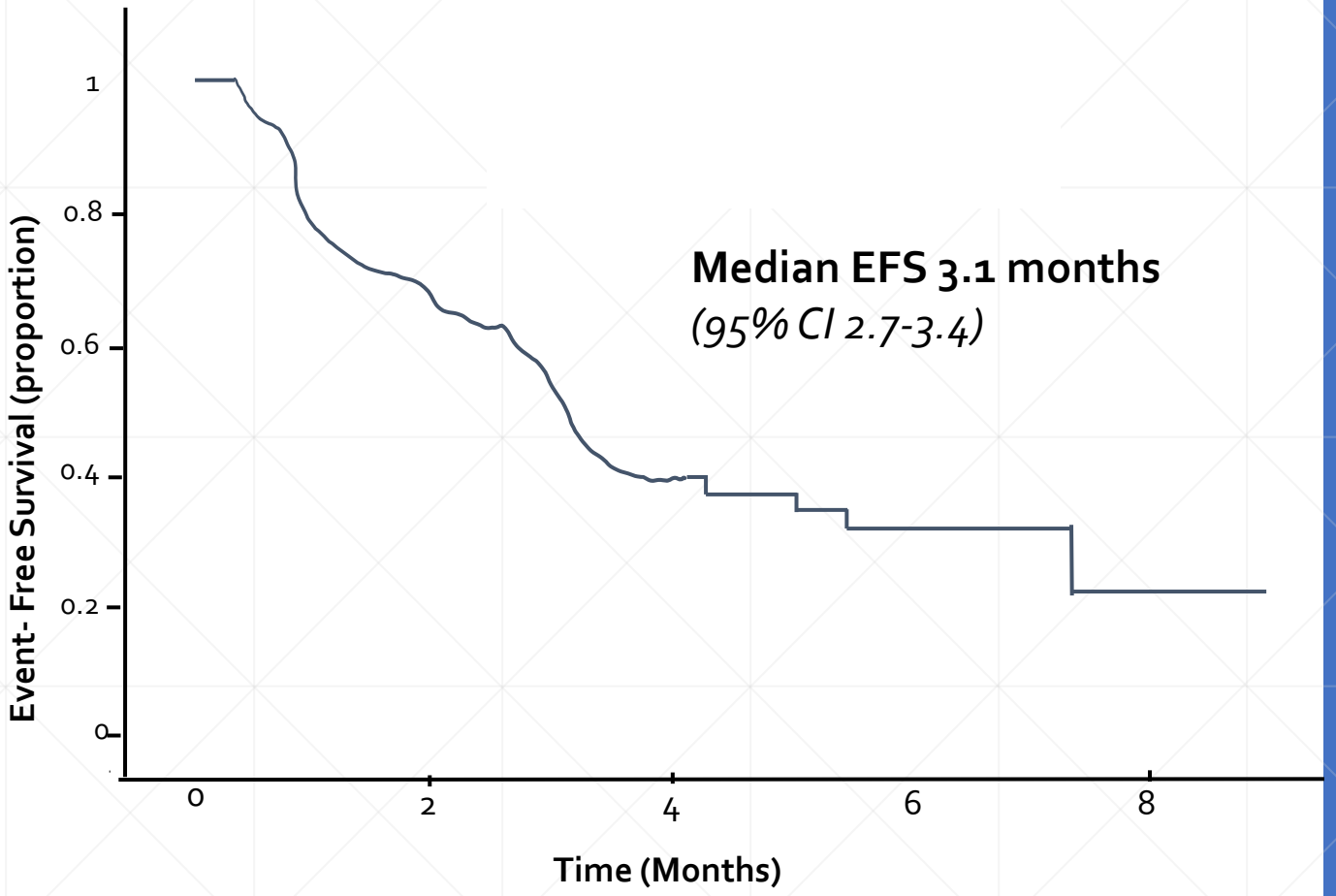
Intent to Treat versus modified Intent to Treat



Mohyuddin, et al. *Eur J Cancer.* 2021 Oct;156:164-174.

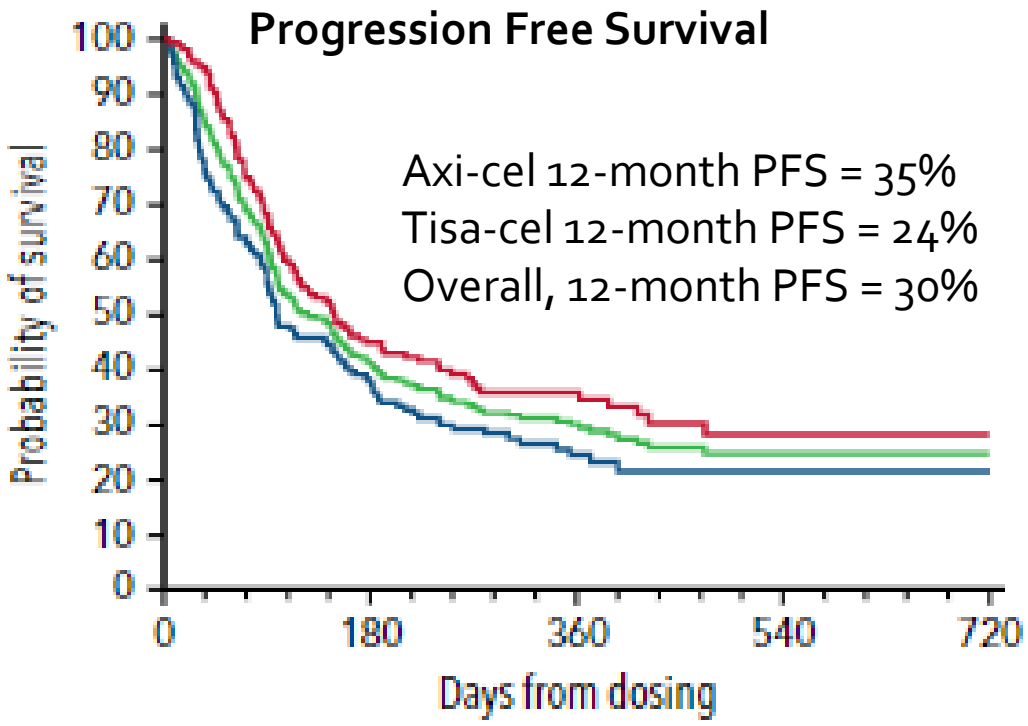
Real-World CAR T Cell Data from the U.K

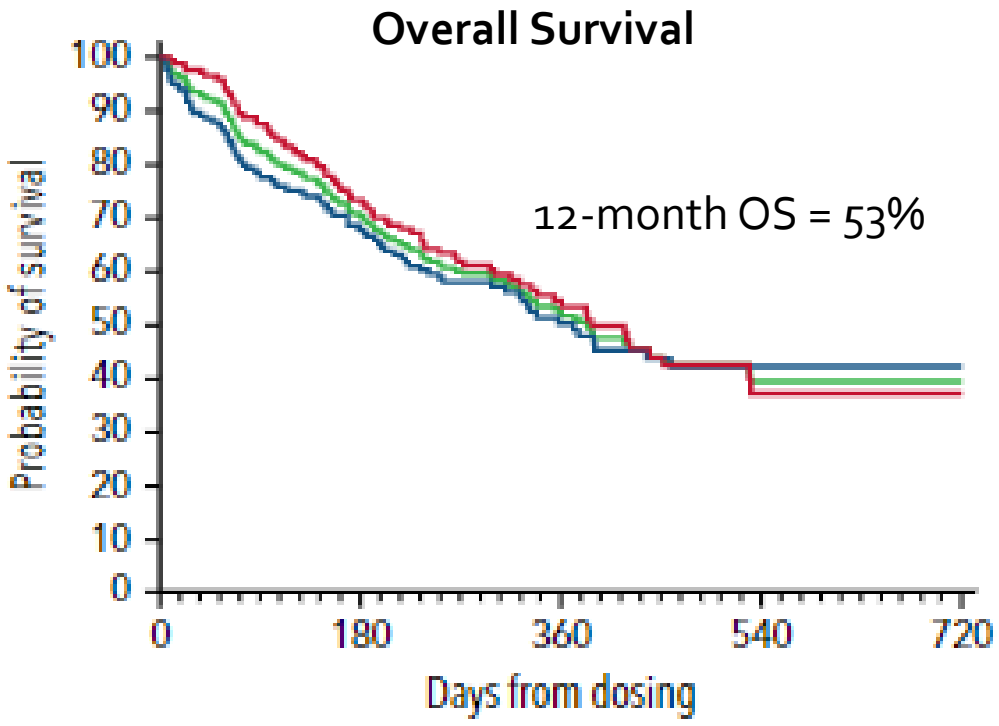




Kuhnl et al, *ASH Annual Meeting 2019*; session 627, abstract 767

Real-World Outcomes in Germany





Axi-cel Tisa-cel All

Bethge, et al. *Blood*. 2022 Jul 28;140(4):349-358.

CD19+ CAR T Cell Therapy

Safety

	AxiCel (ZUMA-1, n = 101)			TisaCel (JULIET, n = 111)		
Adverse reaction	Any	Grade 3	Grade 4	Any	Grade 3	Grade 4
Any AE (worst grade)	100%	26%	64%	100%	28%	61%
Pyrexia	87%	14%	0%	35%	5%	0%
Hypotension	58%	13%	1%	26%	6%	3%
Chills	37%	0%	0%	13%	0%	0%
Anemia	68%	43%	3%	48%	37%	2%
Neutropenia	44%	9%	30%	20%	6%	14%
Fatigue	53%	3%	0%	25%	6%	0%
Headache	46%	1%	0%	23%	1%	0%
Encephalopathy	37%	21%	2%	21% Neurologic events	7% Neurologic events	5% Neurologic events
Tremor	31%	2%	0%			
Nausea	58%	0%	0%	29%	1%	0%
Diarrhea	44%	5%	0%	32%	1%	0%

Locke et al, *Lancet Oncol* 2019; 20:31-42

Schuster et al, *NEJM* 2019; 380:45-56

CD19+ CAR T Cell Therapy

Value

Cost = $373,000 for a 1x infusion (for both)

*** Does not factor in admission, other clinical management***

Scenario	Cost, 2018 US$	Proportion of Simulations Cost Effective at Various WTP Thresholds		
		$50,000	$100,000	$150,000
Axicabtagene ciloleucel				
40% 5-year PFS*	651,000 (602,000-700,000)	0	0.097	0.727
30% 5-year PFS*	638,000 (584,000-694,000)	0	0.013	0.381
20% 5-year PFS*	655,000 (597,000-712,000)	0	0.001	0.141
Tisagenlecleucel				
35% 5-year PFS*	529,000 (481,000-579,000)	0	0.018	0.332
25% 5-year PFS*	523,000 (474,000-577,000)	0	0.002	0.113
15% 5-year PFS*	521,000 (470,000-578,000)	0	0	0.021
Non–CAR-T				
Chemoimmunotherapy and stem-cell transplantation‡	169,000 (145,000-195,000)	—	—	—

Lin et al, *J Clin Oncol* 2019; 37:2105 – 2119.

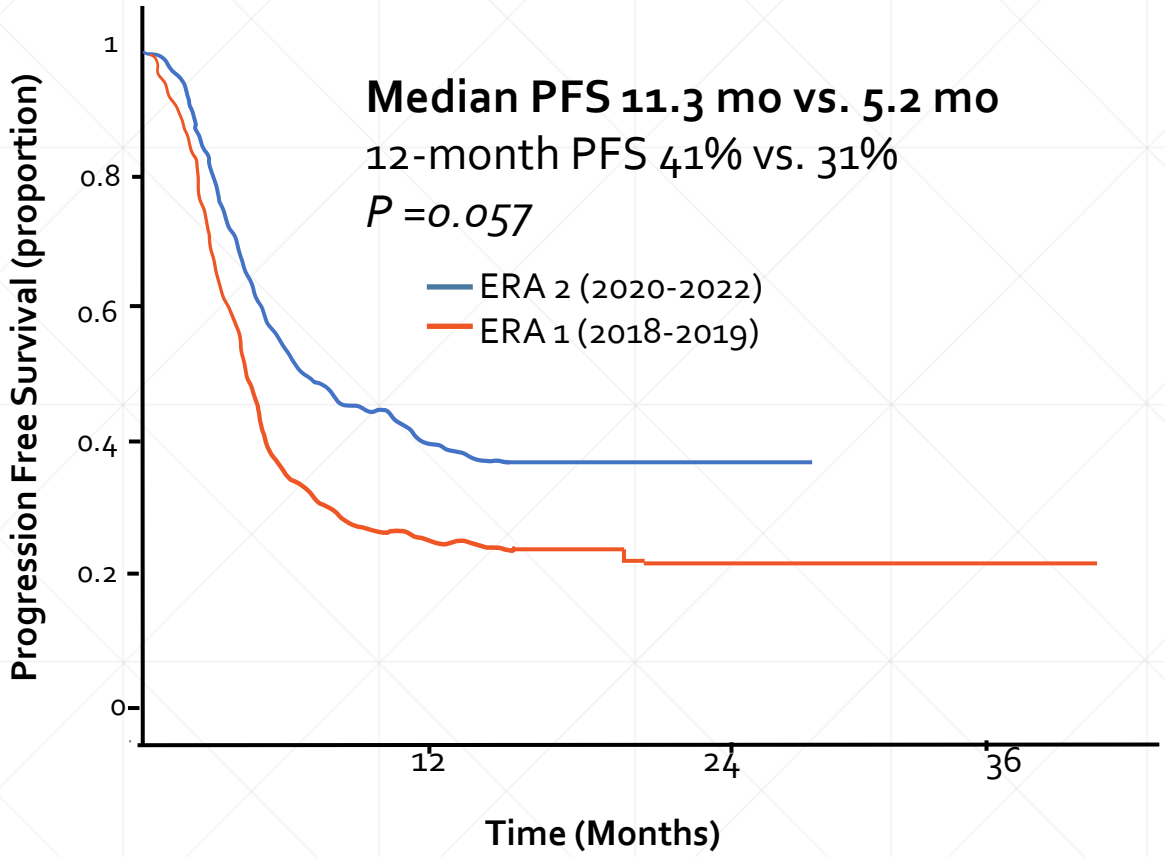
Closing the Gaps in Knowledge- Update from UK

Changes in Management

- Less patients with elevated LDH pre lymphodepletion
- Increased use of bridging therapy
- Decreased Grade III+ CRS/ICANS
  - Increased use of tocilizumab and steroids

Risk factors for worse overall survival

- 3+ extranodal sites: HR 2.0 (95% CI 1.1-3.7)
- elevated LDH prior to lymphodepletion: HR 1.7 (95% CI 1.1-2.8)
- ECOG 2+: HR: 2.0 (95% CI 1.2-3.7)



Boyle et al. *Blood*. 2022:140 (Supplement 1): 4649–4651.

Stewardship when considering CAR-T cell therapy

Evaluate	Critically evaluate **formulary additions**
Standardize	Facilitate standardization of **treatment plans** for diseases
Do not shy away	Discuss **financial toxicity** regularly with providers
Promote	Promote interventions that **optimize quality of life**
Encourage	Encourage **rational use** of medications & palliative services

Parallel in Other Tumor Types?

Keytruda

(pembrolizumab)

Pembrolizumab improved survival compared to platinum doublet in PD-L1 >50%

(KEYNOTE 024 trial)

Consistent with other PD-1/PDL-1 targeting products, when expanded to a larger population (ie PD-L1 >1%), pembrolizumab still showed an OS benefit, but clearly driven by the PD-L1 >50% subgroup

KEYNOTE 042: PD-L1 1-49%, no OS benefit.	IMPOWER 110: atezolizumab showed no OS benefit when expanded to >5%, >1%	Checkmate 026: Nivolumab no OS benefit in PD-L1 population >1%.

However, based on the OS benefit in the entire population, FDA approved pembrolizumab for any metastatic NSCLC with PD-L1 >1%

Audience Poll Question #3

The intent of a randomized controlled clinical trial is to establish the best standard of care

A. True
B. False

Mohyuddin, etl al. Lancet Haematol. 2021 Apr;8(4):e299-e304.

Audience Poll Question #3

The intent of a randomized controlled clinical trial is to establish the best standard of care

A. True

B. **False**

Mohyuddin, etl al. Lancet Haematol. 2021 Apr;8(4):e299-e304.

Recognizing Barriers to Stewardship

- Incorrect perception of national guideline role in care
- Incomplete understanding/access to data prior to drug approvals
- Subjective nature of drug use requests
- False belief that providers cannot impact cost of care
- Novel is better mentality

Proposed Stewardship Model

Audience Poll Question #4

Which of the following is the biggest barrier to implementation of oncology stewardship in your practice?

A. Lack of clear guidance on best practice by national guidelines
B. Incomplete understanding/access to data prior to drug approvals
C. Subjective nature of drug use requests (patient progressing in front of me)
D. Other

QUESTIONS?

ADDITIONAL SLIDES

Therapeutic Monopolies

MRSA Bacteremia

Treat with vancomycin

↓

Drug induced AKI, change to linezolid

14 days

Metastatic Colon Cancer

FOLFOX +/-bev

↓

FOLFIRI +/- bev

↓

Capecitabine

↓

Trifluridine + tipiracil

↓

Regorafenib

Until death

Result:
Drug companies **compete** to produce the most effective antibiotic with less ADRs at the best cost

Result:
Less competition because patient will likely need their drug eventually

Siddiqui M, et al. *Mayo Clin Proc*. 2012;87:935-43

BOSTON trial

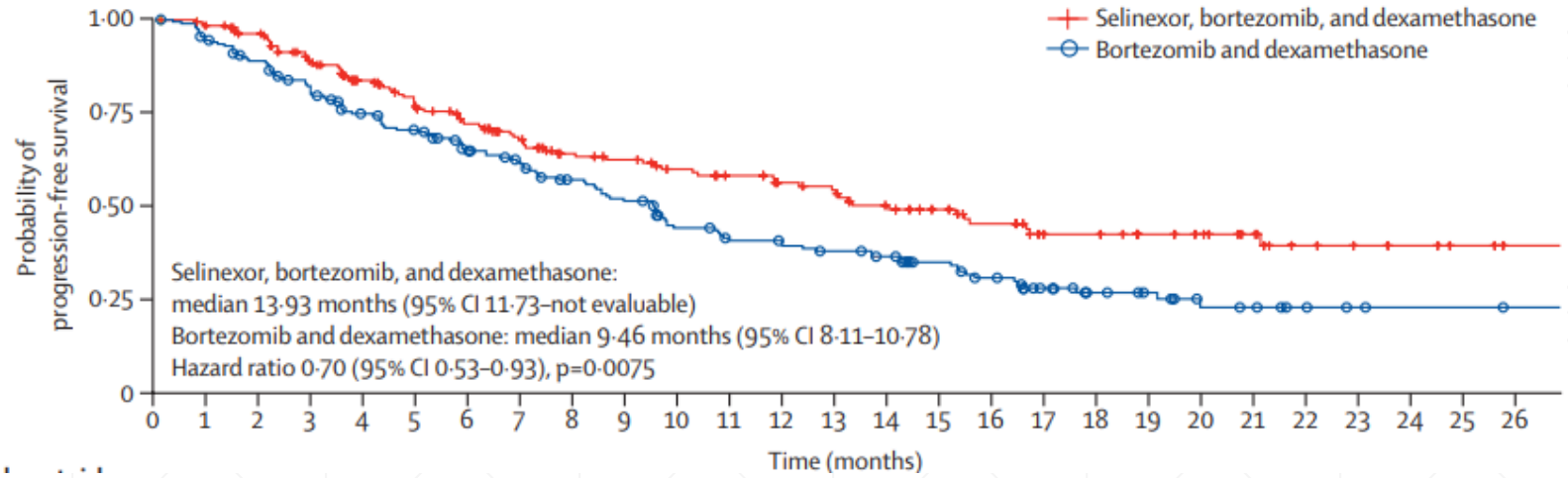
Design

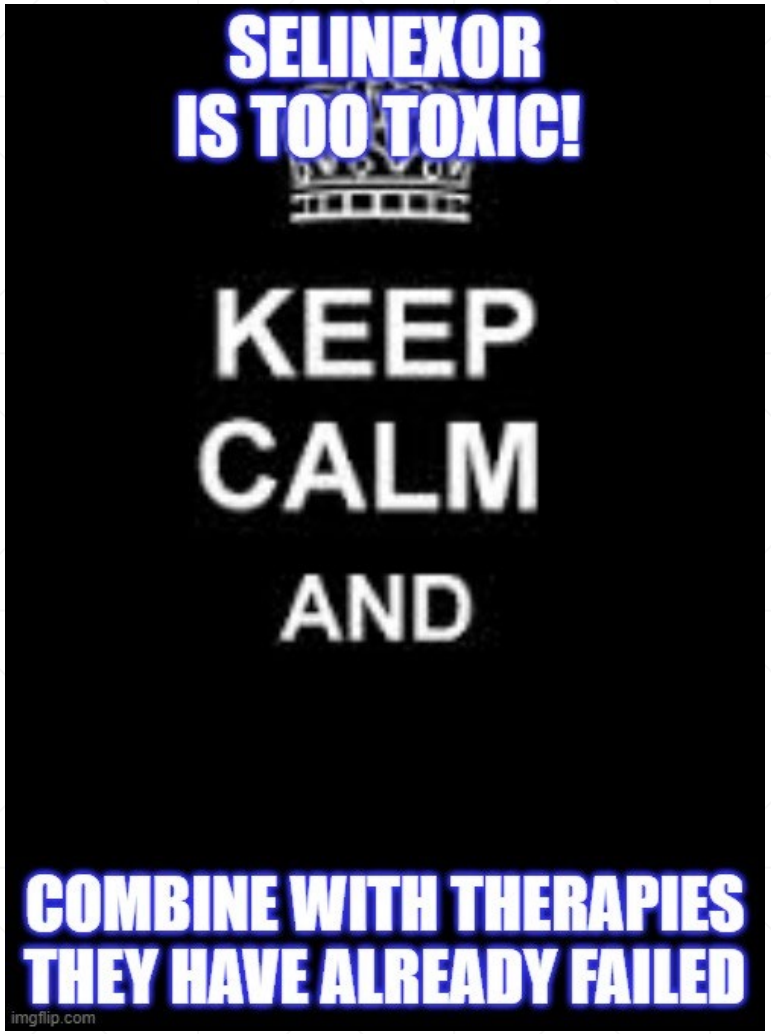
Phase III randomized open label comparison of Selinexor+bortezomib+dex to bortezomib and dex

Patients

402 patients previously treated with 1 (51%), 2 (33%), or **3 (16%)** lines of therapy

"Additional supportive measures were provided at the discretion of the investigator and could include use of olanzapine, megestrol acetate, intravenous fluids, methylphenidate, thrombopoietin stimulating agents, or transfusions."





Grosicki, et al. Lancet. 2020 Nov 14;396(10262):1563-1573.

Chemotherapy for Secondary Acute Myeloid Leukemia

Let's talk about external validity

Clinical Scenario #2 –

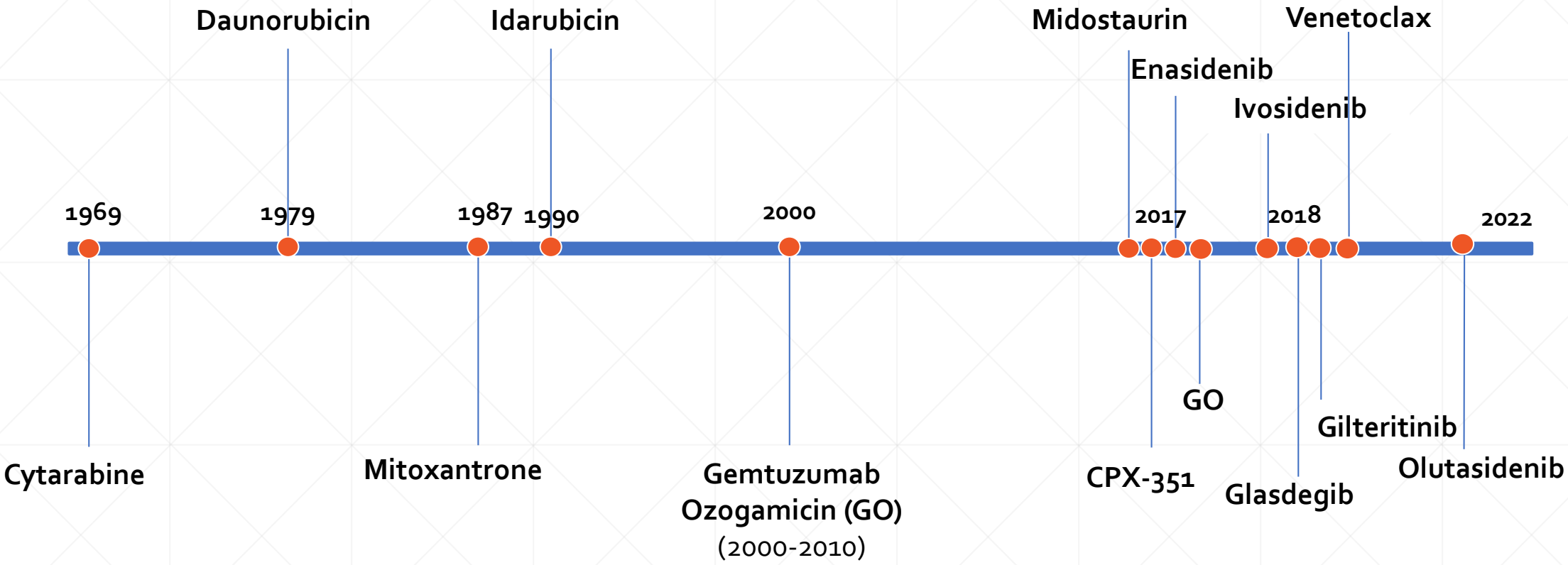
TS is a 62-year-old woman with a prior history of breast cancer and a new diagnosis of acute myeloid leukemia

Relevant Disease Characteristics:

- PMH: ER (+)/ HER (+) stage III invasive ductal carcinoma of right breast 2016 s/p neoadjuvant AC; taxol/Herceptin weekly x12 followed by herceptin to complete one year; right mastectomy 2016; tamoxifen x4 days; and aromasin
- Bone marrow biopsy reveals del 5(q)
- ECOG = 1; Ejection fraction > 50% and allogeneic HCT transplant candidate

What induction therapy would you recommend for TS?

Acute Myeloid Leukemia -Timeline of Drug Approvals



Approval of CPX-351 for sAML

Patients with treatment naïve sAML
(N = 309)

- Related to prior chemotherapy/radiation (t-AML)
- Arising from antecedent hematologic disorder (AML-AHD)

Induction (1-2 cycles)

- **CPX-351*** (n = 153)
- **7+3†** (n = 156)

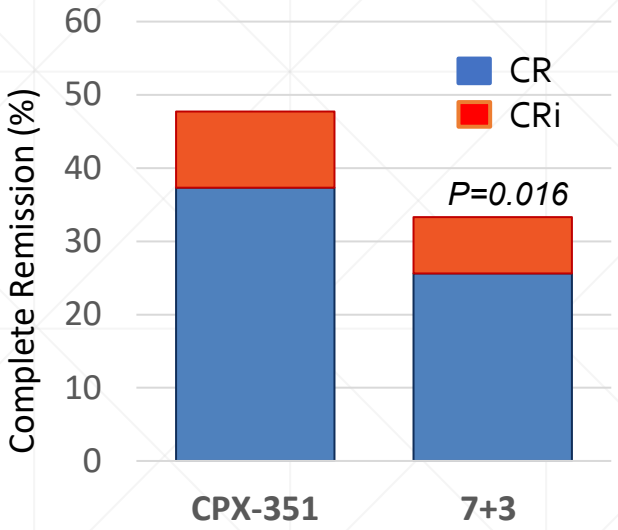
Consolidation (1-2 cycles)

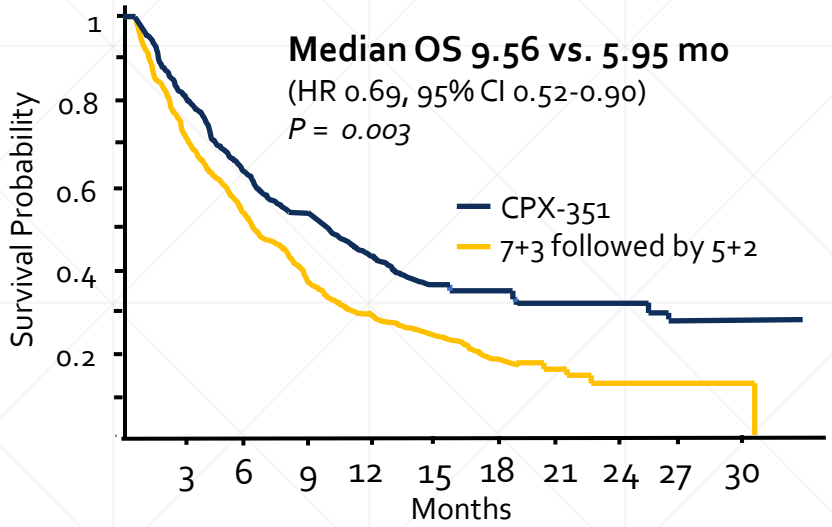
- **CPX-351*** (n = 49)
- **5+2‡** (n = 33)

Allogeneic HCT if eligible

*CPX351: (liposomal daunorubicin-cytarabine in a 5:1 molar ratio) 44mg/m² – 100mg/m² Days 1, 2, 3 induction and 29mg/m²-65mg/m² Days 1 and 3 consolidation
†7+3: daunorubicin 60 mg/m² and cytarabine 100 mg/m2 and reinduction with 5+2 (daunorubicin 60 mg/m² and cytarabine 100 mg/m²) if needed

Phase III multicenter randomized controlled trial | **Primary Outcome: Overall Survival**



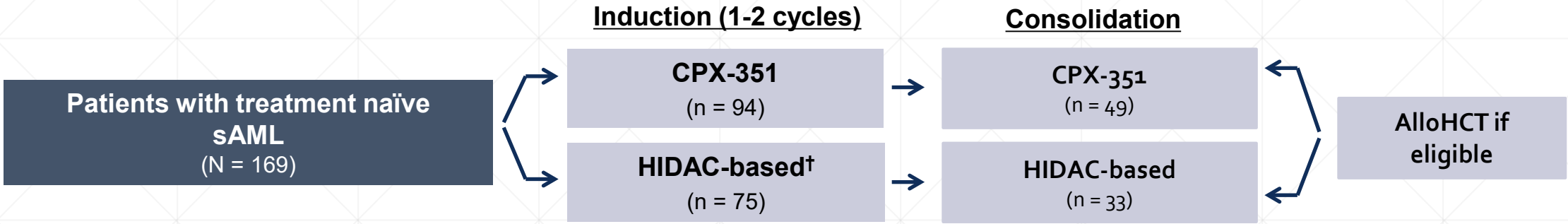


Limitations of Study

- 7+3 may not be best comparator
- Unconventional consolidation strategy

Lancet, et al. *J Clin Oncol*. 2018;36(26):2684-2692.

Comparing HIDAC-based therapy to CPX-351



†HIDAC based regimen: Regimen containing cytarabine at 1,000 mg/m² or greater dose.

Multi-center Retrospective Cohort Study

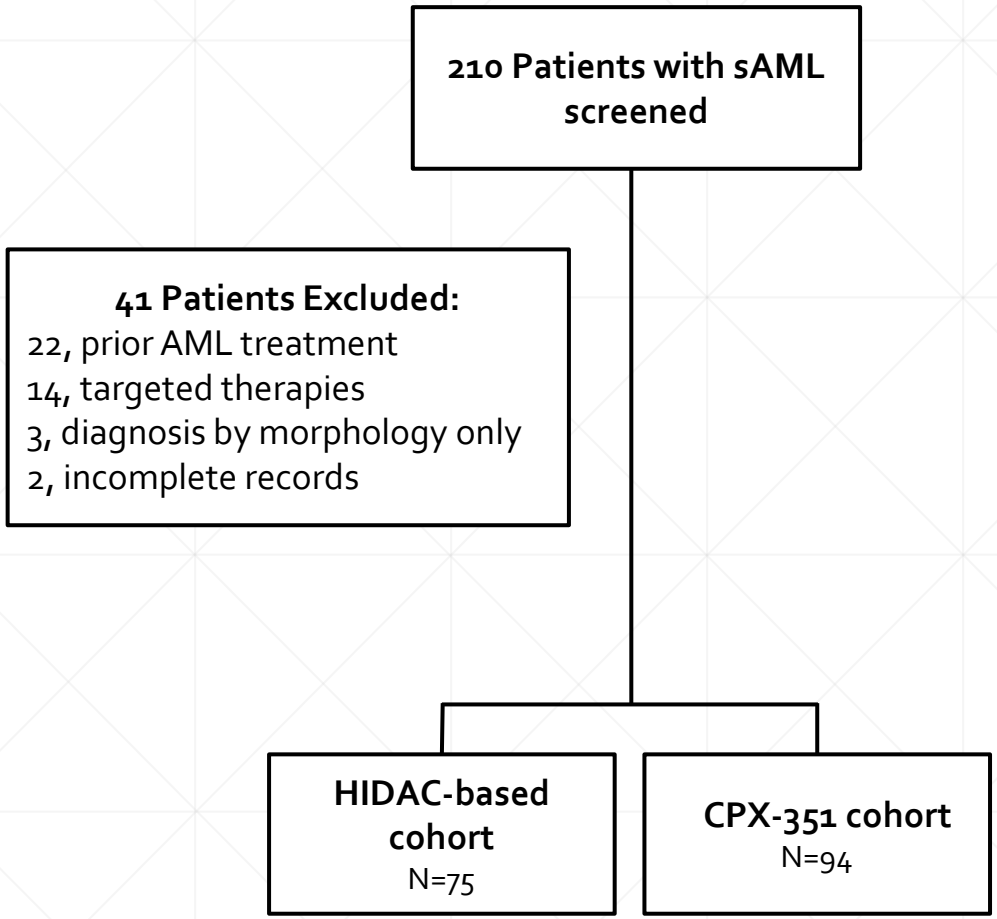
Primary Endpoint:
Complete response/Complete response with incomplete count recovery (CR/CRi)

Non-inferiority design
- CR+CRi for CPX-351: 47.7%
- CR+CRi for FLAG: 63%
- Margin of non-inferiority: 7.5%
  - α =2.5% (one-sided)
  - Power: 80%

Secondary Endpoints:
- Efficacy
  - CR, CRi, MLFS
  - Overall survival (OS)
  - Event-free Survival (EFS)
- Safety
  - 30 and 60-day mortality
  - Neutropenic fever and confirmed infections
  - Chemotherapy related complications

Benitez L, et al.*Leuk Lymphoma*. 2021 Sep;62(9):2184-2192.
Lancet E, et al. *J Clin Oncol*. 2018;36(26):2684-2692.

Participating Centers and Patient Screening



Participating Centers
University of Michigan Health System (n=73)
MD Anderson Cancer Center (n= 27) *Lead Investigator: Caitlin Rausch, PharmD*
Barnes Jewish Hospital (n=22) *Lead Investigator: Jeff Klaus, PharmD*
University of North Carolina (n=11) *Lead Investigator: Stephen Clark, PharmD*
Huntsman Cancer Center (n=9) *Lead Investigator: Kelley Ratermann, PharmD*
University of Rochester (n=9) *Lead Investigator: Carissa Treptow, PharmD*
Indiana University (n=8) *Lead Investigator: Shawn Griffin, PharmD*

Benitez L, et al. *Leuk Lymphoma*. 2021 Sep;62(9):2184-2192.

Patient Characteristics & Efficacy Outcomes

Patient and Disease Characteristics	HIDAC-based (n= 75)	CPX-351 (n = 94)	*P*
Age, yrs[1]	67 (27-82)	66.5 (31-80)	0.919
Gender, female[2]	31 (41.3)	32 (34)	0.330
sAML Etiology[2]			
AHD	42 (56)	50 (53.2)	0.716
t-AML	24 (32)	27 (28.7)	0.645
AML-MRC without AHD	9 (12)	17 (18)	0.276
Cytogenetic Risk[2]			
Favorable	1/73 (1.4)	3/92 (3.3)	0.631
Intermediate	19/73 (26)	30/92 (32.6)	0.394
High	53/73 (72.6)	59/92 (64.1)	0.314
HIDAC-based regimen	FLA/G n=73 CLA/G n=2	-	-

[1]median (range) [2]n (%) *n=71 **n=72 †if received for AHD

	HIDAC-based (n= 75)	CPX-351 (n = 94)	P
CR/CRi[2]	47 (62.7)	45 (47.9)	**0.002**
CR	37 (49.3)	39 (41.5)	0.352
CRi	10 (13.3)	6 (6.4)	0.125
No response	27 (36)	35 (37.2)	0.869
AlloHCT[2]	30 (40)	(30.9)	0.215

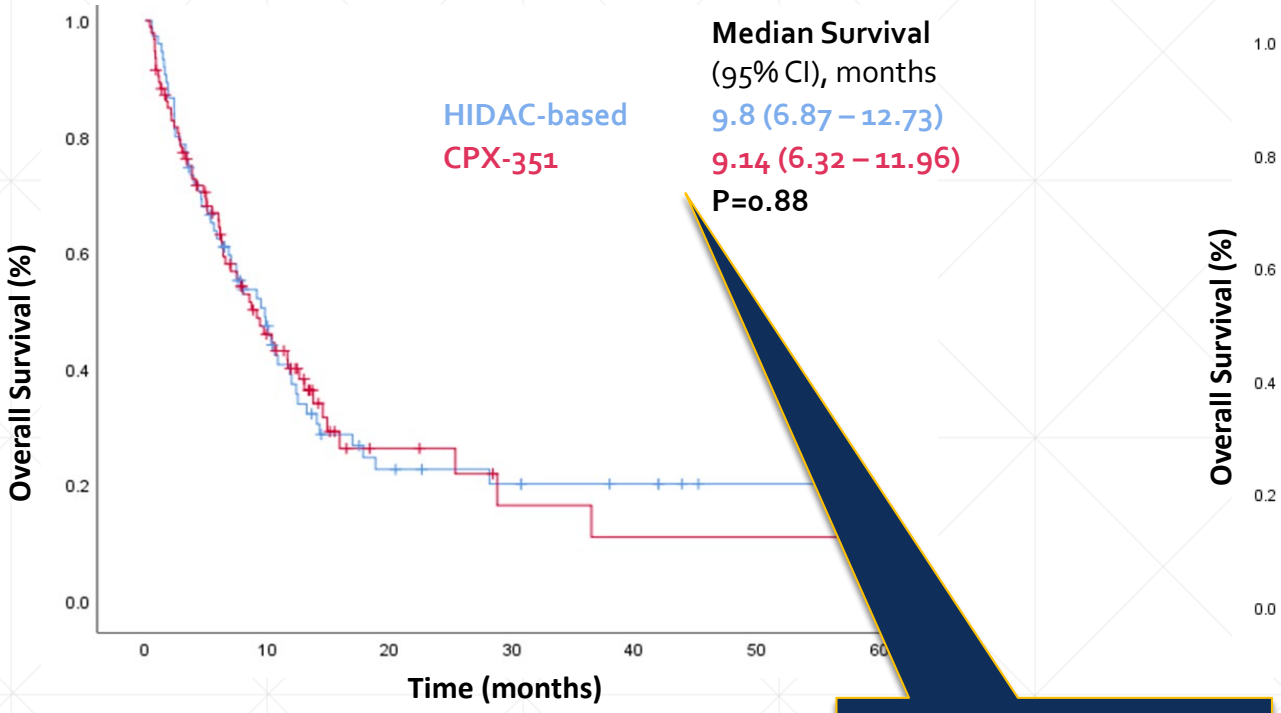
[1]median (range) [2]n (%)

Rates consistent with previously reported data in Phase III trial

Benitez L, et al.*Leuk Lymphoma*. 2021 Sep;62(9):2184-2192.

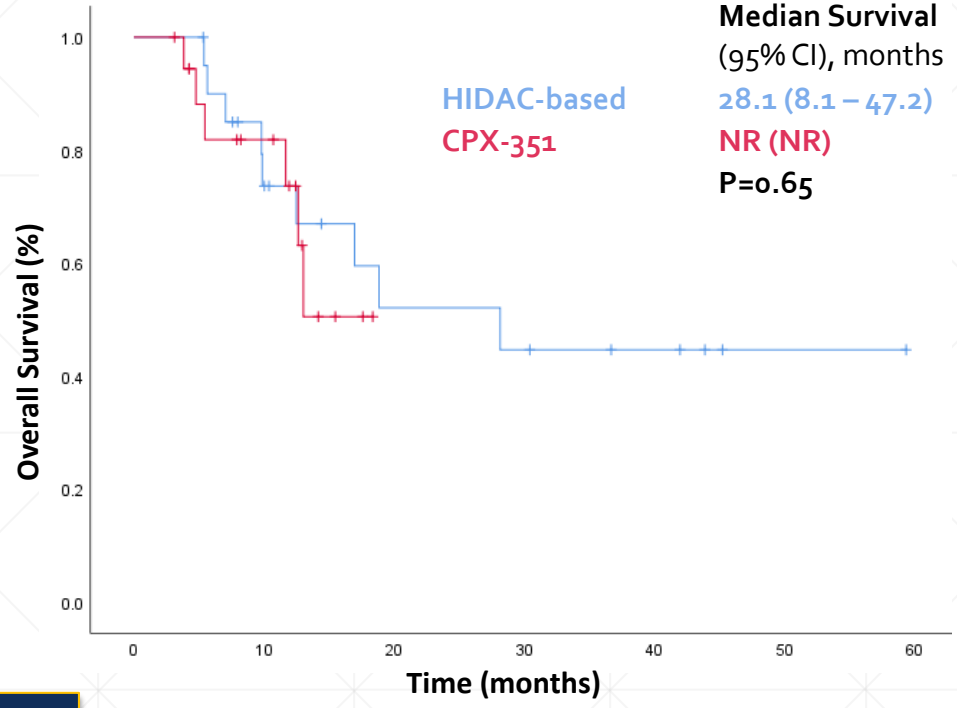
Long Term Outcomes: Overall Survival

Survival in all Patients



Survival consistent with previously reported data in Phase III trial

Patients Proceeding to AlloHCT in First CR/CRi



Benitez L, et al.*Leuk Lymphoma*. 2021 Sep;62(9):2184-2192.

Safety Outcomes

	HIDAC-based (n= 75)	CPX-351 (n = 94)	P-value
Days to ANC recovery (1000) in CR/CRi[1]	18 (9-67)	35.5 (25-95)	**<0.001**
Days to PLT recovery (100) in CR/CRi[1]	23 (17-112)	37.5 (25-95)	**<0.001**
ICU admission in induction[2]	11 (14.7)	23 (24.5)	0.114
Mortality During Induction[2]	5 (6.7)	11 (11.7)	0.267
30-day mortality[2]	1 (1.3)	8 (8.5)	0.039
60-day mortality[2]	8 (10.7)	13 (13.8)	0.536
Neutropenic Fever during induction[2]	64 (85.3)	87 (92.6)	0.131
Confirmed Infection in Induction[2]	42 (56)	70 (74.5)	**0.012**
New onset LVEF < 50%[2]	4 (5.3)	11 (11.7)	0.148
AKI[2]	9 (12)	13(13.8)	0.750
Other Complications[2]	4 (5.3)	3 (3.2)	0.488

[1]median (range) [2]n (%)

Benitez L, et al.*Leuk Lymphoma*. 2021 Sep;62(9):2184-2192.

Summarizing What We Know

01. Efficacy

- **Non-inferior CR/CRi rates with HIDAC-based therapy**
- **Similar long-term outcomes (EFS and OS)**
- **No benefit signal for CPX in any subgroup analyzed**

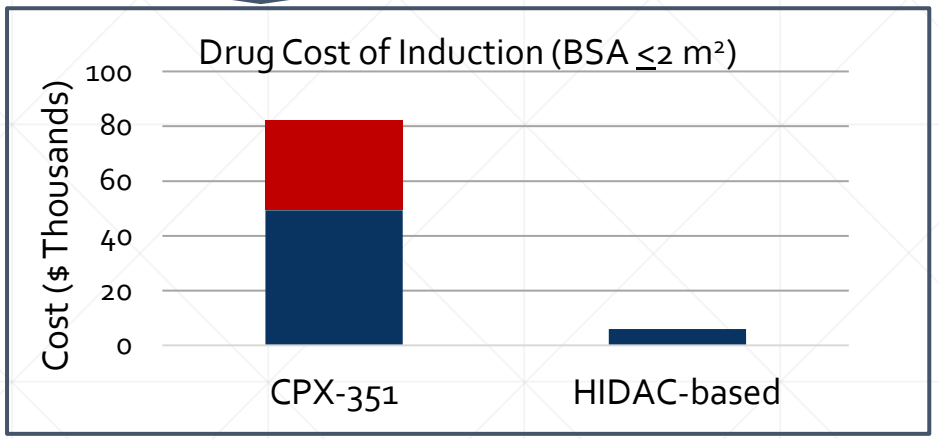
02. Toxicity

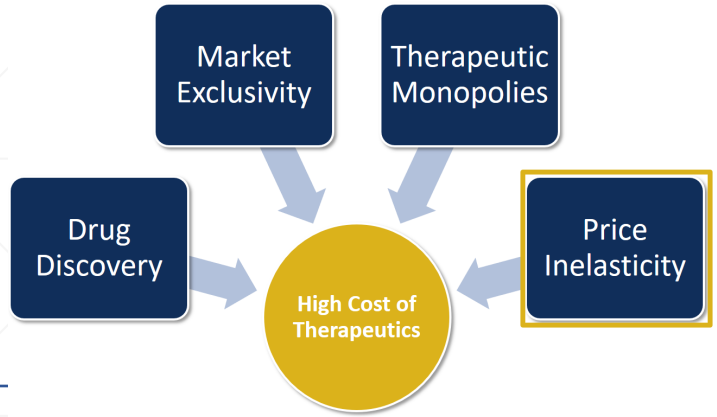
- **Longer time to hematologic recovery with CPX-351**
- **Higher rate of death in first 30-days with CPX-351**
- **Higher rate of confirmed infections with CPX-351**

"Normal markets wouldn't behave like this, you couldn't introduce something ~~twice~~ eight times! as expensive and no better and still sell it."

-Adapted from Dr. Peter Bach ziv-aflivercept commentary

03. Cost

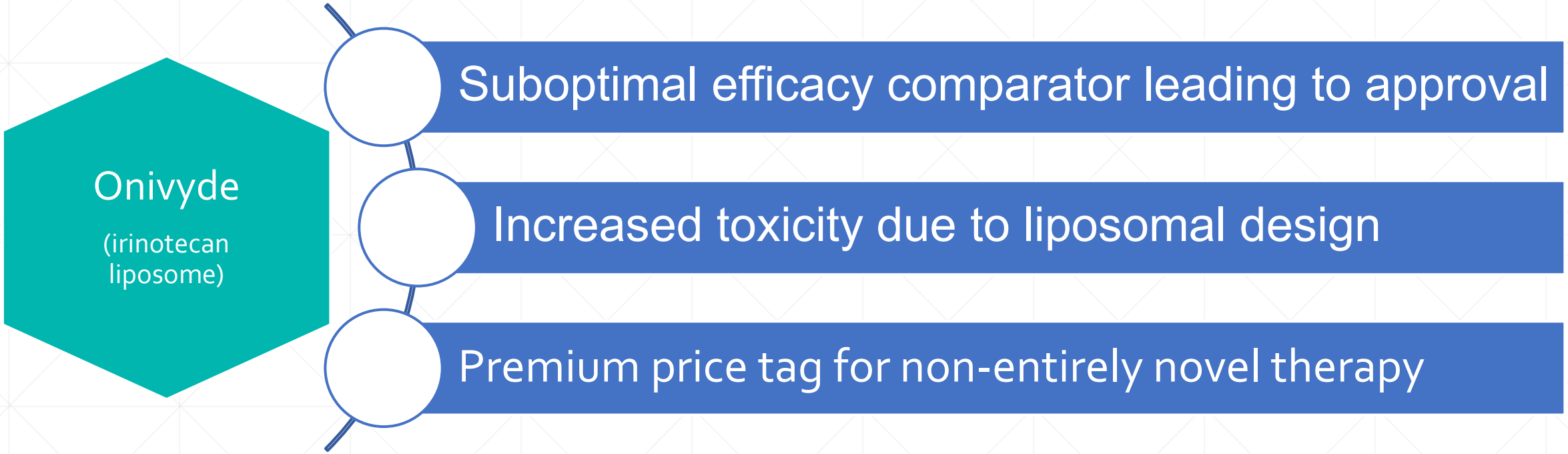




Stewardship in sAML -

Evaluate	Critically evaluate **formulary additions**
Standardize	Facilitate standardization of **treatment plans** for diseases
Do not shy away	Discuss **financial toxicity** regularly with providers
Promote	Promote interventions that **optimize quality of life**
Encourage	Encourage **rational use** of medications & palliative services

Parallels in other Tumor Types?



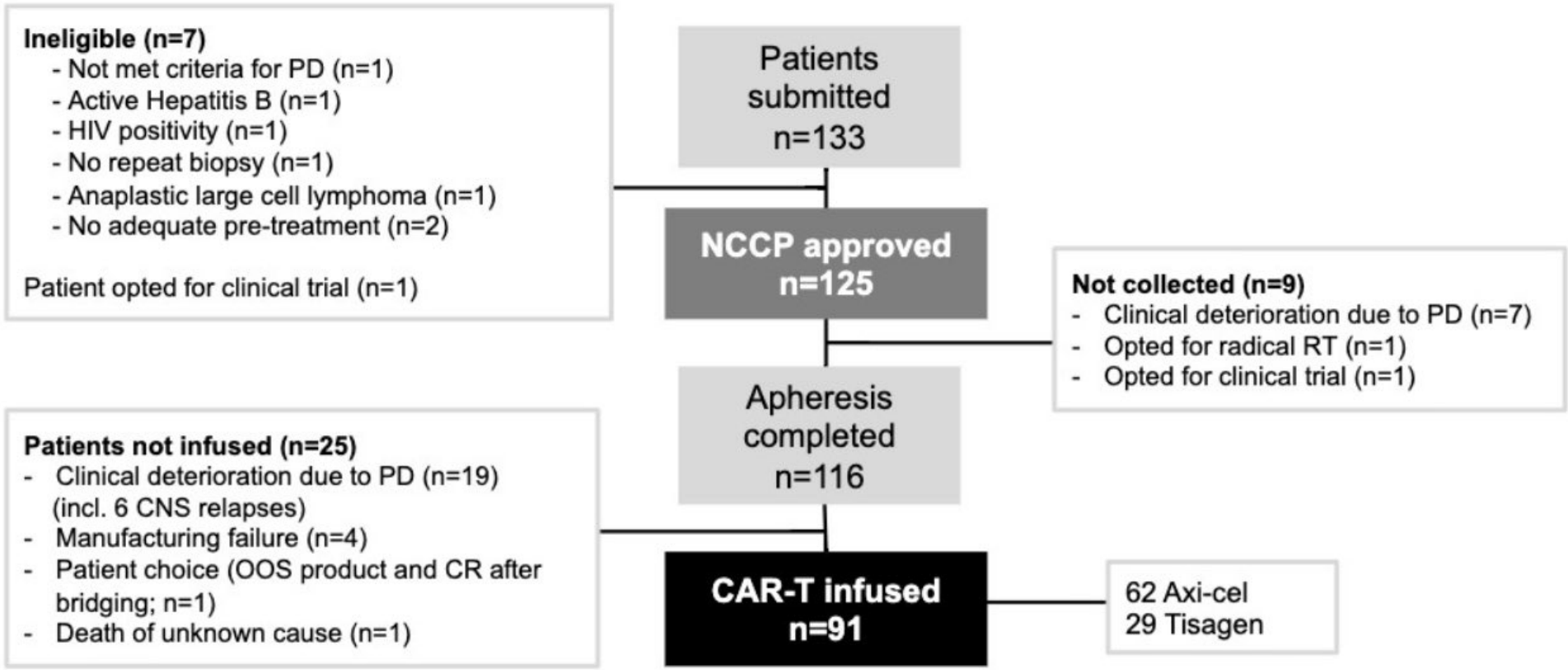
Wang-Gillam, et al Lancet. 2016;387(10018):545-557.

Patient Characteristics in Trials

Baseline Characteristics		Yescarta (ZUMA-1) (n=101)	Kymriah (JULIET) (n=111)
Age		58 (23 – 76)	56 (22 – 76)
% ≥ 65 yo		24 (24%)	25 (23%)
Disease subtype	DLBCL FL or PMBCL	77 (76%) 24 (24%)	88 (79%) 23 (21%)
ECOG score	0 1	42 (42%) 59 (58%)	61 (55%) 50 (45%)
Disease stage	I/II III/IV	15 (15%) 86 (85%)	27 (24%) 84 (76%)
≥ 3 prior therapies		70 (69%)	57 (52%)
Refractory to 2nd line		78 (77%)	61 (55%)
Relapse after ASCT		21 (21%)	54 (49%)
CD19(+) status		74/82 (90%)	-
Bridging therapy?		No	Yes

Neelapu et al, *NEJM* 2017; 377:2531-2544
Schuster et al, *NEJM* 2019; 380:45-56

Real-World CAR T Cell Data



Most patients (~84%) received bridging therapy prior to CAR T infusion

- Median time to CAR T cell infusion = 63 days

Kuhnl et al. *Blood* (2019) 134 (Supplement_1): 767.

MOQCLink Launch
Data Reporting

David Dickinson

Shannon Li

Sonia John

Arbor Research Collaborative for Health

Arbor Research Team supporting MOQC

David Dickinson

Shannon Li

Sonia John

Shengqian Li

Michael Lipham

Brandon Rogers

THE CHILDHOOD LIVER DISEASE RESEARCH NETWORK

CureGN
Cure Glomerulonephropathy Network

neptune
Nephrotic Syndrome Study Network

DOPPS
Dialysis Outcomes and Practice Patterns Study

PRECEDE
Pancreatic Cancer Early Detection Consortium

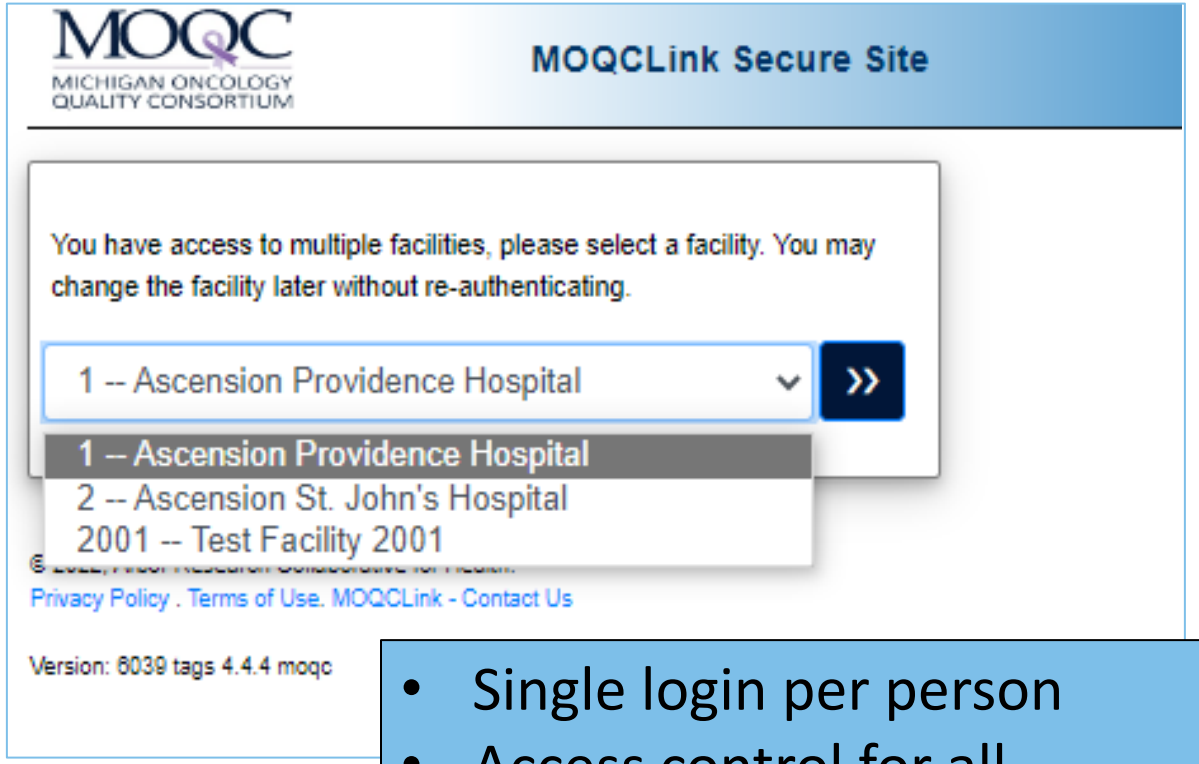
A2ALL
Adult to Adult Living Donor Liver Transplantation Cohort Study

RELIVE
Renal and Lung Living Donors Evaluation Study

MEDIC
Michigan Emergency Department Improvement Collaborative

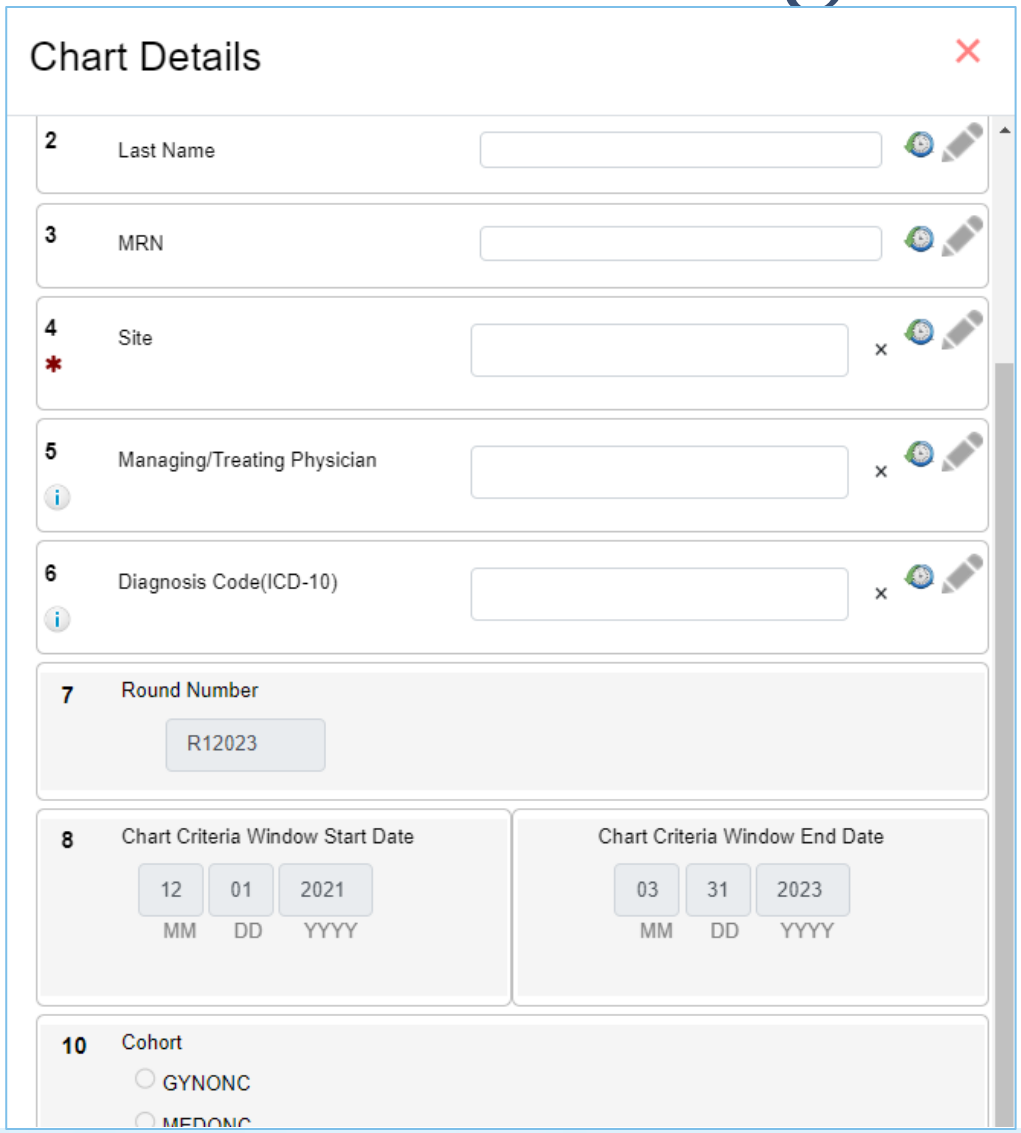
LURN
Symptoms of Lower Urinary Tract Dysfunction Research Network

MOQCLink - Login



- Single login per person
- Access control for all "authorized sites"

Building the Chart Roster



Round Number	Chart abstraction date range	Chart criteria window
R12022	Jan 1 2022- June 30 2022	12/01/2020 - 03/31/2022
R22022	July 1 2022 - December 31 2022	06/01/2021 - 09/30/2022
R12023	Jan 1 2023- June 30 2023	12/01/2021 - 03/31/2023
R22023	July 1 2023 - December 31 2023	06/01/2022 - 09/30/2023

- Round calculated:
  based on chart abstraction date
- Visit date valid range
  based on round number
- Cohort (GynOnc vs MedOnc)
  based on Dx code

Future: import of chart abstraction lists per site

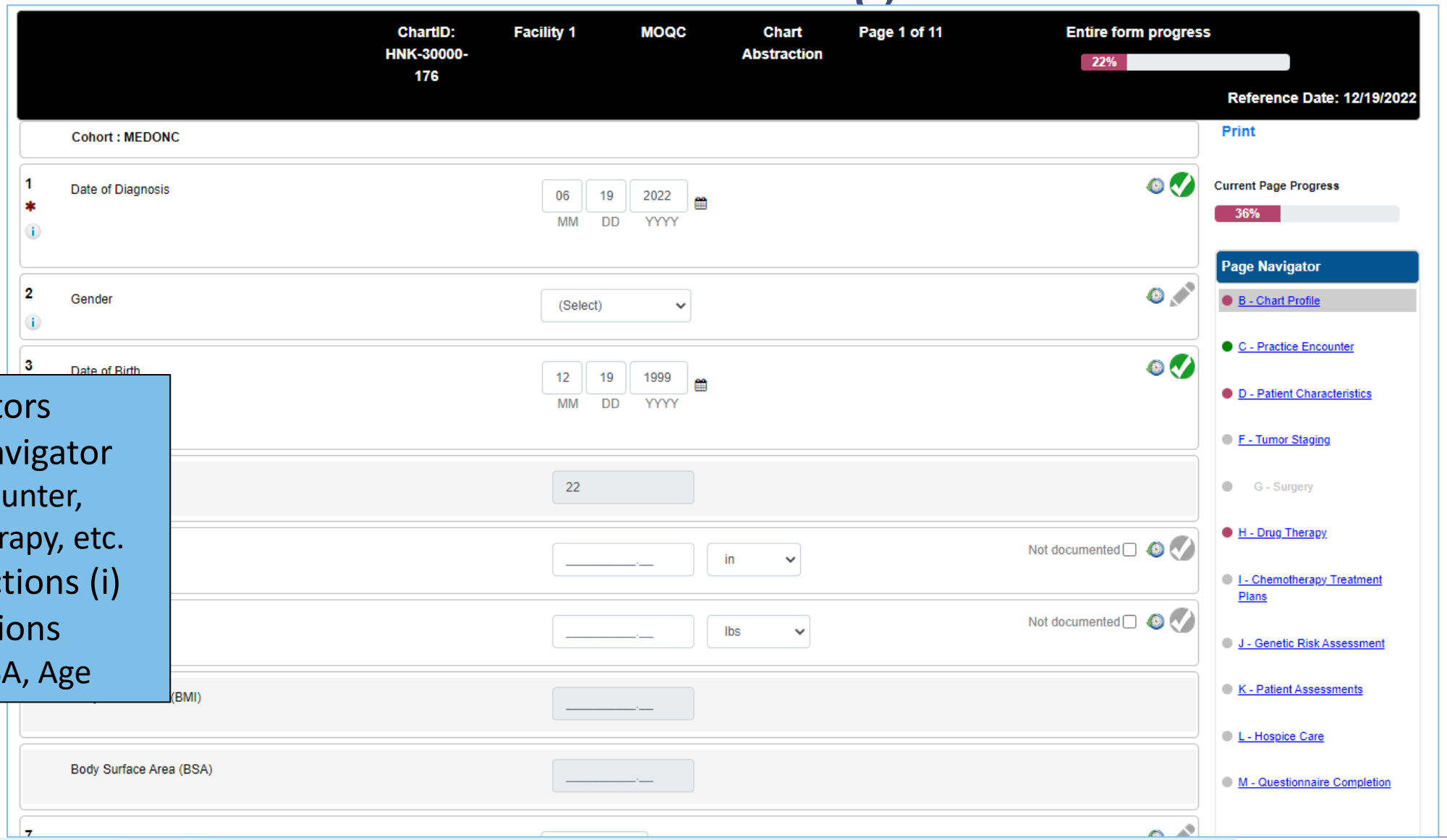
Chart Abstraction Grid

- PII Encrypted
- Delete/edit links
- Filter/search
- Sort (default to newest)
- Print/Export

Edit	Chart ID	Round Number	Diagnosis Code	Site Name	MRN	Patient First Name	Patient Last Name	Chart Abstraction Form	Created By	Created Date	Mod B			
	HNK-30000-177	R22022	C00 | Malignant neoplasm of lip	Muskegon	1312213	Sonia	1220	Edit	sjohn	12/20/202	ddickinson	01/06/202	Submitted	
	HNK-30000-176	R22022	--	Lemmen Holton Cancer Pavillion	432423	test	1219	Edit	sjohn	12/19/202	ddickinson	01/06/202	In Progress	
	HNK-30000-141	R22022	C00.9 | Malignant neoplasm of lip, unspecifiec	Muskegon									s	

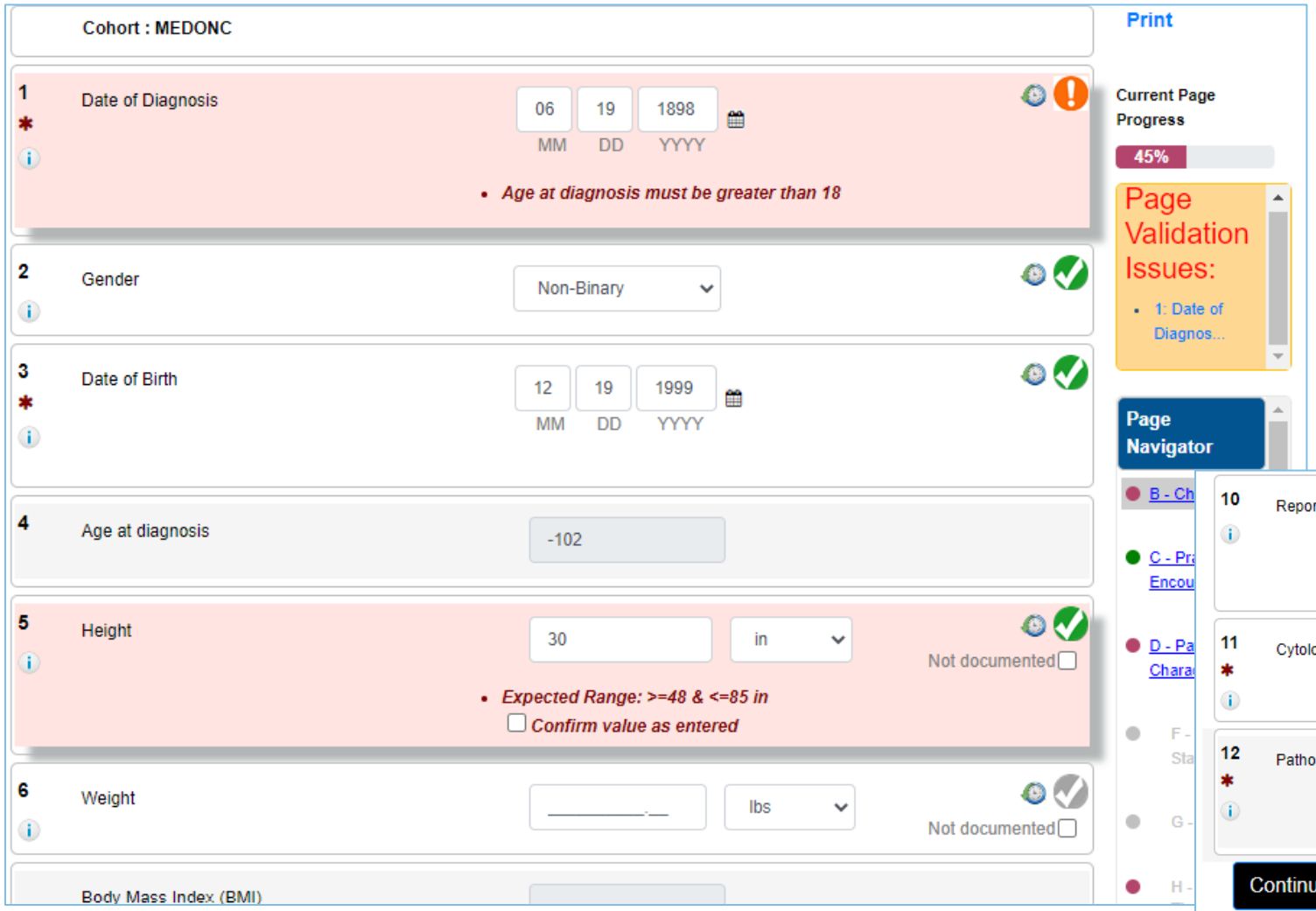
Diagnosis Code	Site Name	MRN	Patient First Name	Patient Last Name	Chart Abstraction Form	Created By
C00 | Malignant neoplasm of lip	Muskegon	Or89915r...	M2QyGyUo...	muUP8/QU...	Edit	sjohn
--	Lemmen Holton Cancer Pavillion	+LiYkIJM...	9wFYV7vG...	w4RsvPTn...	Edit	sjohn
C00.9 |	Muskegon	eKuDGcS4...	Vj9VKQ0B...	5hmxV4Kl...	Edit	sjohn

Chart Abstraction Navigation



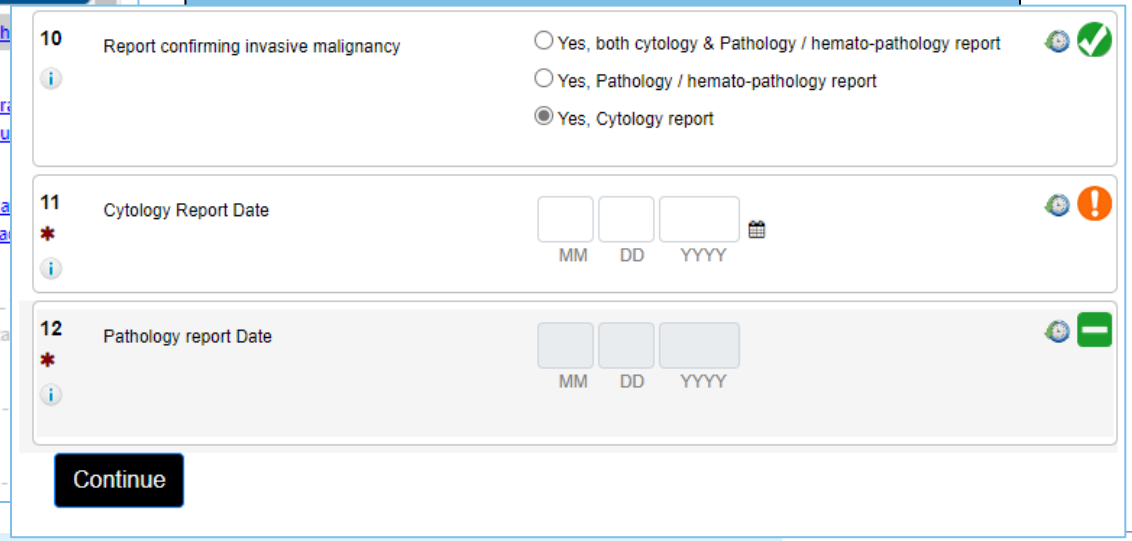
- Progress indicators
- Page/section navigator
  - Profile, Encounter, Staging, Therapy, etc.
- Detailed instructions (i)
- Display calculations
  - e.g., BMI, BSA, Age

Data Quality and Suppression



- Date validations
- Range Checks
- Cross checks
- Hard stop (error) and Soft stop (warning/confirm)
- Suppress unneeded fields

When possible, identify errors in real time while chart is available

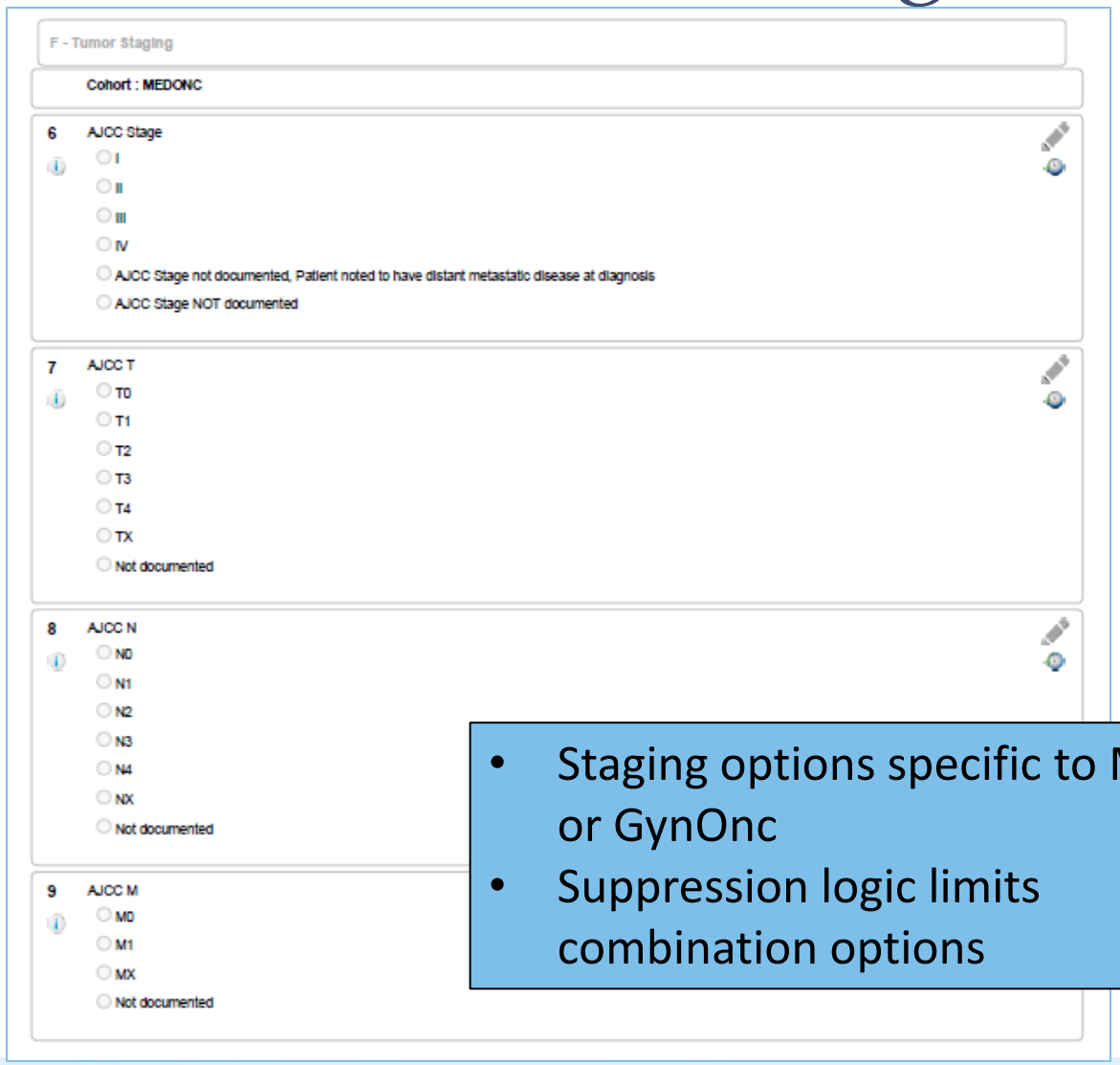


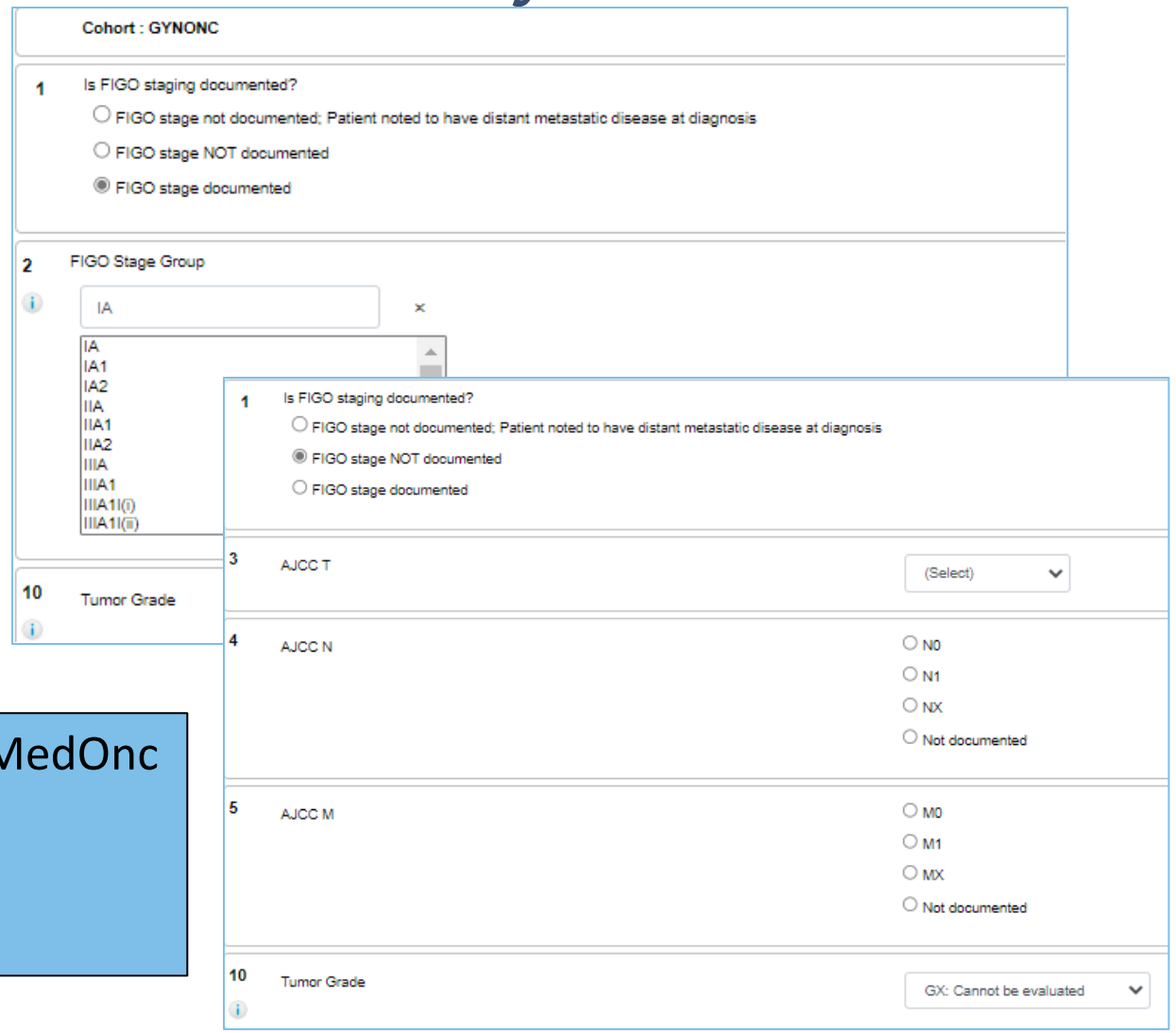
ARBOR RESEARCH COLLABORATIVE FOR HEALTH

MOQCLink (arborresearch.org)

MOQC MICHIGAN ONCOLOGY QUALITY CONSORTIUM

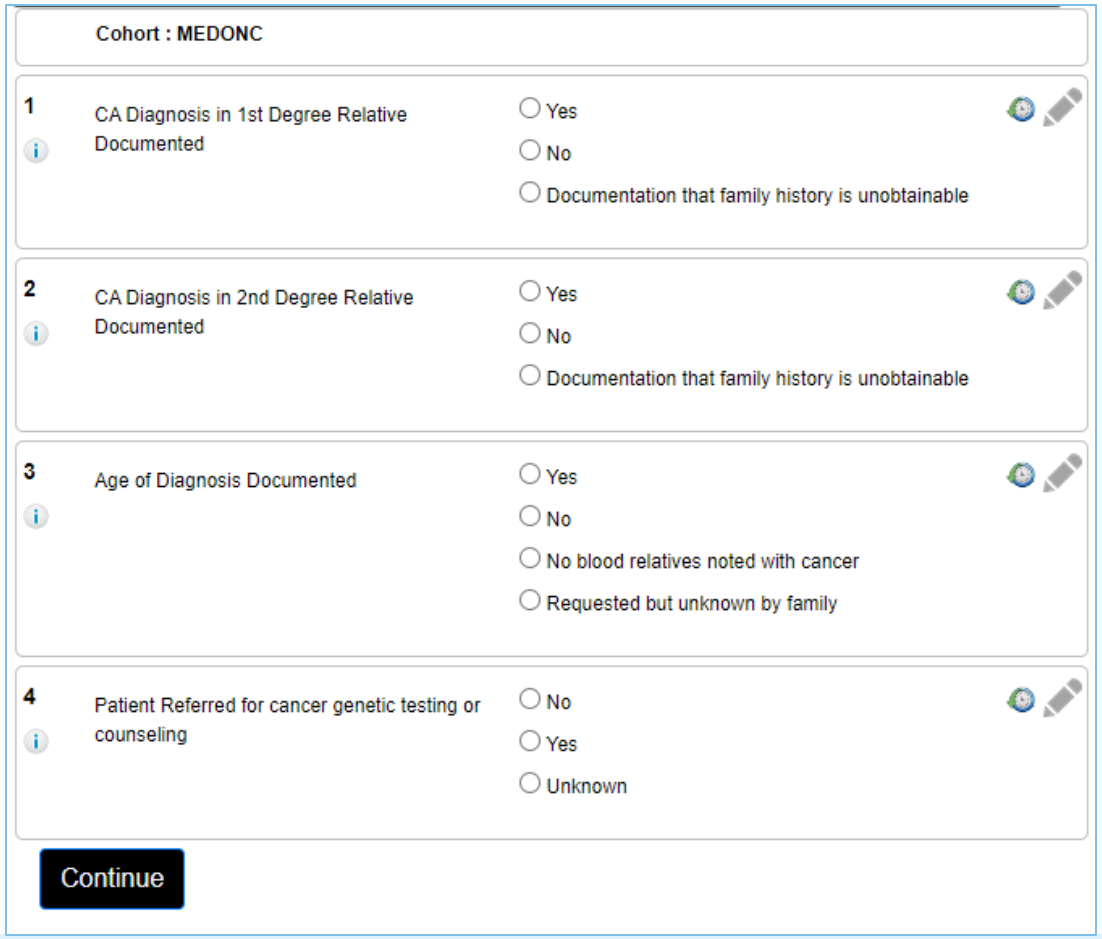
Tumor Stage: MedOnc v. GynOnc



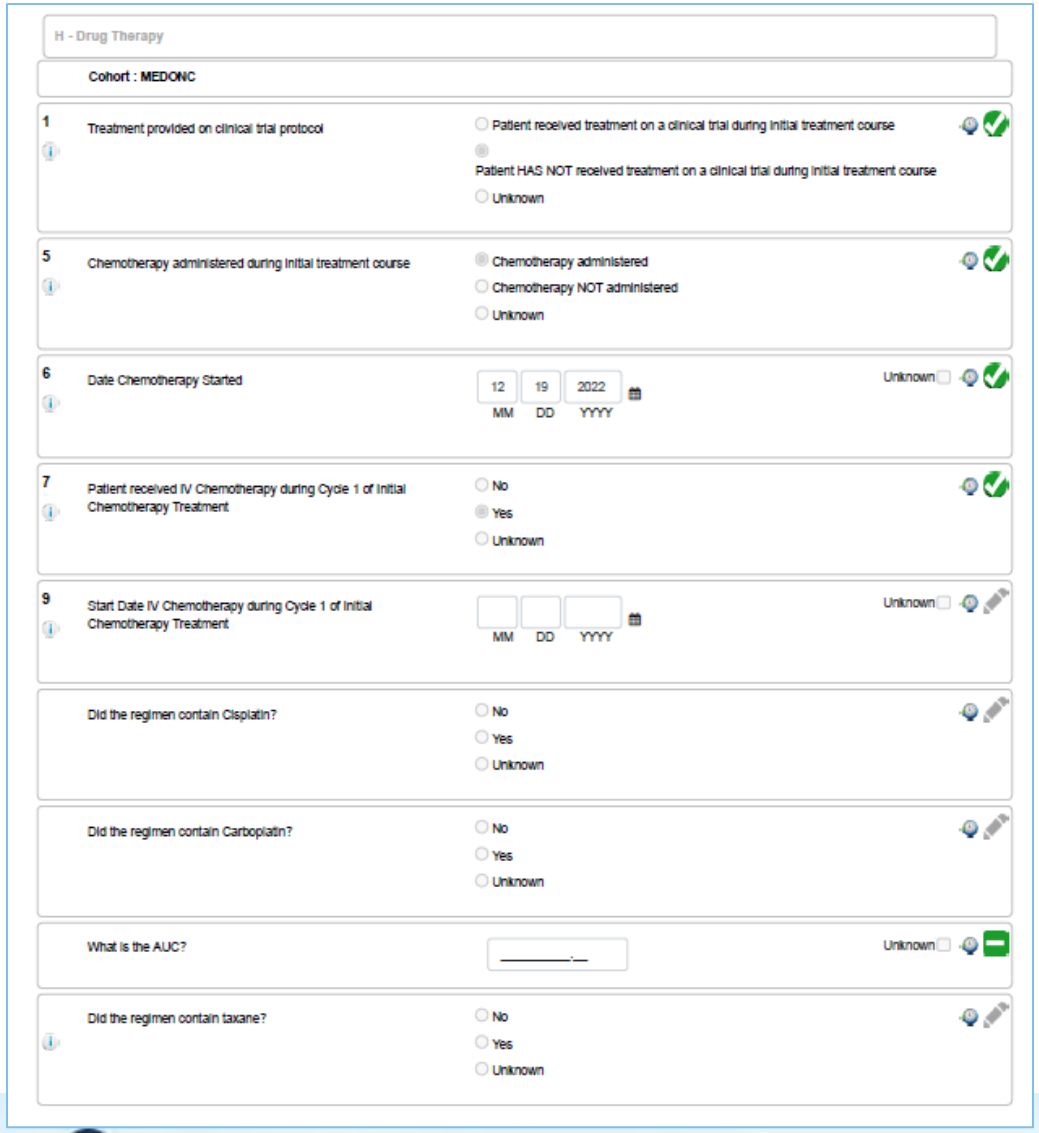


- Staging options specific to MedOnc or GynOnc
- Suppression logic limits combination options

Race/Ethnicity Family History



Drug Therapy and Chemo Treatment Plan


H - Drug Therapy

Cohort : MEDONC

1 Treatment provided on clinical trial protocol
- Patient received treatment on a clinical trial during initial treatment course
- Patient HAS NOT received treatment on a clinical trial during initial treatment course
- Unknown

5 Chemotherapy administered during initial treatment course
- Chemotherapy administered
- Chemotherapy NOT administered
- Unknown

6 Date Chemotherapy Started — 12 (MM) 19 (DD) 2022 (YYYY) — Unknown

7 Patient received IV Chemotherapy during Cycle 1 of Initial Chemotherapy Treatment
- No
- Yes
- Unknown

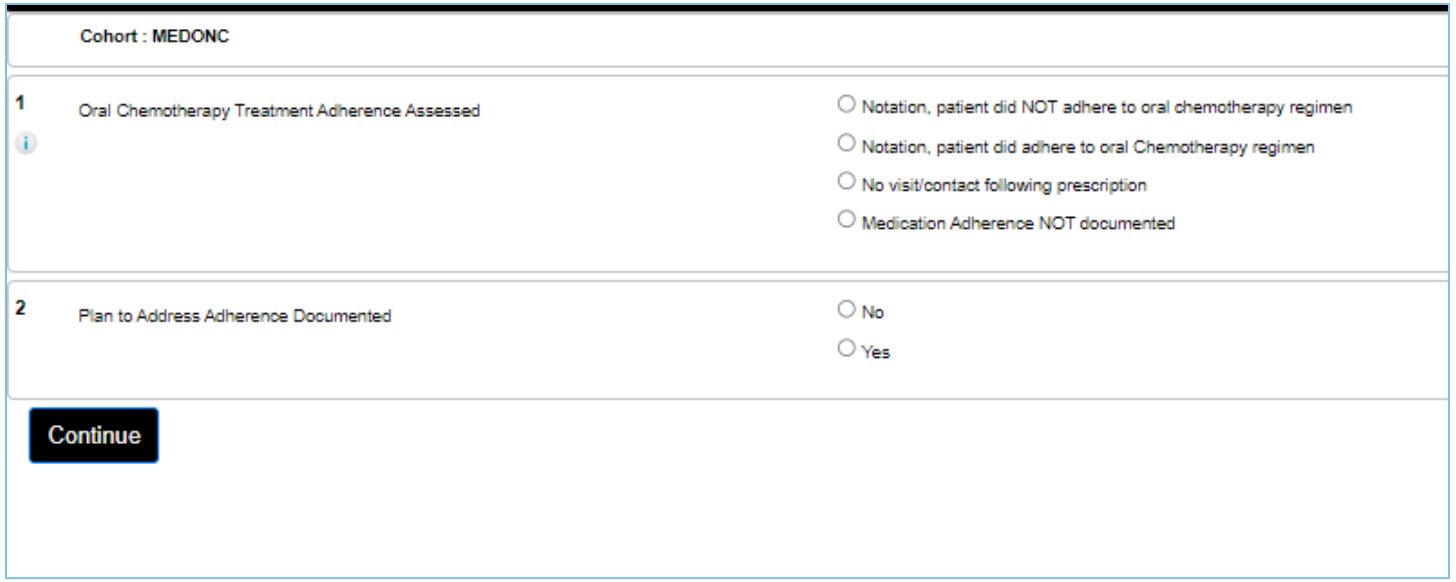
9 Start Date IV Chemotherapy during Cycle 1 of Initial Chemotherapy Treatment — MM DD YYYY — Unknown

Did the regimen contain Cisplatin?
- No
- Yes
- Unknown

Did the regimen contain Carboplatin?
- No
- Yes
- Unknown

What is the AUC? _____.__ — Unknown

Did the regimen contain taxane?
- No
- Yes
- Unknown


Cohort : MEDONC

1 Oral Chemotherapy Treatment Adherence Assessed
- Notation, patient did NOT adhere to oral chemotherapy regimen
- Notation, patient did adhere to oral Chemotherapy regimen
- No visit/contact following prescription
- Medication Adherence NOT documented

2 Plan to Address Adherence Documented
- No
- Yes

Continue

Roles and Information Access

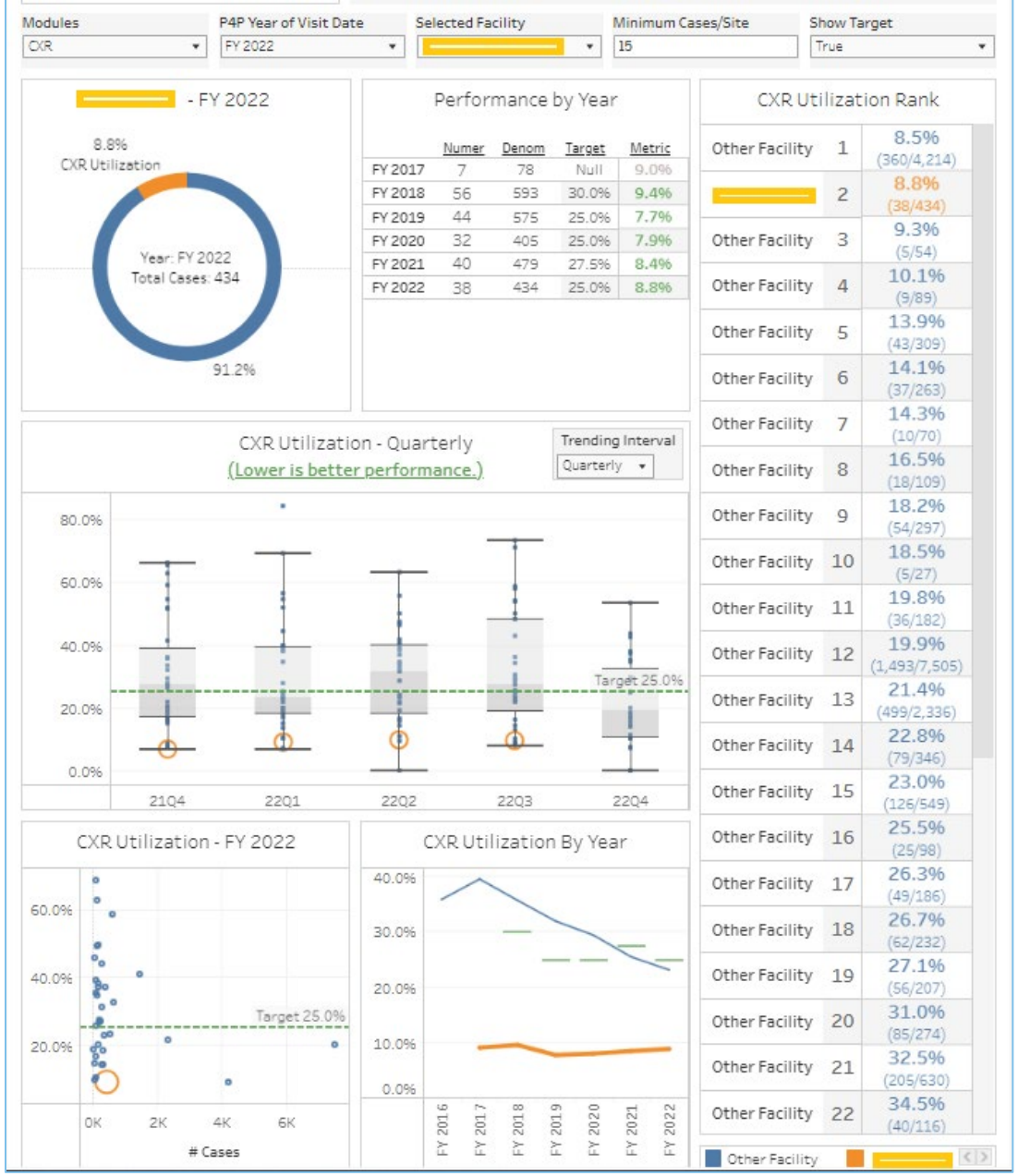
	Create, Edit, Delete Charts	Add, Edit, Delete MOQCLink Users	View Charts	(Reports) View calculated measures, with patient detail	(Reports) View calculated measures, aggregated to provider/site
Abstractors	Yes			Yes (for their practices)	Yes (other practice names blinded)
Practice Managers			Yes	Yes (for their practices)	Yes (other practice names blinded)
Physicians	(no Link Access)			Yes (for their cases)	Yes (blinded of other practices & physicians)
Physician Champions	(no Link Access)			Yes (for their practices)	Yes (other practice names blinded)

2022 Round 2:
Our first MOQC Link Abstraction!

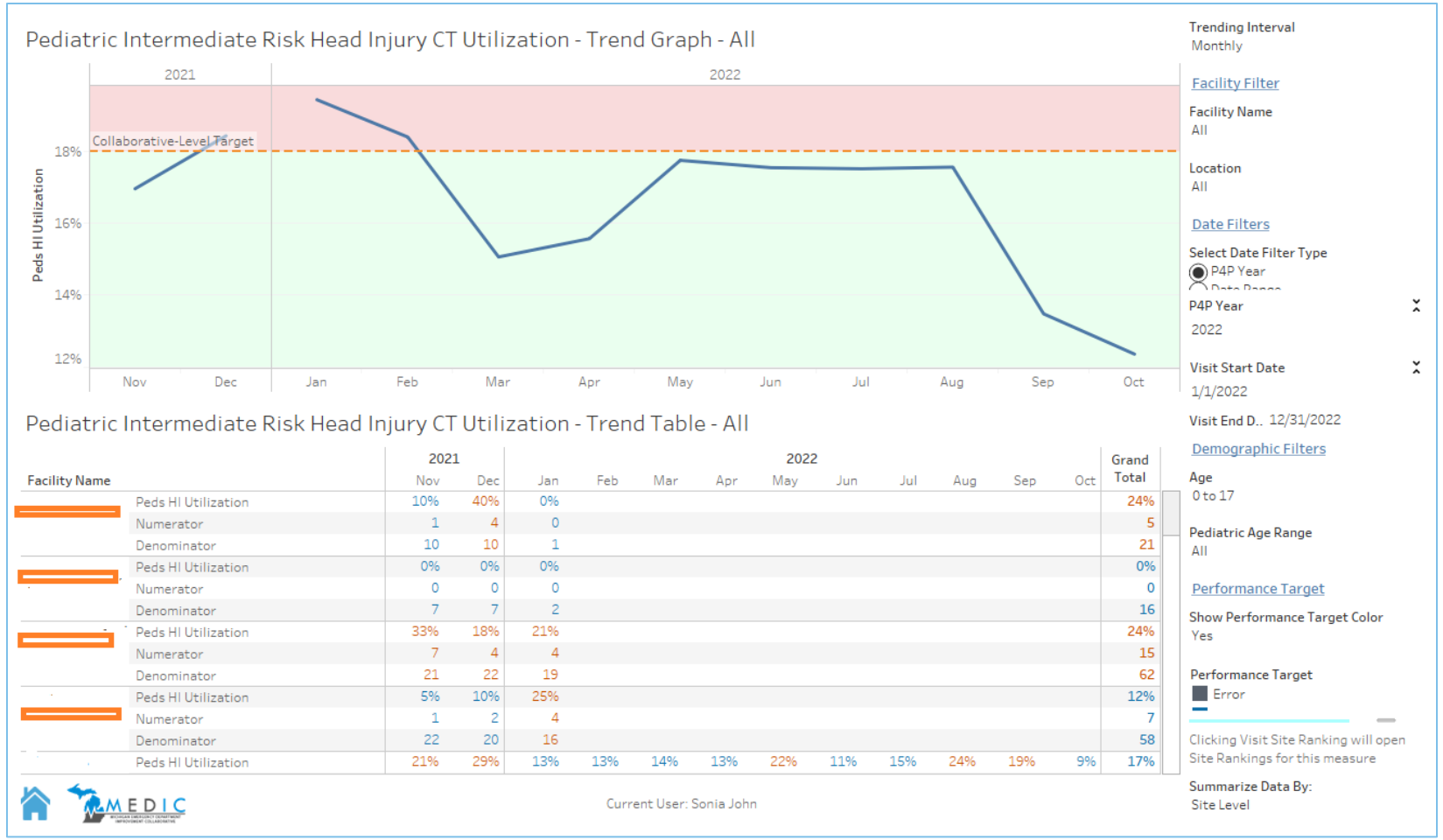
- Chart abstractions: 574
- Practices: 7
- Abstractors: 9
- Total data fields: 51,559
- Both QOPI and MOQC link –
  - some overlap for data validity checks

Tableau Reporting!

- Consortium/abstraction progress
- Calculation of measure attainment
- Track how the consortium is reaching measures, over time; also by
  - Provider/site
  - Physician
- Available to all stakeholders
  - Physicians, Champions, Practice Managers, DCC
- Permissions reflect appropriate aggregation/deidentification



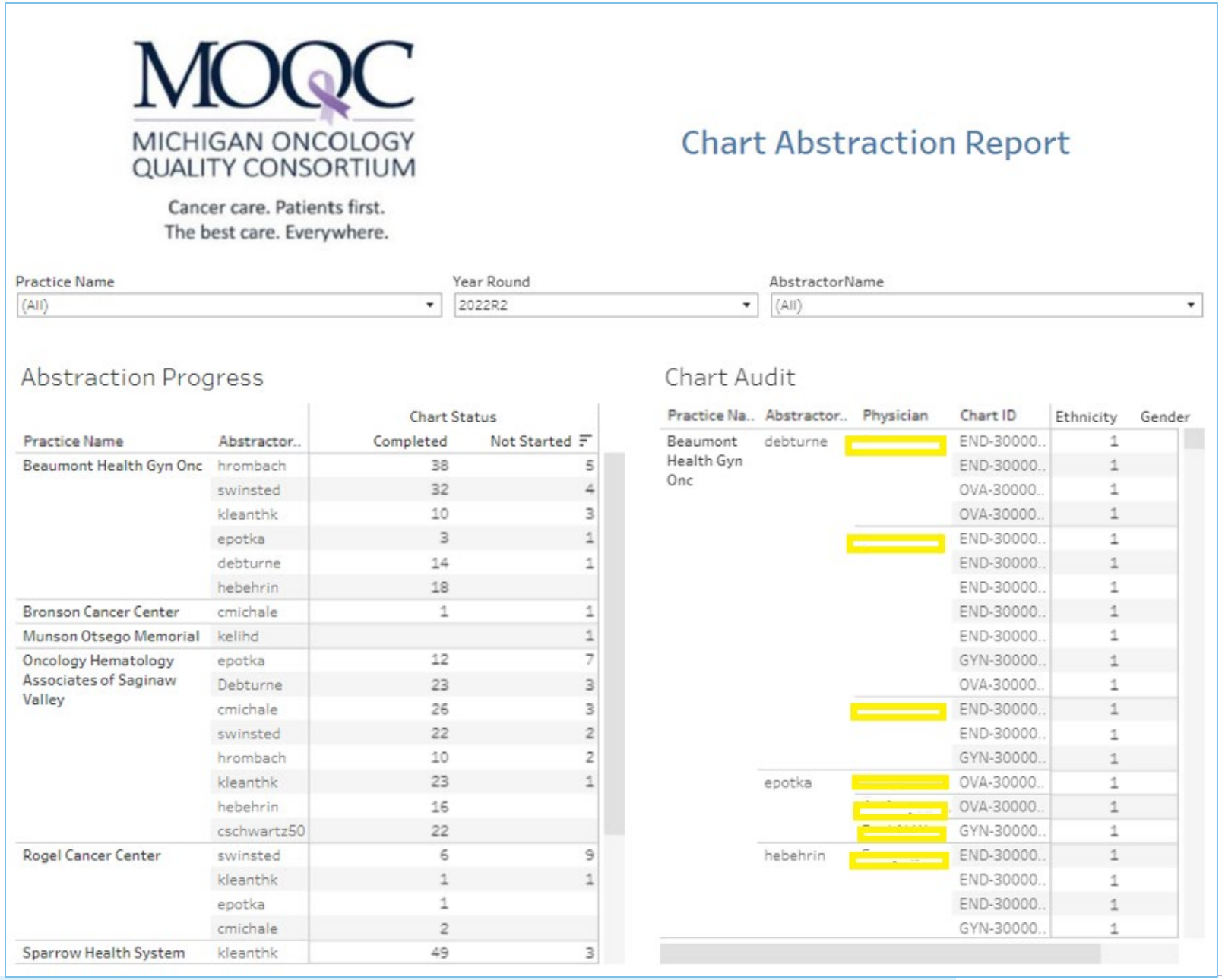
Trends over time; Aggregate Consortium or Provider



MOQC Tableau

- Reports being designed now
- As data aggregates, more possibilities…

- Abstraction progress by practice, abstractor
- Individual listings available to abstractors



MOQC
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Chart Abstraction Report

Practice Name: (All) | Year Round: 2022R2 | AbstractorName: (All)

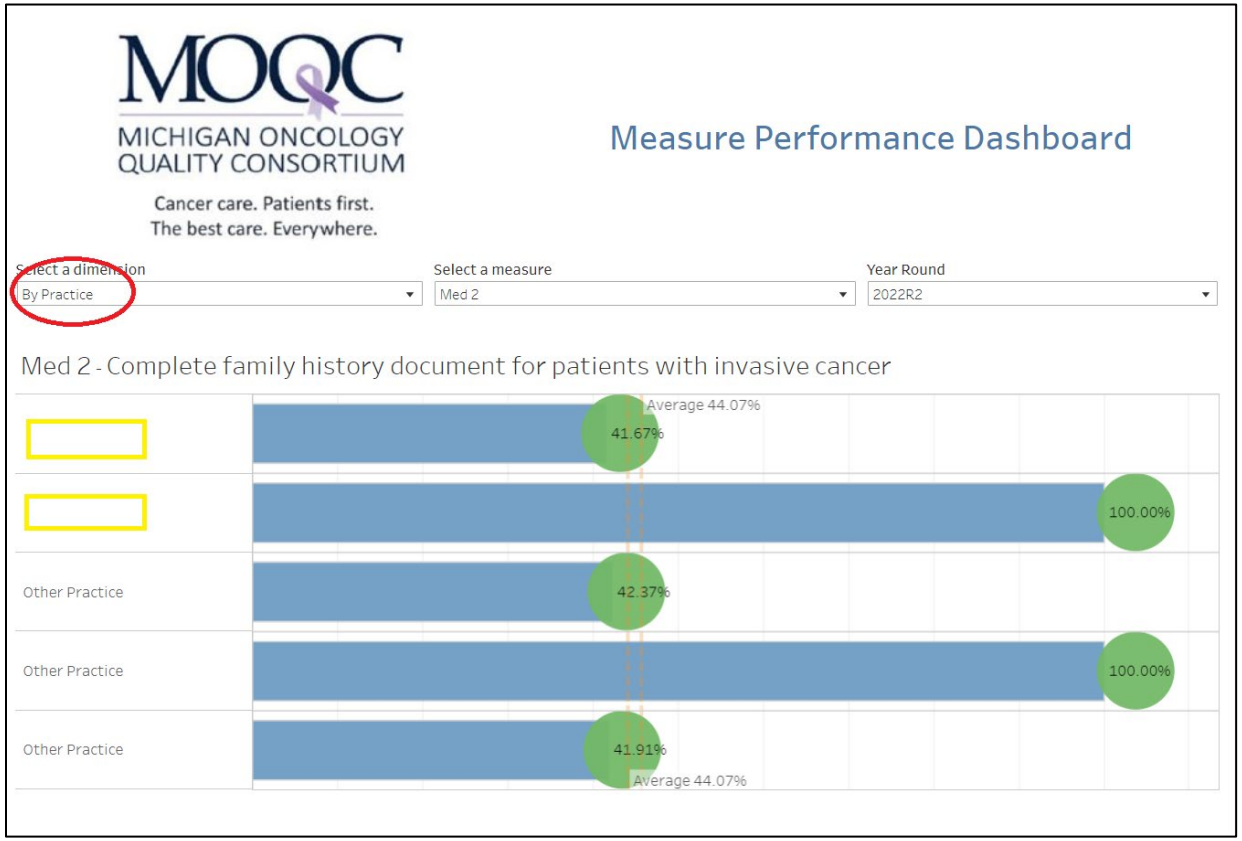
Abstraction Progress

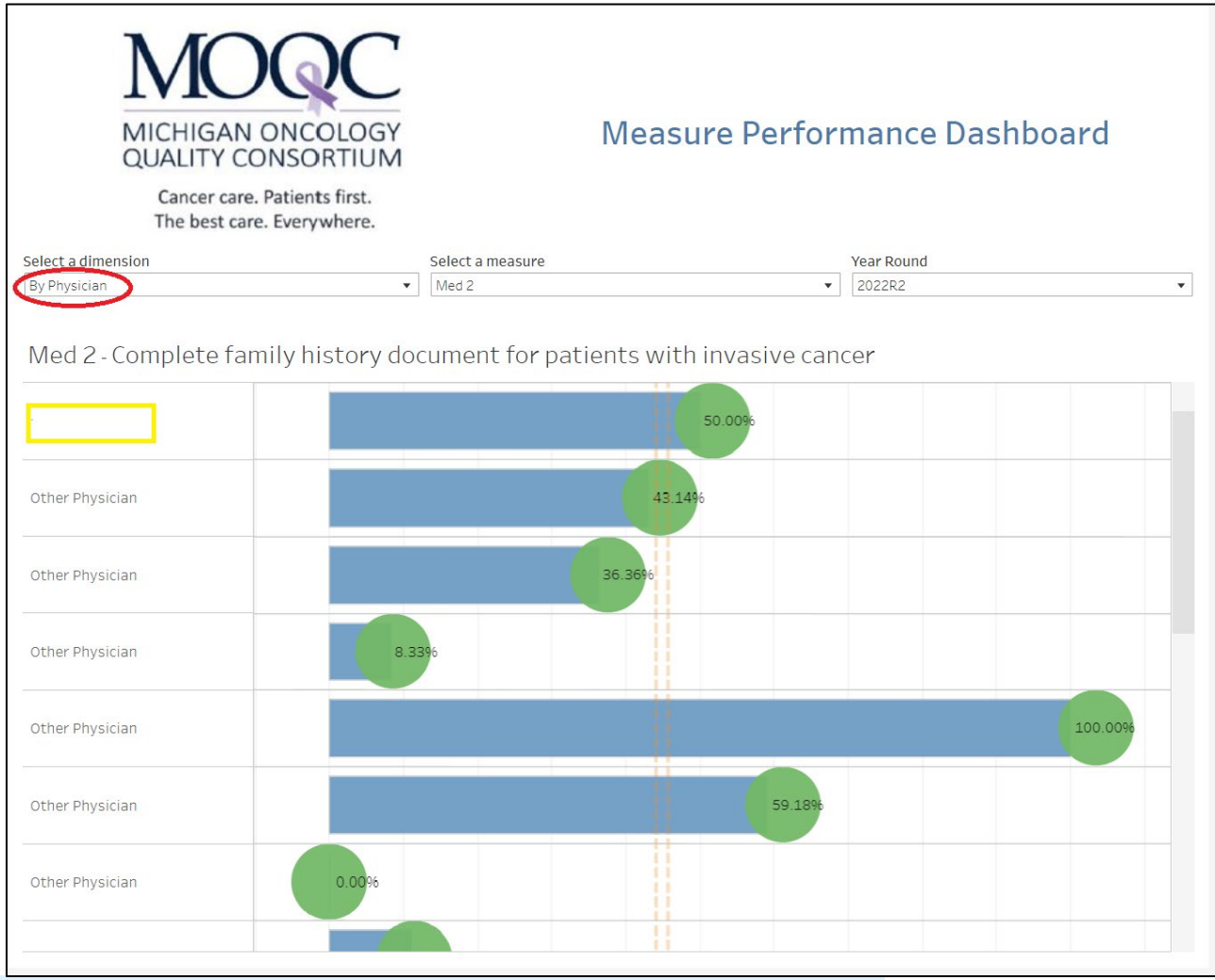
Practice Name	Abstractor..	Chart Status: Completed	Chart Status: Not Started
Beaumont Health Gyn Onc	hrombach	38	5
	swinsted	32	4
	kleanthk	10	3
	epotka	3	1
	debturne	14	1
	hebehrin	18	
Bronson Cancer Center	cmichale	1	1
Munson Otsego Memorial	kelihd		1
Oncology Hematology Associates of Saginaw Valley	epotka	12	7
	Debturne	23	3
	cmichale	26	3
	swinsted	22	2
	hrombach	10	2
	kleanthk	23	1
	hebehrin	16	
	cschwartz50	22	
Rogel Cancer Center	swinsted	6	9
	kleanthk	1	1
	epotka	1	
	cmichale	2	
Sparrow Health System	kleanthk	49	3

Chart Audit

Practice Na..	Abstractor..	Physician	Chart ID	Ethnicity	Gender
Beaumont Health Gyn Onc	debturne	[redacted]	END-30000..	1	
			END-30000..	1	
			OVA-30000..	1	
			OVA-30000..	1	
		[redacted]	END-30000..	1	
			END-30000..	1	
			END-30000..	1	
			END-30000..	1	
			END-30000..	1	
			GYN-30000..	1	
			OVA-30000..	1	
		[redacted]	END-30000..	1	
			END-30000..	1	
			GYN-30000..	1	
	epotka	[redacted]	OVA-30000..	1	
		[redacted]	OVA-30000..	1	
		[redacted]	GYN-30000..	1	
	hebehrin	[redacted]	END-30000..	1	
			END-30000..	1	
			END-30000..	1	
			GYN-30000..	1	

Performance Measure Calculations by Practice, Physician (drill-in available for own data)





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Measure Performance Over Time Heat Map

Select a dimension: By Practice

Select a measure: Med 2

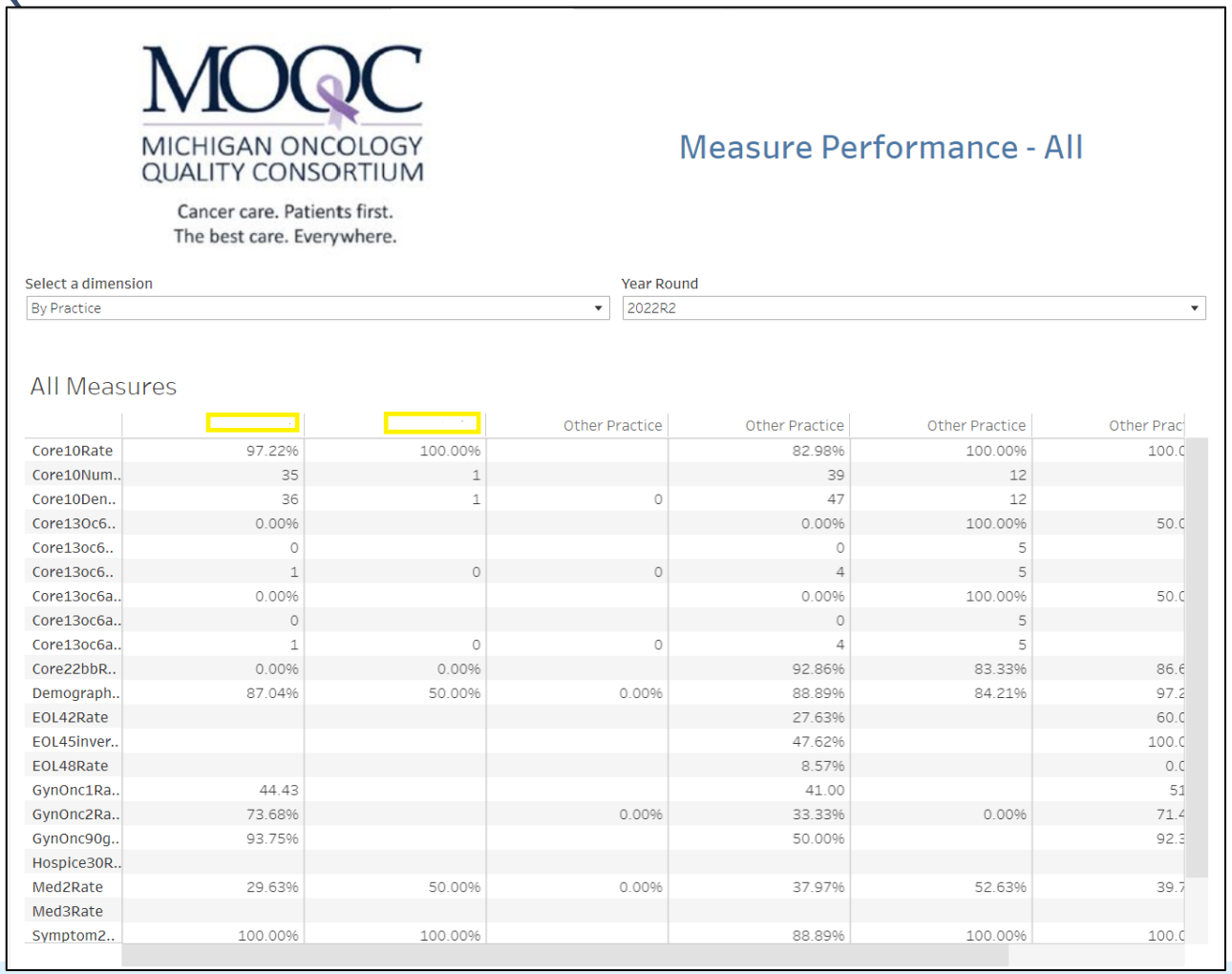
Med 2 Rate

	2020R2	2021R1	2021R2	2022R	2022R2
[redacted]					41.67%
[redacted]					100.00%
[redacted]	31.20%	38.13%	51.61%		
[redacted]				50.00%	42.37%
[redacted]	32.44%	23.81%	21.61%		100.00%
[redacted]					41.91%
[redacted]	42.75%	17.19%	4.38%		

Denominator

	2021R1	2021R2	2022R	2022R2
[redacted]				36
[redacted]				1
[redacted]	257	279		
[redacted]			2	118
[redacted]	273	310		9
[redacted]				136
[redacted]	221	274		

Views Across Multiple Measures (visual dashboards to come)



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Measure Performance - All

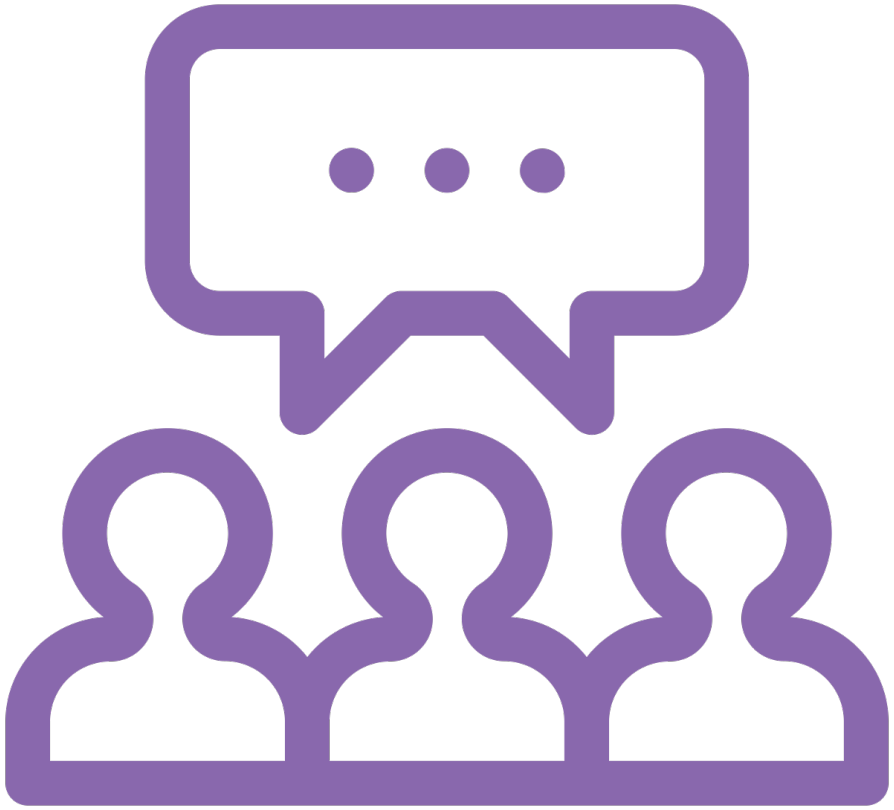
Select a dimension: By Practice

Year Round: 2022R2

All Measures

			Other Practice	Other Practice	Other Practice	Other Prac
Core10Rate	97.22%	100.00%		82.98%	100.00%	100.0
Core10Num..	35	1		39	12	
Core10Den..	36	1	0	47	12	
Core13Oc6..	0.00%			0.00%	100.00%	50.0
Core13oc6..	0			0	5	
Core13oc6..	1	0	0	4	5	
Core13oc6a..	0.00%			0.00%	100.00%	50.0
Core13oc6a..	0			0	5	
Core13oc6a..	1	0	0	4	5	
Core22bbR..	0.00%	0.00%		92.86%	83.33%	86.6
Demograph..	87.04%	50.00%	0.00%	88.89%	84.21%	97.2
EOL42Rate				27.63%		60.0
EOL45inver..				47.62%		100.0
EOL48Rate				8.57%		0.0
GynOnc1Ra..	44.43			41.00		51
GynOnc2Ra..	73.68%		0.00%	33.33%	0.00%	71.4
GynOnc90g..	93.75%			50.00%		92.3
Hospice30R..						
Med2Rate	29.63%	50.00%	0.00%	37.97%	52.63%	39.7
Med3Rate						
Symptom2..	100.00%	100.00%		88.89%	100.00%	100.0

Live Demonstration/Q&A



Patient-Reported Outcomes (PROs) Project

Chris Friese, PhD, RN

Why PROs?

Systematic PRO collection, reporting and analysis:

Helps focus clinical interventions

Prioritizes improvement efforts

Centers care on patient + family needs

Must be done with care to avoid burdens

JAMA

QUESTION In patients undergoing treatment for metastatic cancer, does electronic symptom monitoring improve patient-reported outcomes?

CONCLUSION Use of weekly electronic patient-reported outcome (PRO) surveys to monitor symptoms resulted in statistically significant improvements in physical function, symptom control, and health-related quality of life (HRQOL) at 3 months vs usual care among patients with metastatic cancer.

POPULATION

694 Women
496 Men

Adults receiving treatment for metastatic cancer

Mean age: 62 years

LOCATIONS

52
Community oncology practices in the US

INTERVENTION

1197 Patients randomized
1191 Patients analyzed

593
PRO intervention
Weekly electronic patient survey asking about symptoms, performance status, and falls

598
Control
Usual care

OUTCOMES

Secondary outcomes were change from baseline in physical function, symptom control, and HRQOL at 3 months, measured by the EORTC QLQ-C30 instrument.

Results on the primary outcome, overall survival, are not yet available.

FINDINGS

Change in physical function, symptom control, and HRQOL (score range, 0-100 points) from baseline to 3 months

	PRO intervention		Control	
	Baseline	3 mo	Baseline	3 mo
Physical function	74.27	75.81	73.54	72.61
Symptom control	77.67	80.03	76.75	76.55
HRQOL	78.11	80.03	77.00	76.50

Mean differences were significant:

Physical function, 2.47 points (95% CI, 0.41 to 4.53); *P*=.02

Symptom control, 2.56 points (95% CI, 0.95 to 4.17); *P* = .002

HRQOL, 2.43 points (95% CI, 0.90 to 3.96); *P* = .002

Basch E, Schrag D, Henson S, et al. Effect of electronic symptom monitoring on patient-reported outcomes among patients with metastatic cancer: a randomized clinical trial. *JAMA*. Published online June 5, 2022. doi:10.1001/jama.2022.9265

How will we collect PROs?

- 2-week data collection; twice per year
- MOQC-provided tablets in clinic; check-in desk hands to patient to complete. Paper back up.
- PRO-CTCAE and Health Leaders social needs screen.

  If + → prompt guides patient to talk to clinician
- English and Spanish versions, caregiver can help

What will it entail?

- 12 practices to participate in 2023
- All practices participate in 2024

- Questionnaires – preparation in progress (Arbor Research)
- Spring 2023: user testing and intake meetings
- Summer 2023: 3 pilot sites
- Fall 2023: ~10 practices

What will it entail?

- On-site training and support
- Intake meetings to understand:
  - Preferred location(s) in practice (waiting room, infusion)
  - How to best get MRNs to patients to link to patient data
  - Other logistical concerns and questions
  - Site-specific IRB and DUA concerns
- Data from your site, region, & MOQC shared at regional & biannual meetings

A Phased Approach

Early State

- Meet practices where they are
- Four measures, one-time
- Tablet platform, paper backup
- Reports generated by MOQC
- Shared at regular intervals
- Data inform QI efforts

Future State

- 100% digital reporting
- Fully-integrated into EHR
- Scored & shared in real-time
- Can adjust timing, questions
- Longitudinal monitoring
- Subgroup analyses
- Caregiver-specific instrument
- Grants and papers

Thank You to our Task Force Members

- Megan Beaudrie
- Tracey Cargill-Smith
- Diane Drago
- Jacklyn Griffin
- Mike Harrison
- Amanda Itliong
- Pat Keigher
- Kathy LaRaia
- Cindy Michelin
- Lindsey Ranstadler
- Jerome Seid
- Dawn Severson
- Patrice Tims

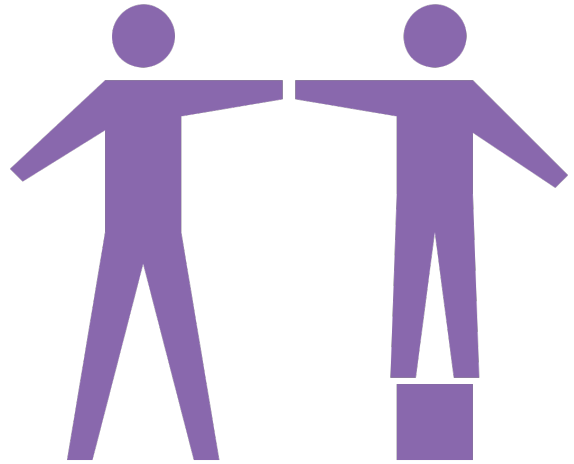
Contact us to learn more:

- Shayna Weiner: shaynaw@med.umich.edu
- Ashley Bowen: asbowen@med.umich.edu
- Robin Voisine: rvoisine@med.umich.edu
- Chris Friese: cfriese@umich.edu

Are We Delivering Equitable Care?

Jennifer Griggs

MD, MPH, FACP, FASCO

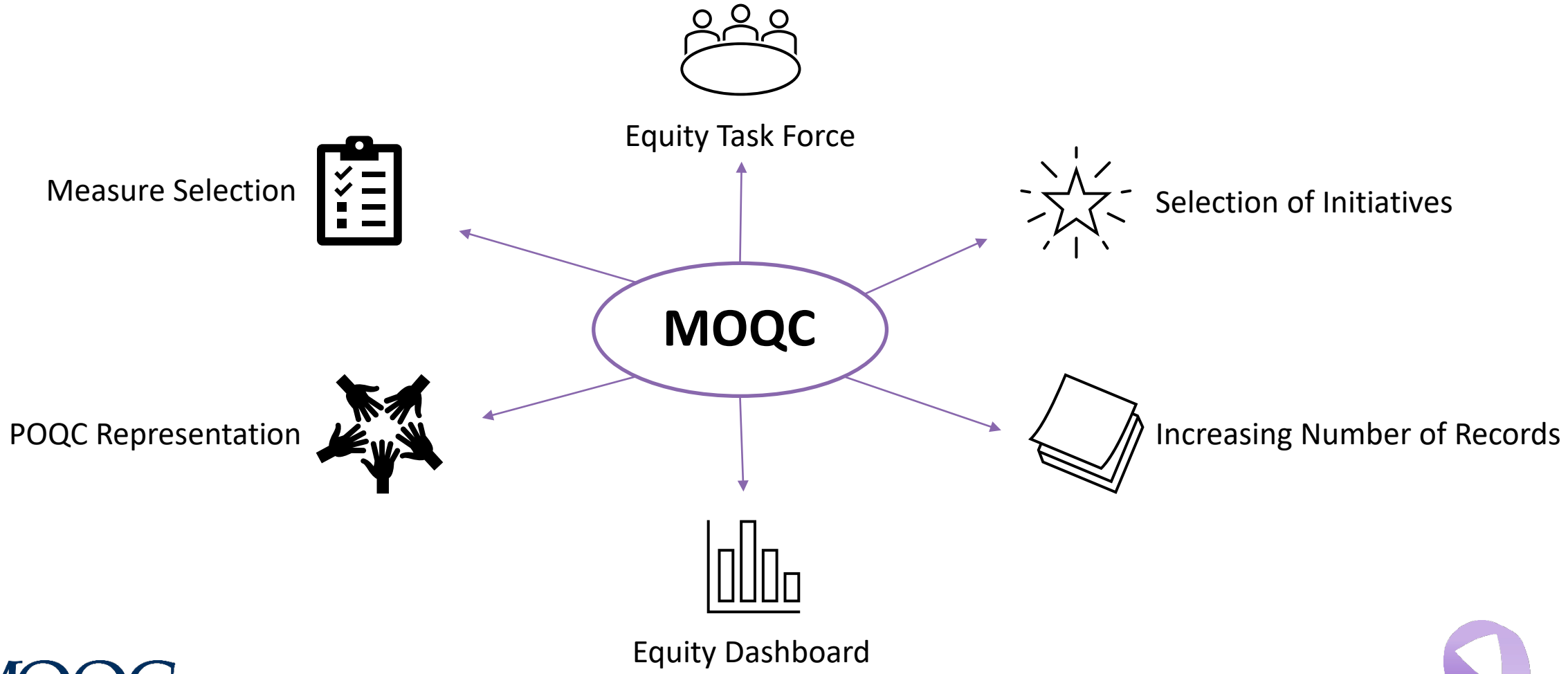


Equity in Cancer Care

Why is MOQC focused on equity?

- Disparities in cancer care and outcomes have been seen across
  - Race
  - Ethnicity
  - Language of care
  - Immigration status
  - Age
  - Gender
  - Other non-clinical factors
- Advances in treatments have led to a widening in some disparities
- Equity issues cannot be addressed until they are identified

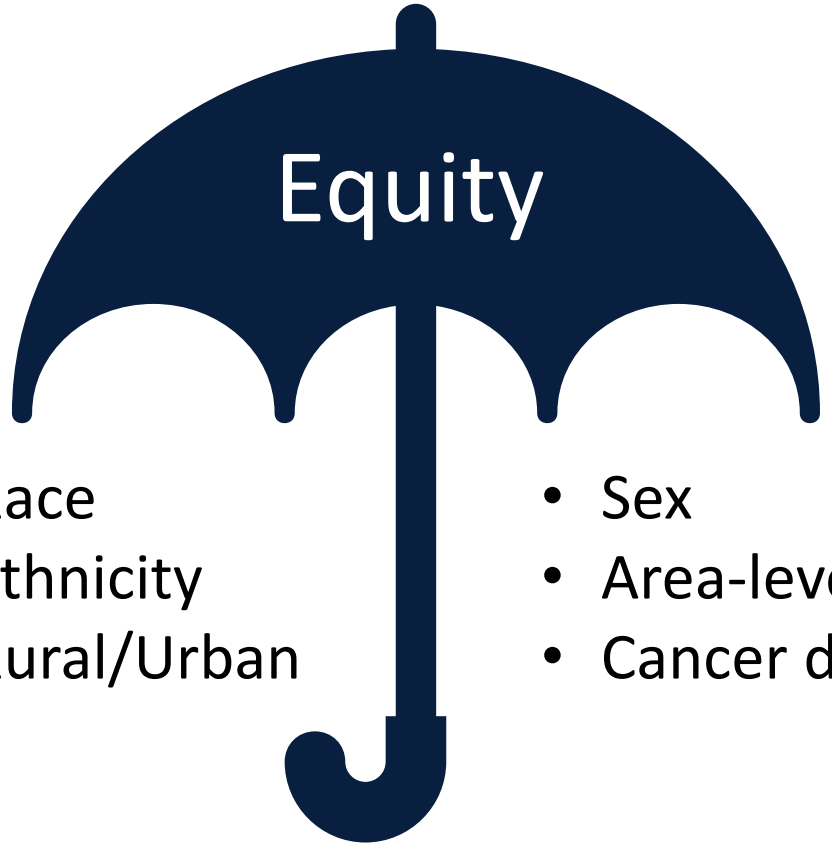
Equity Work at MOQC



Equity Task Force

- Founding Group:
  - Tracey Cargill-Smith
  - Michael Dudley
  - Beth Fisher-Polasky
  - Zachary Hector-Word
  - Beth Sieloff
  - Diane Smith
  - Elena Stoffel

What is Included in Equity?



- Race
- Ethnicity
- Rural/Urban
- Sex
- Area-level deprivation
- Cancer diagnosis

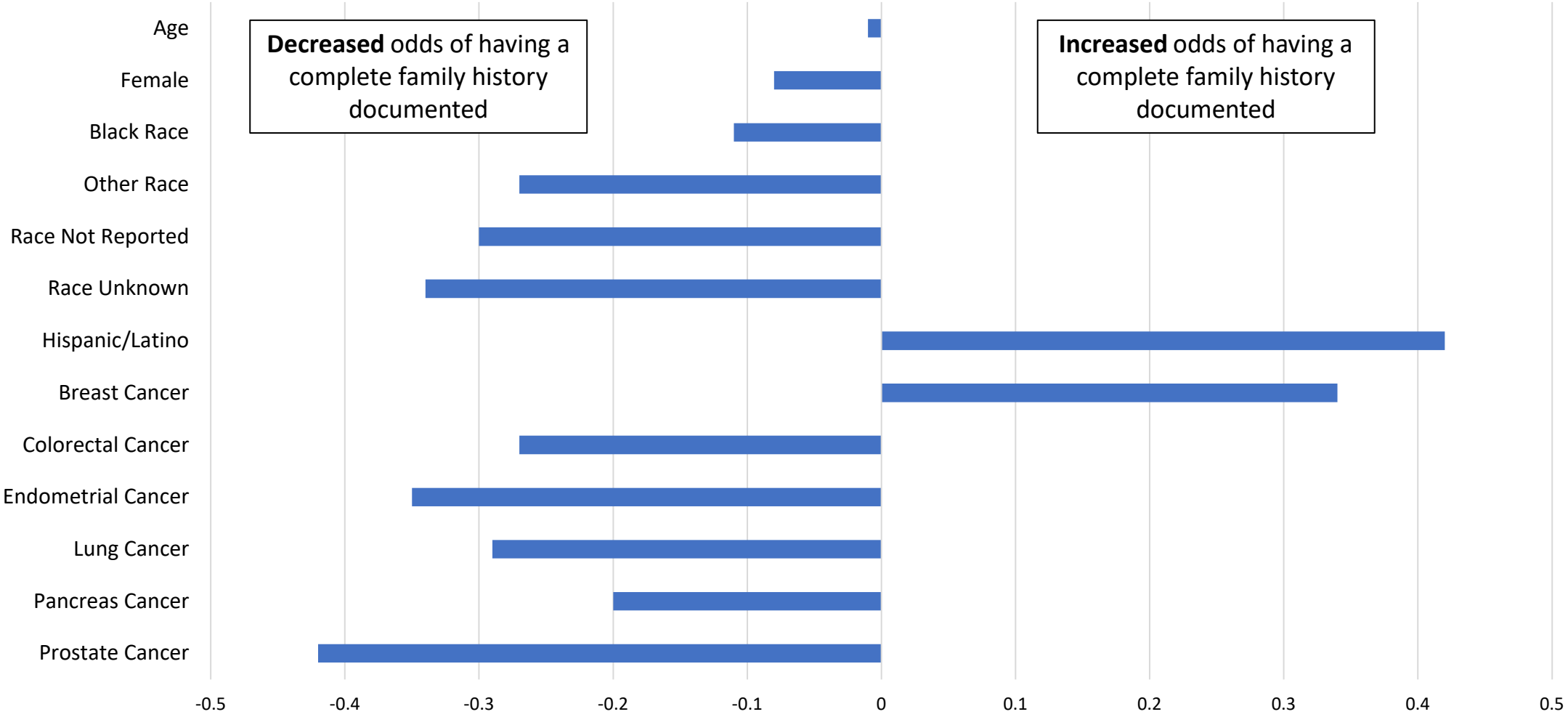
Future:
- Sexual and gender minority status
- Language of care

Disparities in Performance on MOQC Measures

- Multivariate analysis was performed for 4 MOQC measures to identify disparities in care
  - Complete Family History
  - Hospice Enrollment
  - Chemotherapy Given in the Last 2 Weeks of Life
  - Days in Hospice
- Variables analyzed included:
  - Age
  - Sex
  - Race
  - Ethnicity
  - Cancer diagnosis
  - Year

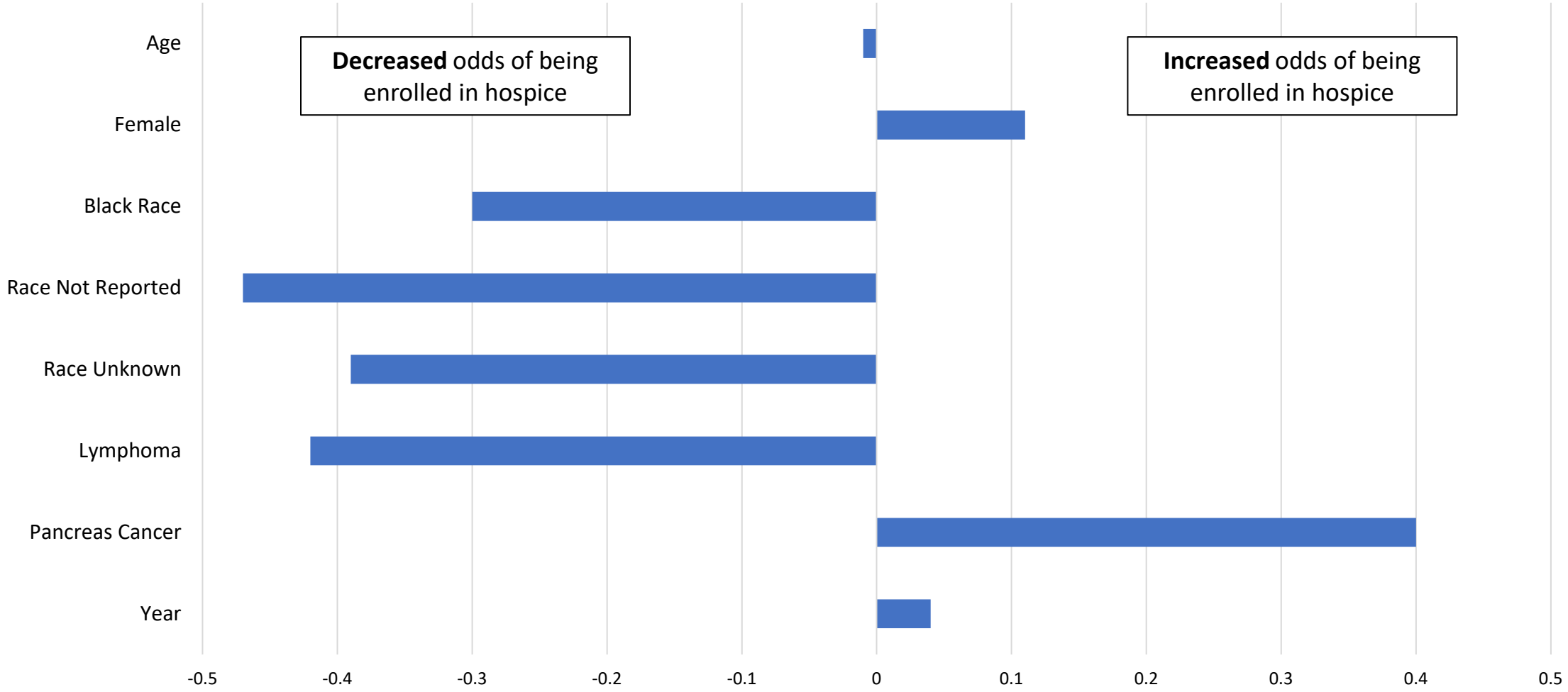
Disparities in Performance on MOQC Measures

Complete Family History, Multivariate Analysis (N = 24,505)



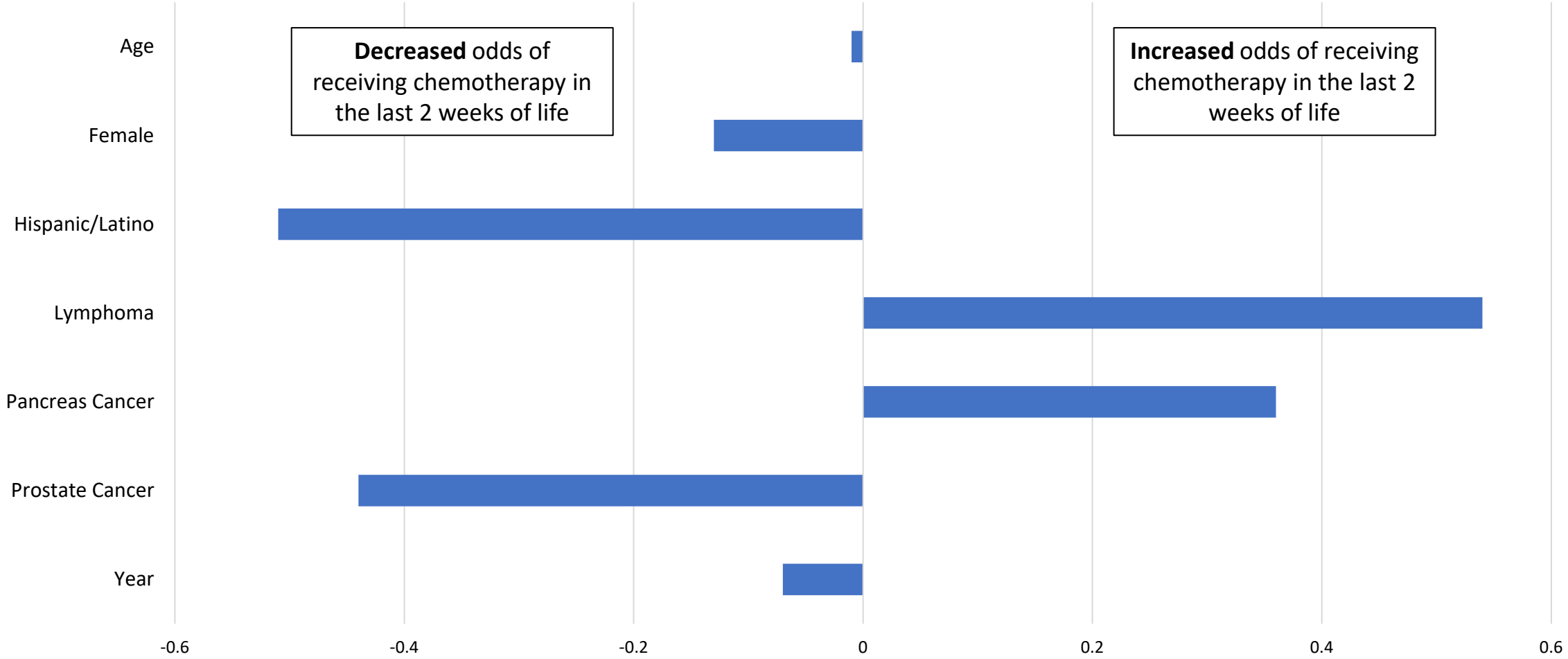
Disparities in Performance on MOQC Measures

Hospice Enrollment, Multivariate Analysis (N = 13,153)



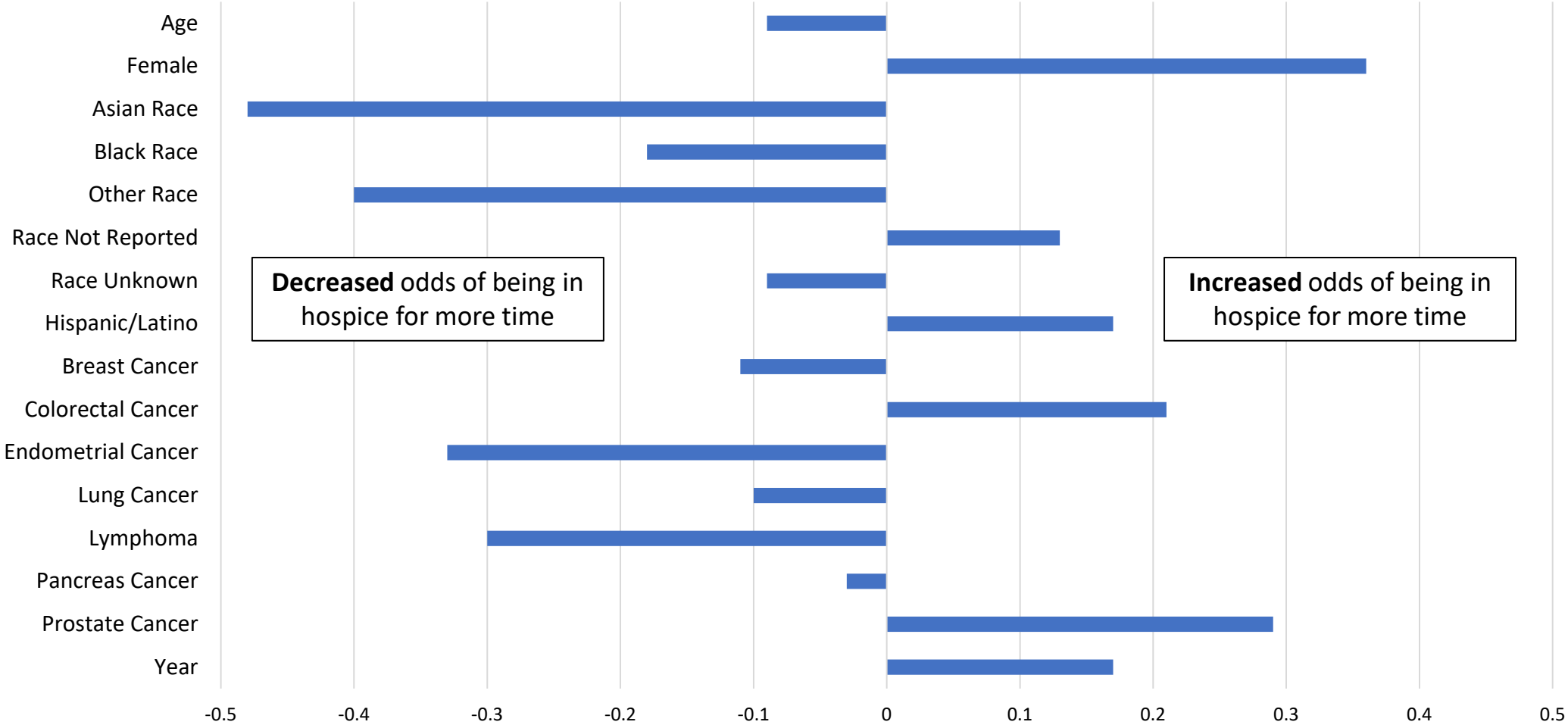
Disparities in Performance on MOQC Measures

Chemotherapy Given in the Last 2 Weeks of Life, Multivariate Analysis (N = 13,153)



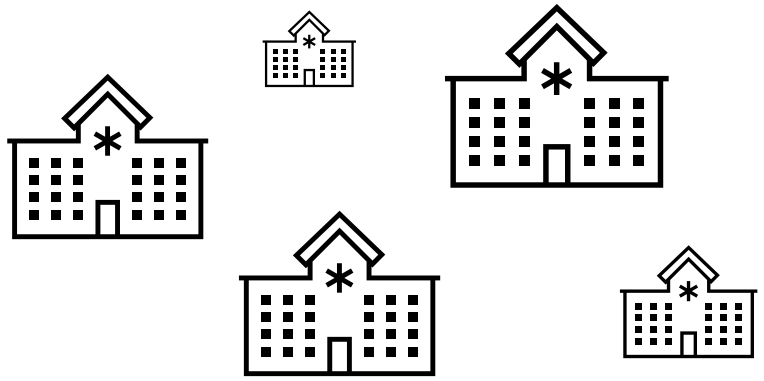
Disparities in Performance on MOQC Measures

Days in Hospice, Multivariate Analysis (N = 6,705)

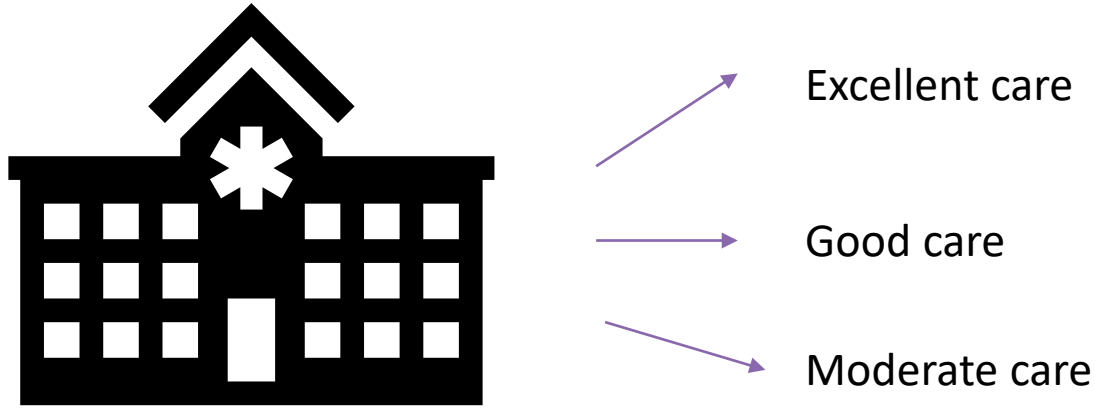


Site Effects

What are site effects?



- Patients with similar characteristics receive care at specific hospitals/practices with fewer resources



- Patients receive varying quality of care at the same hospital/practice

The Language of Cancer Care: Reframing our work in 5 words (*Changes in my time*)

Thomas Gribbin, MD
Vice President, Cancer and Hematology
Centers of Western Michigan

Founding Director, Lacks Cancer Center,
Trinity Health Grand Rapids

From 1985-2023:

- Understand how our **words** have changed
- Understand how our **goals** have changed
- Understand how our **outcomes** have changed
- Speculation: **What's next?**

- No conflicts of interest to declare

Why we are talking today

How did we identify cancer patients at high risk of high-cost complications?

- ER visits
- Avoidable hospitalization
- ICU utilization
- Futile end-of-life care

Look at the words we use.

1. The Words

Five words with evolving meanings

- Cure
- Palliate
- Response
- Survivor
- Value

Cure: to cure *(verb)*, the cure *(noun)*

The Latin noun ***'cura,'*** meaning 'care,' became the verb ***'curare,'*** meaning 'take care of,' and then the Old French ***'curer,'*** meaning 'cure'

- To attend to, to be responsible, to take trouble
- To heal, to make whole
- To mend: to repair, to make good, to restore completeness or usability

Ac**cur**ate: executed with care

A**mend**: to heal, to make good, to restore, to change

Cure is given/done to you by someone who cares

Palliate

- From the Latin ***pallativus***, Middle English “cloak”
  - A garment worn by Christians instead of a Roman toga
  - Under a cloak, cover
  - A cloth spread over a coffin, a pall (pallbearer)
  - That which relieves the symptoms of a disease without dealing with the underlying cause

“Covering it over”

Response: an action and an answer

- ***Respondere***: something offered in return
  - ***Spondere:*** a surety, guarantee, pledge, a sponsor
  - ***re***: an answer back

- Antiphon: a musical response

  (like a Bach fugue or “dueling banjos”)

Value

- **Valere:** “be worth”
  - The regard that something is held to deserve the importance, worth, or usefulness of something
  - A person’s principles or standards of behavior
  - Value based care vs fee-for-service (value vs volume)

Survivor

- ***Super*** (above or beyond) and ***vivere*** (to live)
- Continuing to live typically in spite of accident, ordeal, or difficult circumstance
- A continuation of life despite difficult conditions

2. Cure And Its Meaning Over Time

What cancer is curable in advanced stages?

1985

- ALL
- AML
- Hodgkin Disease
- Diffuse Large Cell Lymphoma
- Testicular Cancer

2023

- Lung Cancer
- Breast Cancer
- Ovarian Cancer
- Head and Neck Cancer
- ?Colon Cancer
- ? Melanoma
- ?Myeloma

What cannot be cured in advanced stages in 2023?

- Glioblastoma
- Pancreatic Cancer
- Carcinoid Tumors
- Prostate Cancer
- CLL

- Alzheimer's
- Multiple Sclerosis
- Cirrhosis
- Emphysema
- Advanced CHF
- CAD
- HIV

Oncologist's meaning of cure comes from a surgical paradigm

- Surgeons resect to negative margins
- "No touch"
- Remove an organ, not a tumor

You cannot be cured if you have residual disease

Changing definitions and minimal residual disease

- Negative physical exam
- Negative pathologic exam
- Negative CT scan
- Negative PET scan
- Negative PCR
- Negative circulating tumor cells
- Negative status maintained for meaningful duration (5 years) = cure

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

A Pooled Analysis of Bone Marrow Micrometastasis in Breast Cancer

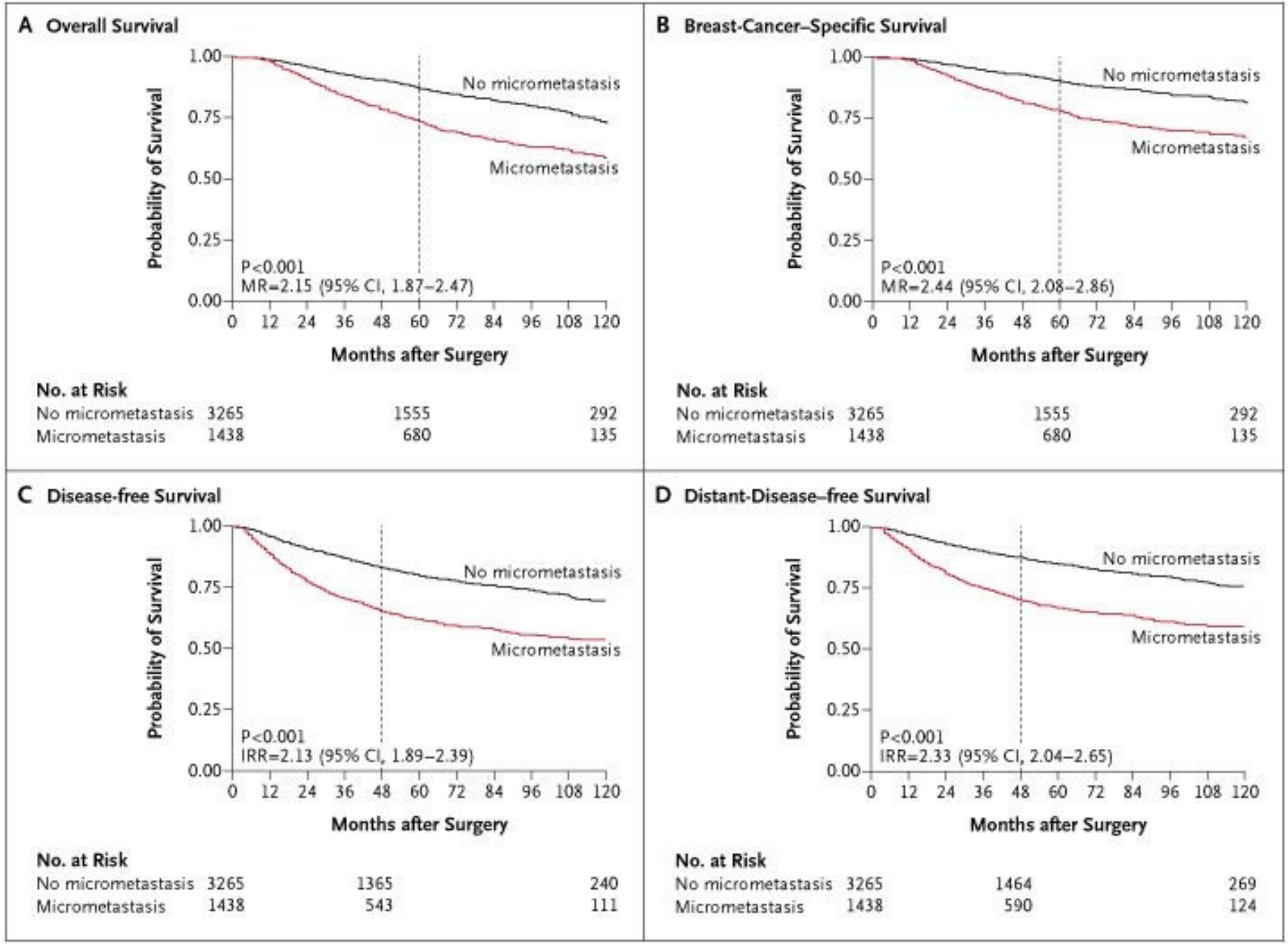
Stephan Braun, M.D., Florian D. Vogl, M.D., Bjørn Naume, M.D., Wolfgang Janni, M.D., Michael P. Osborne, M.D., R. Charles Coombes, M.D., Günter Schlimok, M.D., Ingo J. Diel, M.D., Bernd Gerber, M.D., Gerhard Gebauer, M.D., Jean-Yves Pierga, M.D., Christian Marth, M.D., Daniel Oruzio, M.D., Gro Wiedswang, M.D., Erich-Franz Solomayer, M.D., Günther Kundt, M.D., Barbara Strobl, M.D., Tanja Fehm, M.D., George Y.C. Wong, Ph.D., Judith Bliss, M.Sc., Anne Vincent-Salomon, M.D., and Klaus Pantel, M.D.*

Predicting systemic relapse from breast cancer by bone marrow involvement at presentation

- Pooled patient data from 9 studies involving 4703 patients evaluated for micro-metastatic bone marrow involvement by bone marrow sampling at the time of diagnosis, with detection by H and E and IHC

- 30.6% of patients had detectable breast cells in bone marrow at presentation

- Involvement predicted worse outcome but…

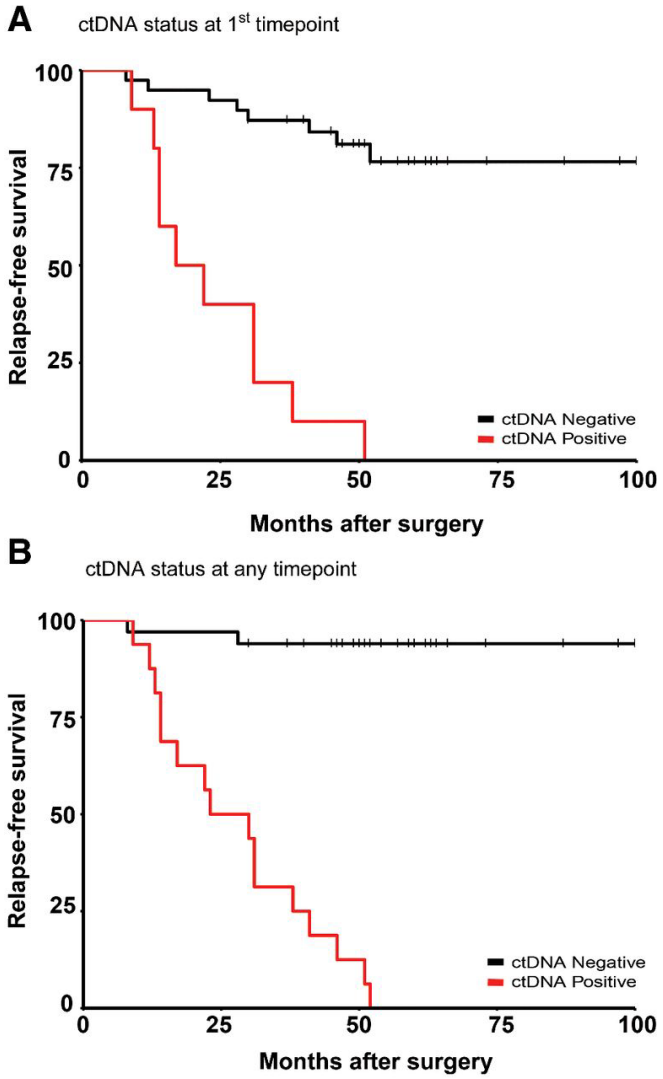

A Overall Survival
Probability of Survival
1.00
0.75
0.50
0.25
0.00
No micrometastasis
Micrometastasis
P<0.001
MR=2.15 (95% CI, 1.87–2.47)
0 12 24 36 48 60 72 84 96 108 120
Months after Surgery
No. at Risk
No micrometastasis 3265 1555 292
Micrometastasis 1438 680 135
B Breast-Cancer–Specific Survival
Probability of Survival
1.00
0.75
0.50
0.25
0.00
No micrometastasis
Micrometastasis
P<0.001
MR=2.44 (95% CI, 2.08–2.86)
0 12 24 36 48 60 72 84 96 108 120
Months after Surgery
No. at Risk
No micrometastasis 3265 1555 292
Micrometastasis 1438 680 135
C Disease-free Survival
Probability of Survival
1.00
0.75
0.50
0.25
0.00
No micrometastasis
Micrometastasis
P<0.001
IRR=2.13 (95% CI, 1.89–2.39)
0 12 24 36 48 60 72 84 96 108 120
Months after Surgery
No. at Risk
No micrometastasis 3265 1365 240
Micrometastasis 1438 543 111
D Distant-Disease–free Survival
Probability of Survival
1.00
0.75
0.50
0.25
0.00
No micrometastasis
Micrometastasis
P<0.001
IRR=2.33 (95% CI, 2.04–2.65)
0 12 24 36 48 60 72 84 96 108 120
Months after Surgery
No. at Risk
No micrometastasis 3265 1464 269
Micrometastasis 1438 590 124

Survivor

- The majority of women with micro-metastatic involvement of the bone marrow did not relapse in this study
- You can be a survivor and have residual disease
- You can be a survivor and not cured

From: **Personalized Detection of Circulating Tumor DNA Antedates Breast Cancer Metastatic Recurrence**

Clin Cancer Res. 2019;25(14):4255-4263. doi:10.1158/1078-0432.CCR-18-3663



So, what does it mean to be cured?

You're Cured Till You're Not: Should Disease-Free Survival Be Used as a Regulatory or Clinical End Point for Adjuvant Therapy of Cancer?

Alberto F. Sobrero, MD; Alessandro Pastorino, MD; John R Zalcberg, PhD

1985

- For the sake of cure
  - Unlimited cost
  - Unlimited toxicity
- For the sake of palliation
  - Limited cost
  - Limited toxicity

2023

- For the sake of cure
  - Unlimited cost
  - Managed Toxicity
- For the sake of palliation
  - Unlimited cost
  - Limited toxicity

2023

Today, our language for *curing* and *palliating* is overlapping

(confused)

And the source of value has become confused

- Medicare daily rate for hospice in home care (2022): $203.40, average length of stay = 18 days
  - $3,661 per patient
- Per day cost for nivolumab $534 x median duration of response in lung cancer = 696 days
  - $371,664 per patient
- Is the value in the time extended, is it in the suffering avoided, the possibility for cure?

3. Cure Meets Value

Oncology Care Model - Cancer on a Budget

- Care was provided on a stipend calculated for each patient
- Provider is incented to provide care “on or under budget”
- Encourages identifying and avoiding “high-cost interventions”:
  - ER utilization
  - Hospitalization
  - ICU stay

Our Pen and Paper Solutions

- Patient survey instruments
- High risk huddles
- Patient reported outcomes

HIGH-RISK PATIENT MANAGEMENT

- **Discussion at multidisciplinary huddle when initiating a new treatment, or when there is significant change in performance status/recent admission**
- **Immediate screening for community-based program**
- **RN Care Coordinator visits every cycle. phone calls in between as warranted (as frequently as 1-2x per week, if needed)**
- **Social Work visits every month, phone calls in between as warranted (as frequently as 1-2x per week, if needed)**
- **Comment in chart that patient is considered "high risk" as reminder to MD and support staff**

Metric	0-Low Risk	1– Moderate Risk	2 – High Risk	Total Acuity Score
Age	0-59	60-70	71+	
# of Comorbidities	0-1	2-3	4+ or CHF, COPD, DM, CKD, HIV	
ECOG	0-1	2	3-4	
Treatment Intent	Curative	Palliative w/ life expectancy >2 years	Palliative w/ life expectancy <2 years	
Health Mgmt.	0 ER visits in last six months	1 ER visit in last six months	2+ ER visits in last six months Or No PCP	
Psych. History	None	Diagnosis of anxiety or depression	All other psychiatric diagnoses	
Distress Screening	Distress Thermometer 0 – 4 and Negative PHQ-9	Distress Thermometer 5-7 or PHQ-9 score of 15-19	Distress Thermometer 8-10 or PHQ-9 score of 20+	
Living Arrangements	With loved ones	Alone, in assisted living	Alone, in community	

If we can distinguish the curable from the dying, then we can avoid futile care.

J Clin Oncol. 2022 Dec 10;40(35):4044-4047. doi: 10.1200/JCO.22.01531. Epub 2022 Oct 31.

You're Cured Till You're Not: Should Disease-Free Survival Be Used as a Regulatory or Clinical End Point for Adjuvant Therapy of Cancer?

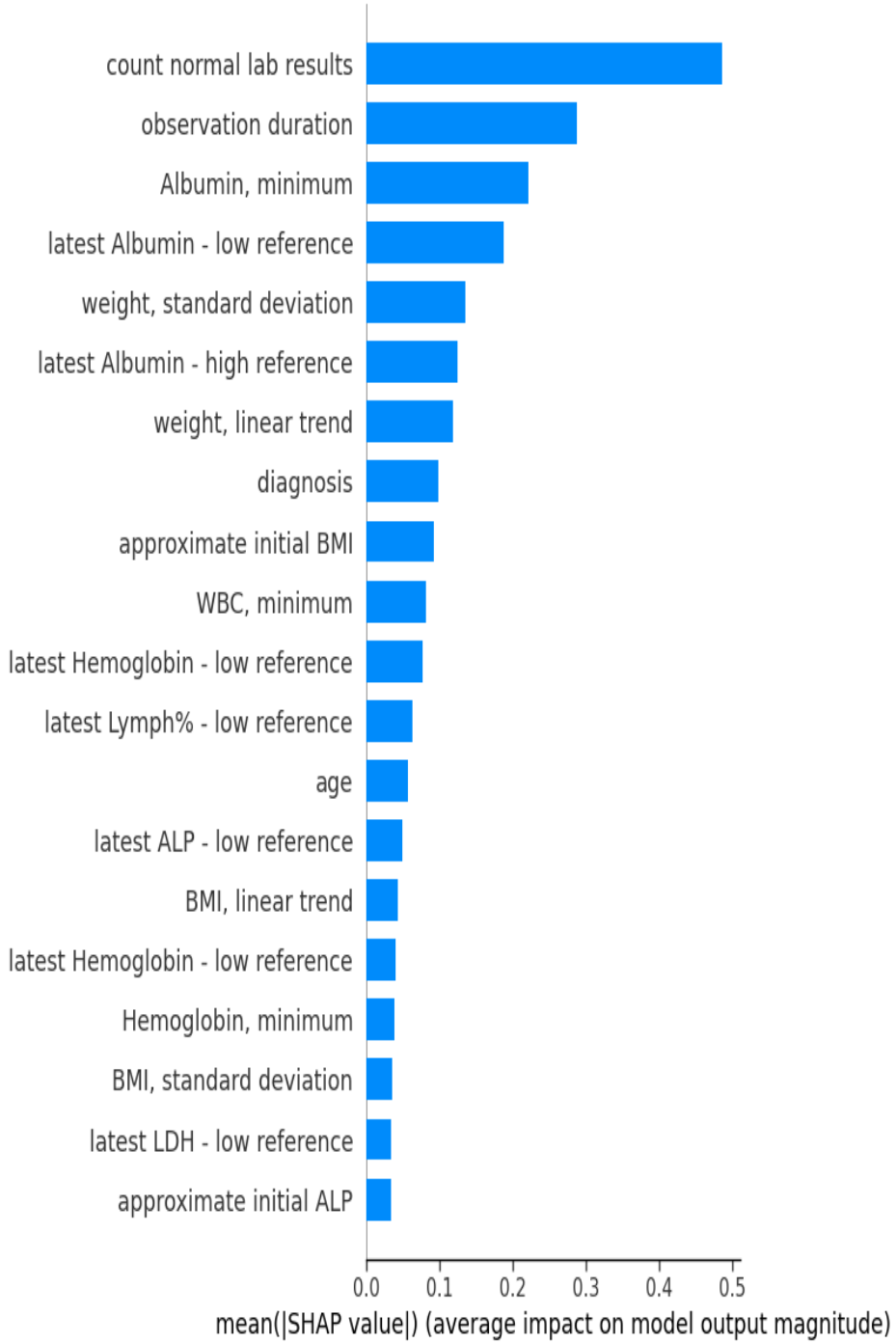
Alberto F Sobrero [1], Alessandro Pastorino [1], John R Zalcberg [2]

Bonus Words: Artificial Intelligence

- Artificial (*artificialis*, Latin): made of produced by human beings, lacking naturalness, forced, contrived, feigned, artful, cunning
- Intelligence: to understand, comprehend
- Artificial intelligence: the science and engineering of making intelligent machines (1956)
- In this construct, providers have natural intelligence

U Penn Model:
Solving the futility equation with medical data

1. A machine learning analysis of the medical record
2. Identify a population with a 10% 180-day mortality
3. Communicate that to the provider
4. Have the provider intervene


count normal lab results
observation duration
Albumin, minimum
latest Albumin - low reference
weight, standard deviation
latest Albumin - high reference
weight, linear trend
diagnosis
approximate initial BMI
WBC, minimum
latest Hemoglobin - low reference
latest Lymph% - low reference
age
latest ALP - low reference
BMI, linear trend
latest Hemoglobin - low reference
Hemoglobin, minimum
BMI, standard deviation
latest LDH - low reference
approximate initial ALP
0.0
0.1
0.2
0.3
0.4
0.5
mean(|SHAP value|) (average impact on model output magnitude)

Jvion Model:
Solving the futility problem with big data

- Jvion is an established AI company in the medical space, now purchased by *Lightspeed*
- Use big data to identify risk and change outcomes
- Identify impactable patient, provider to intervene
- ALL data welcome

Jvion Model

- Predicted 30-day mortality
- Notified physicians to intervene
- Not to prevent death but to limit end-of-life intervention

4. What if Our Words Don’t Fit?

December 23, 1971:
Nixon Declares War on Cancer:

- Etymology: *werre (G*erman*)*, and *guerre* (French) “To bring into confusion”
- Intense armed conflict between states, societies, groups

- Are providers engaged in a war on cancer?
- Is a patient engaged in a war with his cancer?
- Is the patient “the battlefield” or “the warrior”?

We use the language of war to describe our patient's course

- Chemotherapy kills the cancer
- Radiation "nukes" cancer
- Immunotherapy lets your immune system attack cancer
- Surgery removes the cancer
- Treatment stops the invasion and progress of cancer
- Patient is a "fighter"

What our words tell us to do

- In the Rhetoric of War, don't stop shooting?
- In the Rhetoric of Cure, don't stop treating?
- In the Rhetoric of Palliation, cover it over?
- In the Rhetoric of Value, spend less?

In Conclusion

- The words we use to describe cancer care, and the way we use them, has changed over the last 38 years
- The practice of oncology has led to evolving and overlapping meanings of “palliation” and “cure” (confusion)
- Our description of cancer and its treatment using the terms of “war” may not be as helpful in framing our patient’s experiences if in fact, “you’re cured till you’re not”

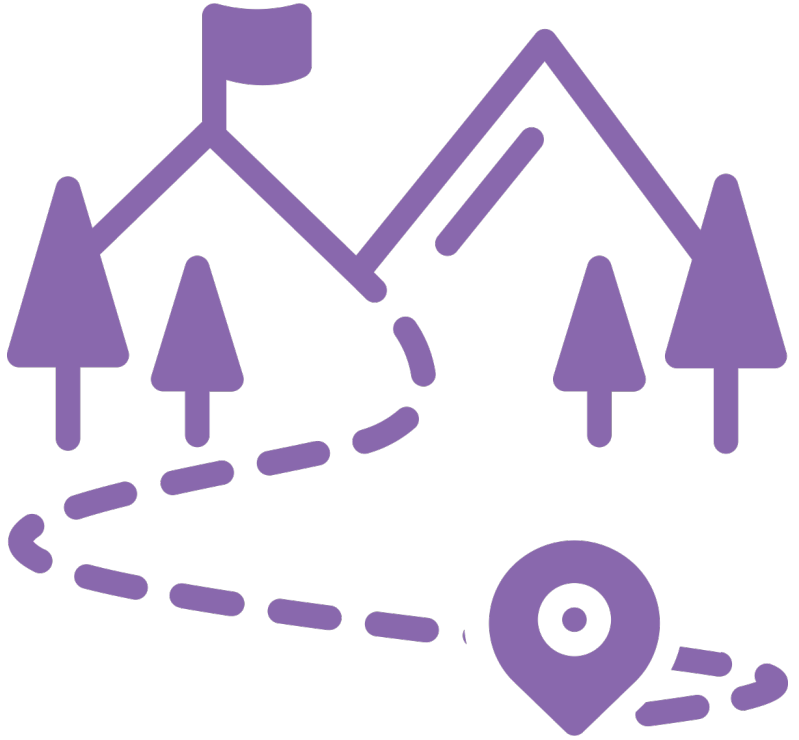
Thank You.

Hope

- To cherish a desire with anticipation (secular)
- A confident expectation and desire for something good in the future (religious)

Closing Items

Keli DeVries, LMSW



Continuing Education Credits

This meeting has been approved for 4.75 CEU

1. MOQC will send out the evaluation to everyone's email address as part of the follow-up email
2. Attendees should complete the evaluation
3. Attendees will receive a certificate from the CE accreditation organization with their credits
   - The certificate will be sent from ipceapps@umn.edu

Questions? Please reach out to moqc@moqc.org

Next Meetings

MOQC 2023 Spring Regional Meetings	
WOW	Wednesday, March 29 (Ypsilanti)
LMOR	Monday, April 3 (Lansing)
Metro East	Wednesday, April 12 (Troy)
CMG	Monday, April 17 (Saginaw)
Superior West	Wednesday, April 26 (Marquette)
Superior East	Thursday, April 27 (Petoskey)

MOQC GynOnc Biannual Meeting	
GynOnc Biannual	Saturday, April 29, 2023 (Plymouth)

MOQC MedOnc Biannual Meeting	
MedOnc Biannual	June 16, 2023 (Midland)

MOQC
MICHIGAN ONCOLOGY QUALITY CONSORTIUM

Register at: https://moqc.org/events/

Testimonials

There are aspects of MOQC that bring in other voices that we don't, as clinicians, sometimes hear in that way because we see them in the patient exam room. But to have patient representation at MOQC also helps because it allows us to get some feedback, as clinicians, from the group that we need to address.

PHYSICIAN

Each meeting, we share, we collaborate, and we celebrate the success that's being done around the state. I feel that MOQC really supports the practice, which then allows us to go back and support the patient.

SOCIAL WORKER

MOQC has given us the opportunity to benchmark our quality data against other cancer programs throughout the state. This helps us to identify opportunities for improvement.

PRACTICE MANAGER

https://umich.qualtrics.com/jfe/form/SV_06VDGWqXExJExnM

THANK YOU!

MICHIGAN ONCOLOGY
QUALITY CONSORTIUM

Cancer care. Patients first.
The best care. Everywhere.