CLINICAL PATHWAYS AND CANCER CARE DELIVERY

David Jackman, MD

Medical Director of Clinical Pathways, Dana-Farber Cancer Institute

Senior Physician, Thoracic Oncology, Dana-Farber Cancer Institute

Assistant Professor, Harvard Medical School

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DISCLOSURES

- AstraZeneca
- CVS Caremark
- MOREHealth

CONTEXTUALIZING CANCER CARE

SYSTEM	INSTITUTION	**PATIENT**	CELL	GENE

- Define best care
- Standardize and disseminate that care (and the information behind it)
- Influence and oversee care across a network
- Improve clinical trial awareness

WHAT IS A CLINICAL PATHWAY?

- A platform that provides real-time decision-making support across the continuum of cancer care
  - Reflects current standards of care
  - Attempts to decrease unwarranted variation, while supporting warranted, granular variation
  - Supports learning

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CURRENT PORTFOLIO: MED ONC

Heme Malignancies	Solid Tumors
Leukemia/MDS • Chronic myelogenous leukemia • Myelodysplastic Syndrome	Breast Cancer

Lymphoma
• Hodgkin's
• Non-Hodgkin's
  • Burkitt's
  • CLL/SLL
  • DLBCL / double-hit lymphomas
  • Follicular
  • Mantle Cell
  • Marginal Zone
  • T-cell
	GI Oncology:
	• Colorectal
	• Gastroesophageal
	• Pancreatic adenocarcinoma

Plasma Cell Dyscrasias • Amyloidosis • Multiple Myeloma • POEMS syndrome • Waldenstrom's	GU Oncology: • Bladder • Prostate • Renal Cell Carcinoma • Testicular
	GYN Oncology: • Cervical • Endometrial/Uterine • Ovarian
	H&N: Squamous Cell Carcinoma
	Melanoma
	Neuro-Onc: Glioblastoma
	Sarcoma: GI Stromal Tumor
	Thoracic: • Non-small cell lung cancer • Small cell lung cancer

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CURRENT PORTFOLIO: RAD ONC

Radiation Oncology Pathways	
Breast Cancer	Hematologic Malignancies: • Leukemia & transplant • Lymphoma: Hodgkin • Lymphoma: Non-Hodgkin • Multiple Myeloma & Plasmacytoma
GI Oncology: • Anal • Esophgeal • Gastric • Liver • Pancreatic adenocarcinoma • Rectal	Soft Tissue: • Sarcoma • Bone metastases
GU Oncology: • Bladder • Prostate • Testicular	Skin: • Cutaneous (non-melanoma) • Melanoma
GYN Oncology: • Cervical • Endometrial/Uterine • Vaginal • Vulvar	Thoracic: • Non-Small Cell Lung • Small Cell Lung
H&N: Squamous Cell Carcinoma	
Neuro-Onc: • Primary CNS tumor • Brain metastases	

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CHALLENGES IN IMPLEMENTATION

- Role of pathways for expert users?
- Cancer care should not be one-size-fits-all
- Impact on workflow
- Pathways are too cost-driven

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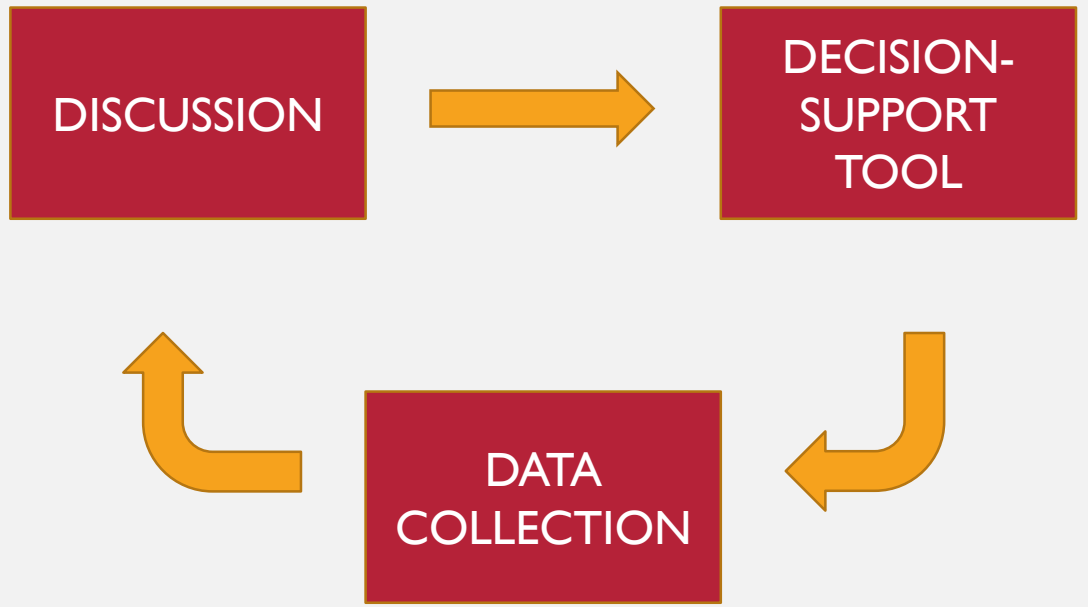
CHALLENGE: ROLE OF PATHWAYS FOR EXPERT USERS



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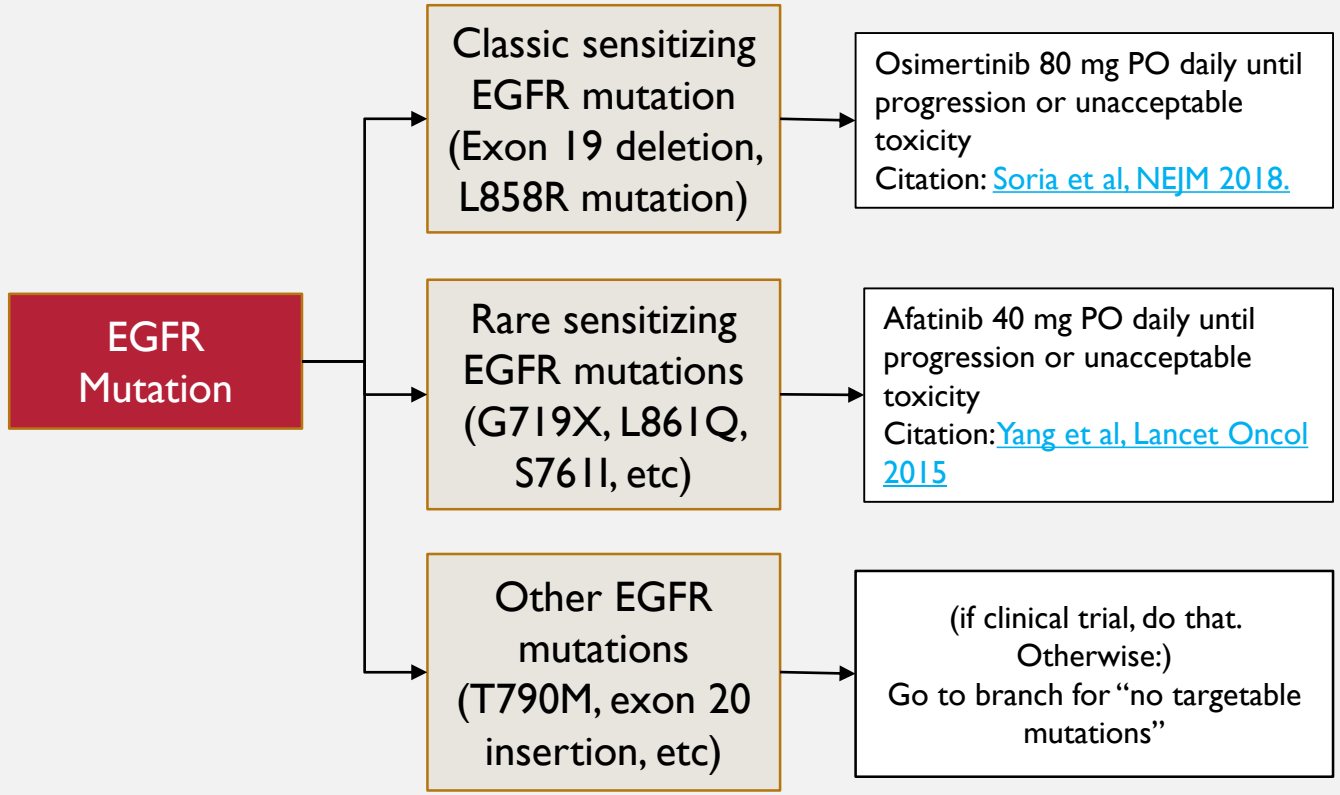

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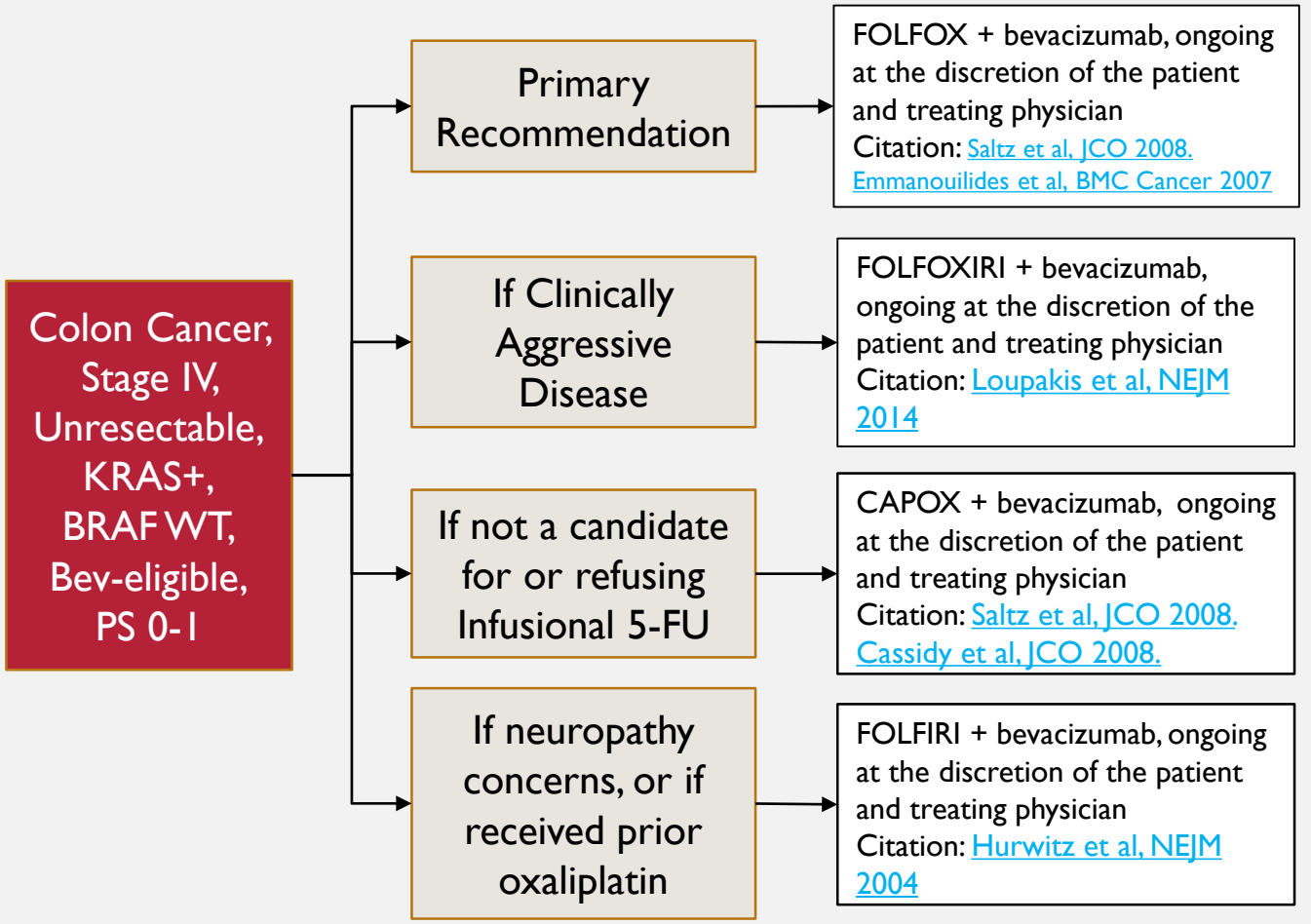

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CHALLENGE: CANCER CARE SHOULD NOT BE ONE-SIZE-FITS-ALL

- **MESSAGING and INCENTIVES**
  - Support physicians to provide the best care for the patient in front of them
  - Incentives: System usage, not on-pathway rate
  - System usage supports learning

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CHALLENGE: WORKFLOW

- **Click reduction**
  - Minimizing navigation
  - What can be imported?
- **Other opportunities for efficiency**
  - Embedded resources
    - Clinical trial links
    - Side effects / Chemo consent
    - Patient education sheets
    - Citations
  - Educational opportunities:
    - Minutes
    - Network Updates

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CHALLENGE: PATHWAYS ARE TOO COST DRIVEN

- **Costs: Inclusion and Messaging**
  - Make cost a routine part of discussion
    - Medicare allowables – drug cost
    - Never margin/reimbursement
- **Opportunities for Cost Containment**
  - Prior Authorization
  - Cost-conscious pathway choices where appropriate

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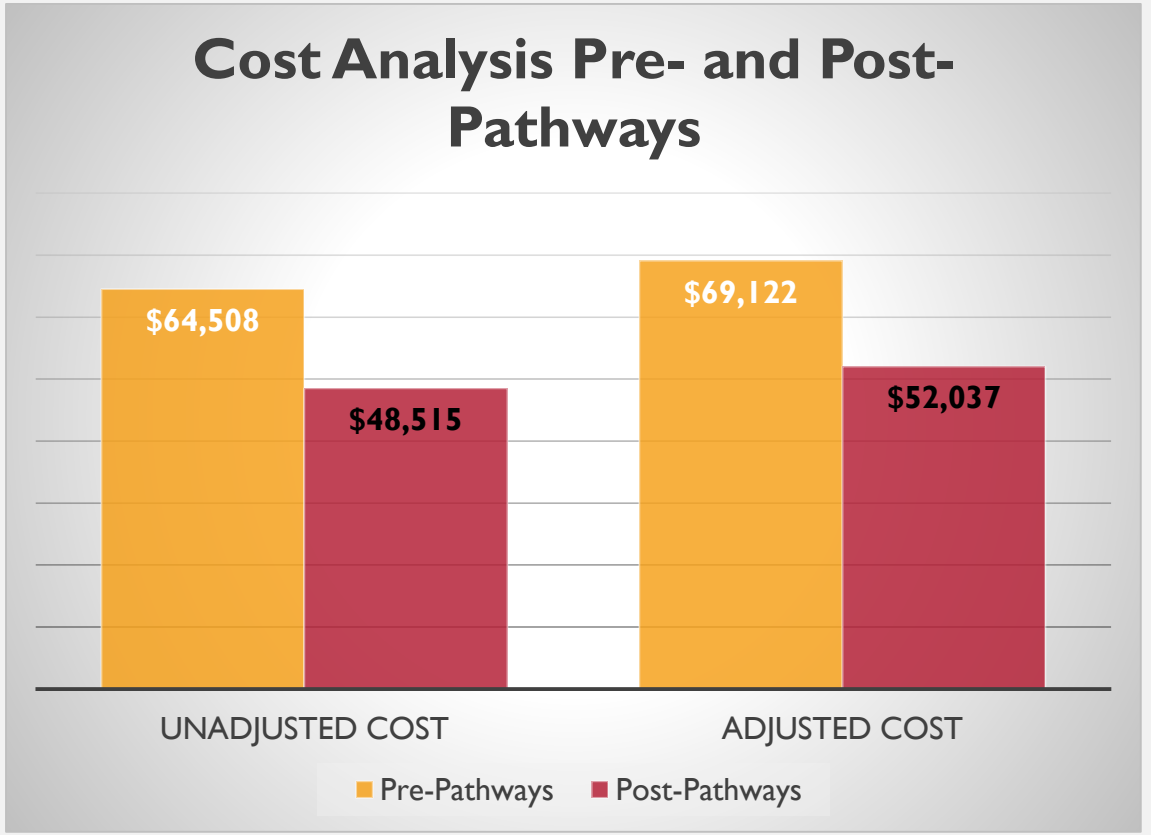


Jackman et al. JOP 2017. 13(4): e346-e352

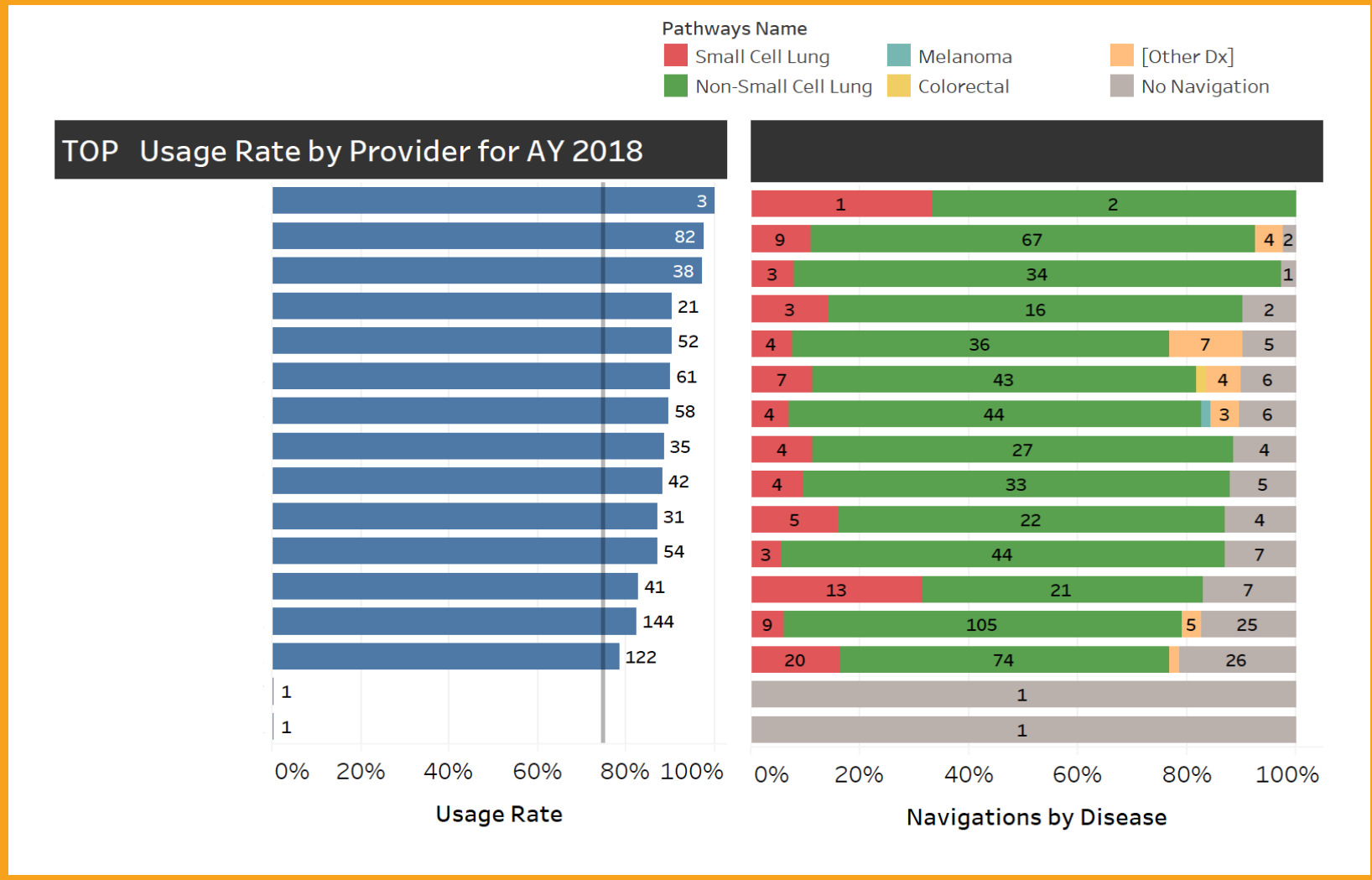
SCOPE OF EFFORT

Prior state (Content Development, Program maintenance)

- Leadership: Operations Director, Medical Director
- Pathways Team: Program Manager, 3 project managers, data analyst, IT project manager
- Pharmacy: Lead pathways pharmacist, 6 other pharmacists
- MD champions: 28 Med Oncs, 16 Rad Oncs
- 12 disease center research coordinators

PATHWAYS AS LEARNING TOOL

USAGE RATE AND DISTRIBUTION



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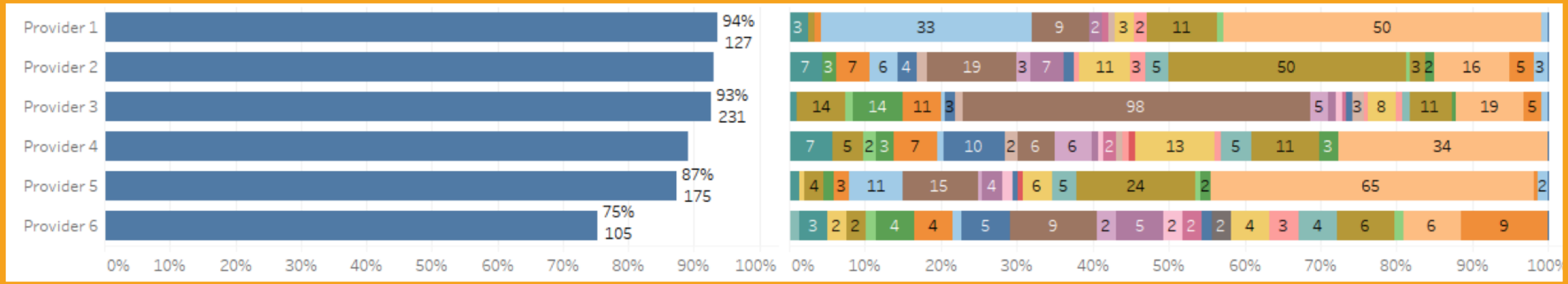

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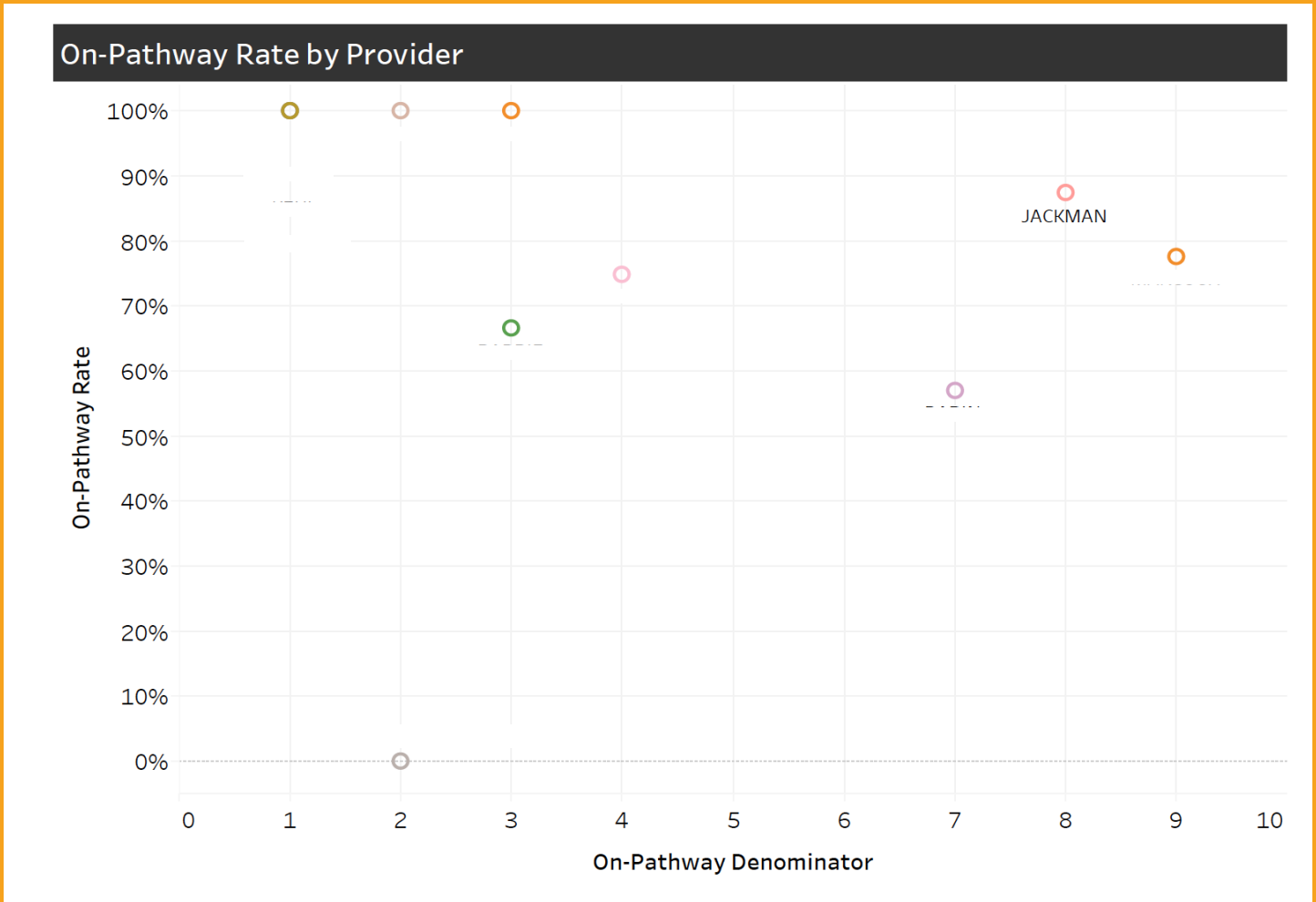
ON-PATHWAY RATE BY PROVIDER



DECISIONS BY BRANCH

Navigation Type by Disease, Includes All Locations

Pathways Name	Patient Presentation 1	Patient Presentation 2	On-Pathway	Off-Pathway	Off-Treatment
Non-Small Cell Lung	Local Recurrence	Unresectable		1	
	Stage III	Potentially Resectable	1		
		Resected	3		
		Unresectable	2		
	Stage IV Metastatic	Non Squamous	31	14	
		Squamous	4		
Small Cell Lung	First Line	Extensive Stage	4		
	Second Line	Relapse 3 - 6 Months		1	
		Relapse < 6 Months	4		1
		Relapse ≥ 6 Months	1		
	Third Line and Beyond	No CNS Metastases or CNS Metastases Can Be Controlled by Local Therapy	1		

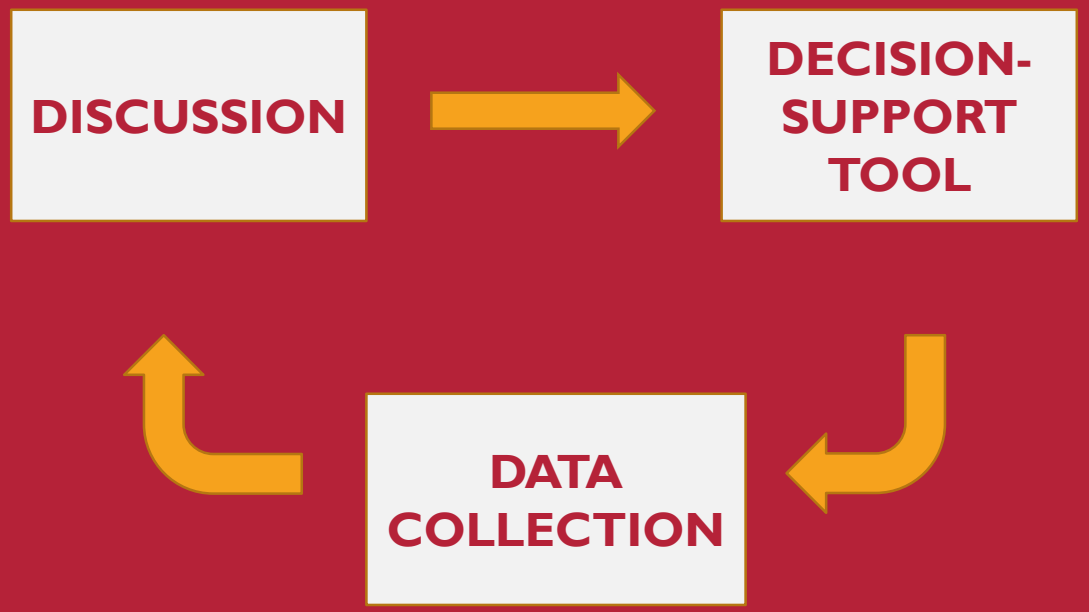
SPECIFIC DECISIONS BY BRANCH

Metastatic, Clear Cell

Metastatic	Systemic Therapy Indicated	Clear Cell	First Line	On-Pathway OR Clinical Trial	Cabozantinib (tablet)	6.45% 2
					Other Trial - 15-592	3.23% 1
					Other Trial - 17-397	3.23% 1
					Pazopanib	19.35% 6
					Trial 15-592: Atezolizumab + Bevacizumab In nccRCC	3.23% 1
					Trial 17-038: Lenvatinib + Everolimus or Pembrolizumab VS Sunitinib in RCC	22.58% 7
					Trial 17-064: Nivolumab in Renal Cell Carcinoma	16.13% 5
				Off-Pathway	Cabozantinib (tablet)	9.68% 3
					Nivolumab	3.23% 1
					Nivolumab, Ipilimumab, Nivolumab	9.68% 3
					Radiation	3.23% 1
			Second Line	On-Pathway OR Clinical Trial	Cabozantinib (tablet)	29.41% 5
					Nivolumab	23.53% 4
					Trial 17-064: Nivolumab in Renal Cell Carcinoma	47.06% 8
			Third Line	On-Pathway OR Clinical Trial	Axitinib	11.11% 1
					Cabozantinib (tablet)	55.56% 5
					Trial 15-569: GS-16C3F vs Axitinib In Metastatic Renal Cell Carcinoma	11.11% 1
					Trial 16-527: TAK-228 in Renal Cell Carcinoma	11.11% 1
				Off-Pathway	Cabozantinib (tablet)	11.11% 1
			Fourth Line and Beyond	On-Pathway OR Clinical Trial	Axitinib	33.33% 2
					Everolimus, Lenvatinib	33.33% 2
					Other Trial - 17-634	16.67% 1
					Trial 17-084: Combination Therapies in RCC	16.67% 1

Decision Type (group) 1
- On-Pathway OR Clinical Trial
- Off-Pathway

FUTURE STATE:
WHERE DO PATHWAYS FIT



INTEGRATION

- To improve the decision-support tool
- To facilitate data collection & analysis
- To reduce inefficiencies

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Belen Fraile
Yichen Zhang

Pathways Architects
Caroline Block
Susanna Campos
Matt Davids
Peter Enzinger
David Fisher
Arnold Freeman
Glenn Hanna
Eric Jacobsen
Caron Jacobson
Kerry Kilbridge
Ann LaCasce
Jacob Laubach
Ursula Matulonis
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