

Using data transparency to improve cancer care

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Hutchinson Institute for Cancer Outcomes Research



FRED HUTCH
CURES START HERE™

Mission



Eliminate cancer and related diseases as causes of human suffering and death.



Improve the effectiveness of cancer prevention, early detection and treatment services provided to patients in ways that reduce the economic and human burden of cancer.

Community Reporting

HICOR IQ



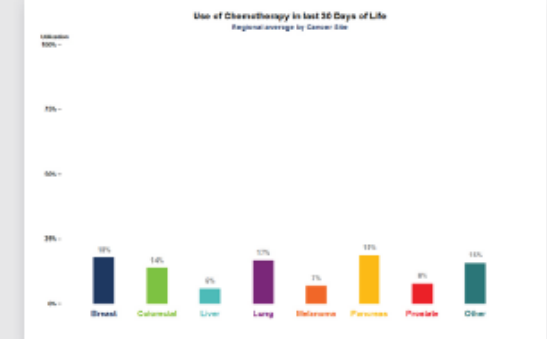
Customize Report

View:

Breakdown:

Population:

by Age:	by Cancer Site:	by Clinic Volume:	by PR Risk:
<input checked="" type="checkbox"/> Select all	<input checked="" type="checkbox"/> Select all	<input checked="" type="checkbox"/> Select all	<input checked="" type="checkbox"/> Select all
<input checked="" type="checkbox"/> <40	<input checked="" type="checkbox"/> Breast	<input checked="" type="checkbox"/> High	<input checked="" type="checkbox"/> Low Risk
<input checked="" type="checkbox"/> 40+	<input checked="" type="checkbox"/> Colorectal	<input checked="" type="checkbox"/> Low	<input checked="" type="checkbox"/> Intermediate Risk
<input checked="" type="checkbox"/> Not	<input checked="" type="checkbox"/> Lung	<input checked="" type="checkbox"/> Medium	
<input checked="" type="checkbox"/> 60+			
by Gender:	by Race:	by Stage:	
<input checked="" type="checkbox"/> Select all	<input checked="" type="checkbox"/> Select all	<input checked="" type="checkbox"/> Select all	
<input checked="" type="checkbox"/> Male	<input checked="" type="checkbox"/> White	<input checked="" type="checkbox"/> Localized	
<input checked="" type="checkbox"/> Female	<input checked="" type="checkbox"/> Black	<input checked="" type="checkbox"/> Regional	
	<input checked="" type="checkbox"/> Hispanic (any race)	<input checked="" type="checkbox"/> Distant	
	<input checked="" type="checkbox"/> Asian/Pi	<input checked="" type="checkbox"/> Unstaged	
	<input checked="" type="checkbox"/> Other/Unknown		



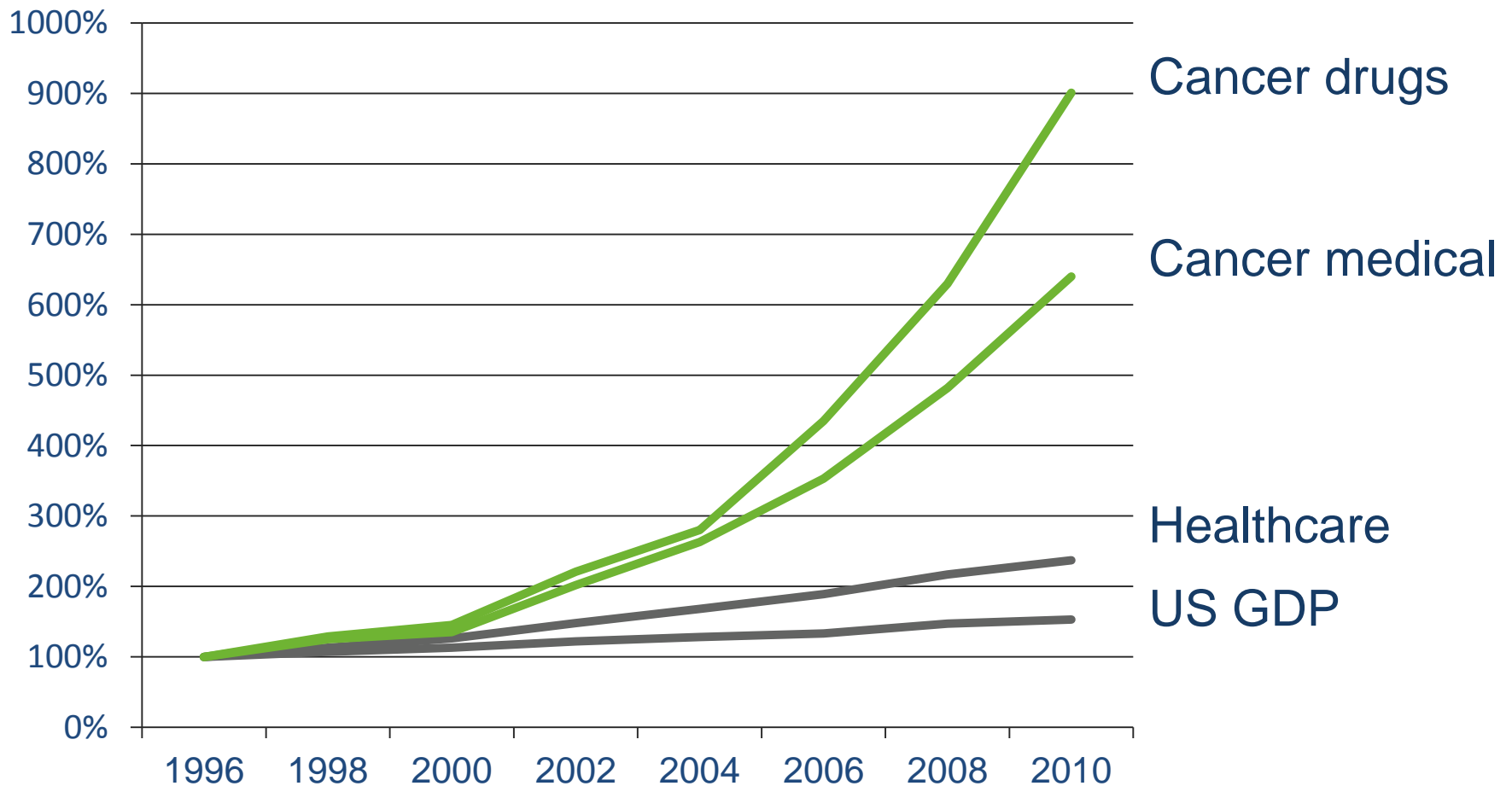
Other screen views

Why HICOR? Why now?

Patients are bearing an ever-increasing share of the expense, causing a new side effect called financial toxicity

There's great variability in cost and quality of cancer treatments across the health care system

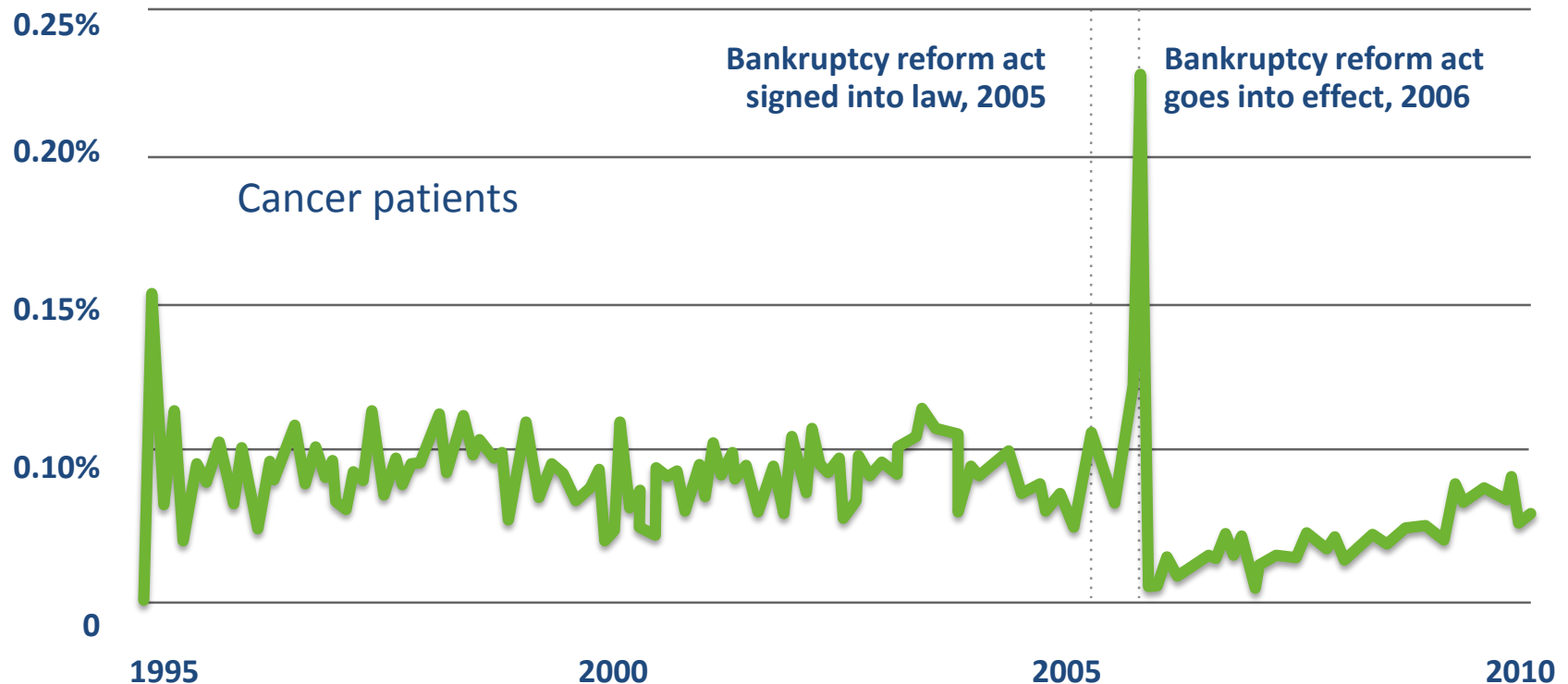
Rising cancer care costs



Risk for Financial Toxicity

Cancer patients have higher rates of bankruptcy than non-cancer patients

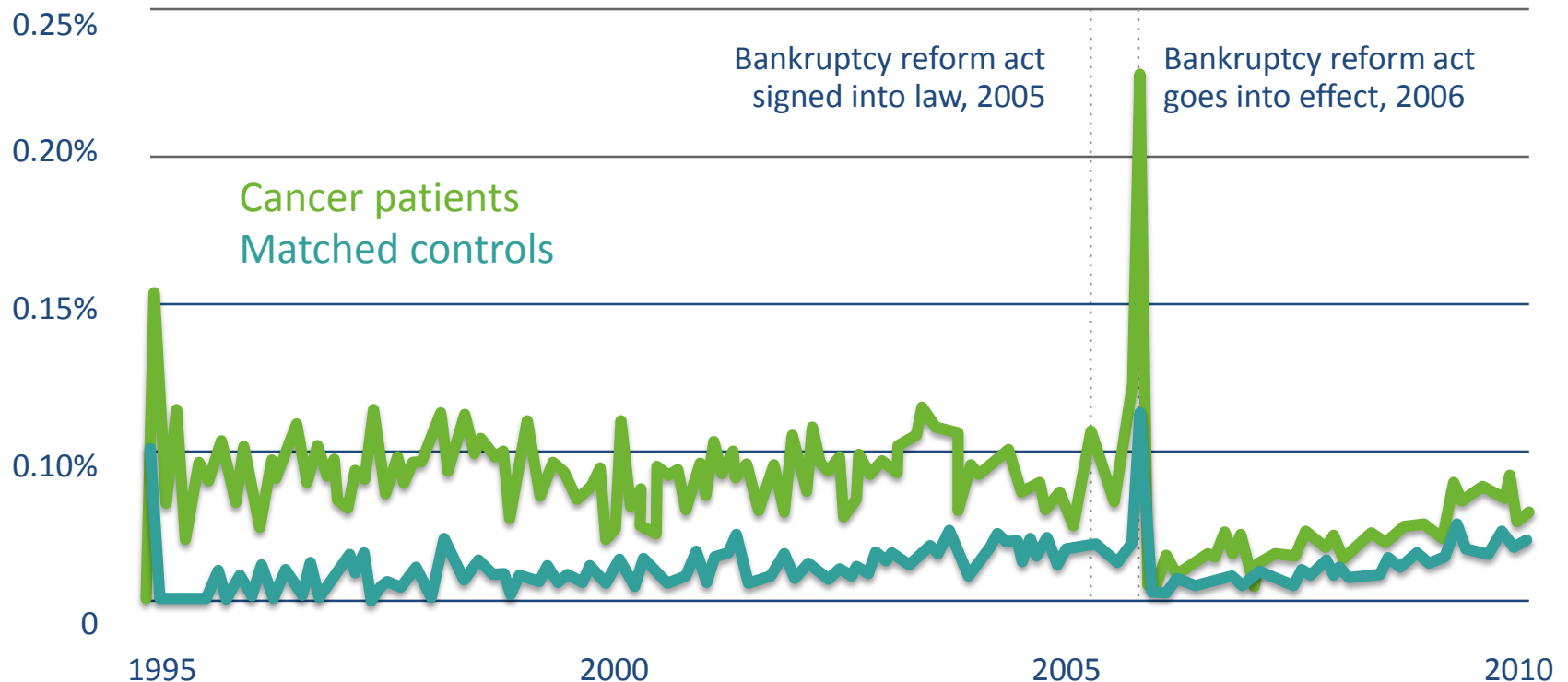
Percent filing for bankruptcy



Risk for Financial Toxicity

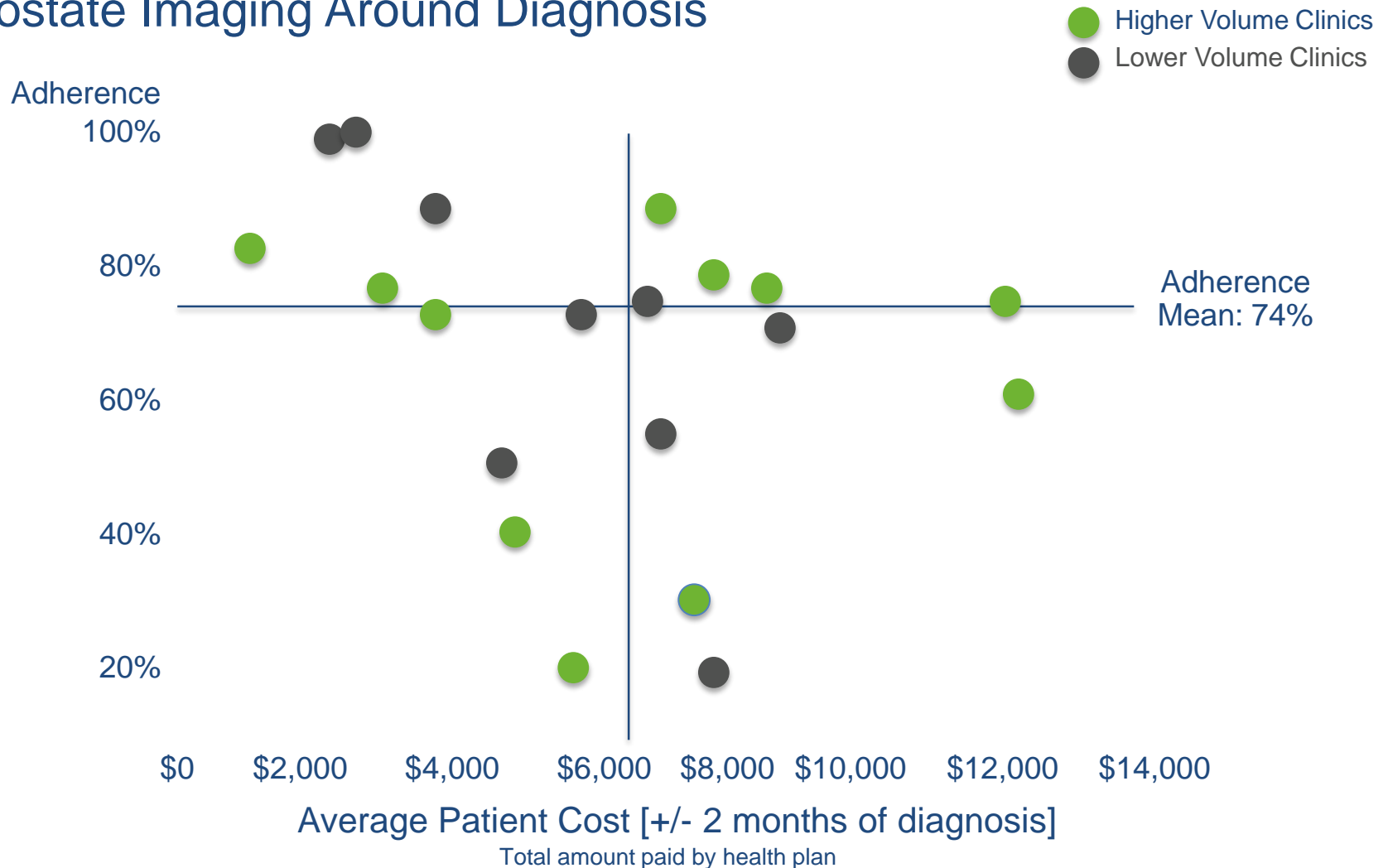
Cancer patients have higher rates of bankruptcy than non-cancer patients

Percent filing for bankruptcy



Variation in Care Quality

Prostate Imaging Around Diagnosis



The background features a large, faint clock face with numbers 2, 4, and 5 visible. Overlaid on the clock is a network of thin, light-colored lines connecting various points, suggesting a data or communication network.

Strategies: Data-driven
community engagement to
improve care

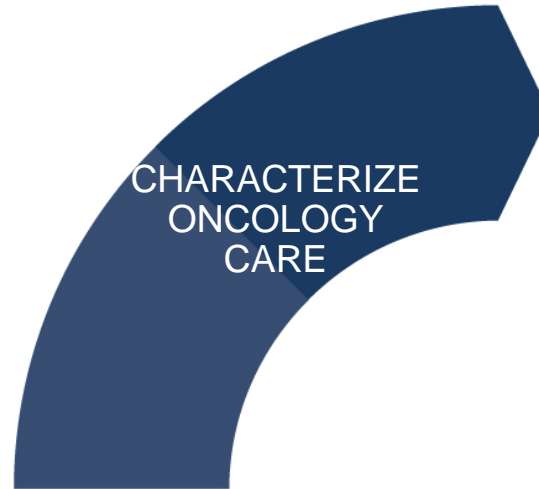
How we work

- Treatment patterns
- Guideline adherence
- Utilization
- Cost
- Survival
- Benchmarking relative to region



How we work

- Treatment patterns
- Guideline adherence
- Utilization
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Provide patients, payers, providers and health systems with **transparent** information to support decision-making in cancer care.

First step in a **community process** to improve value

Metrics Across Phases of Cancer Care

Diagnosis

Prostate:
Advanced
imaging for
staging
(*Choosing
Wisely*)

Breast:
Advanced
imaging for
staging
(*Choosing
Wisely*)

Treatment

Colony
Stimulating
Factor (CSF)
use
(*Choosing
Wisely*)

Hospital use
during
chemotherapy or
radiation therapy

Hospital use
following surgery

Continuing Care

Breast: Advanced
imaging and
tumor marker
testing in
surveillance
[*Choosing
Wisely*]

End-of-Life

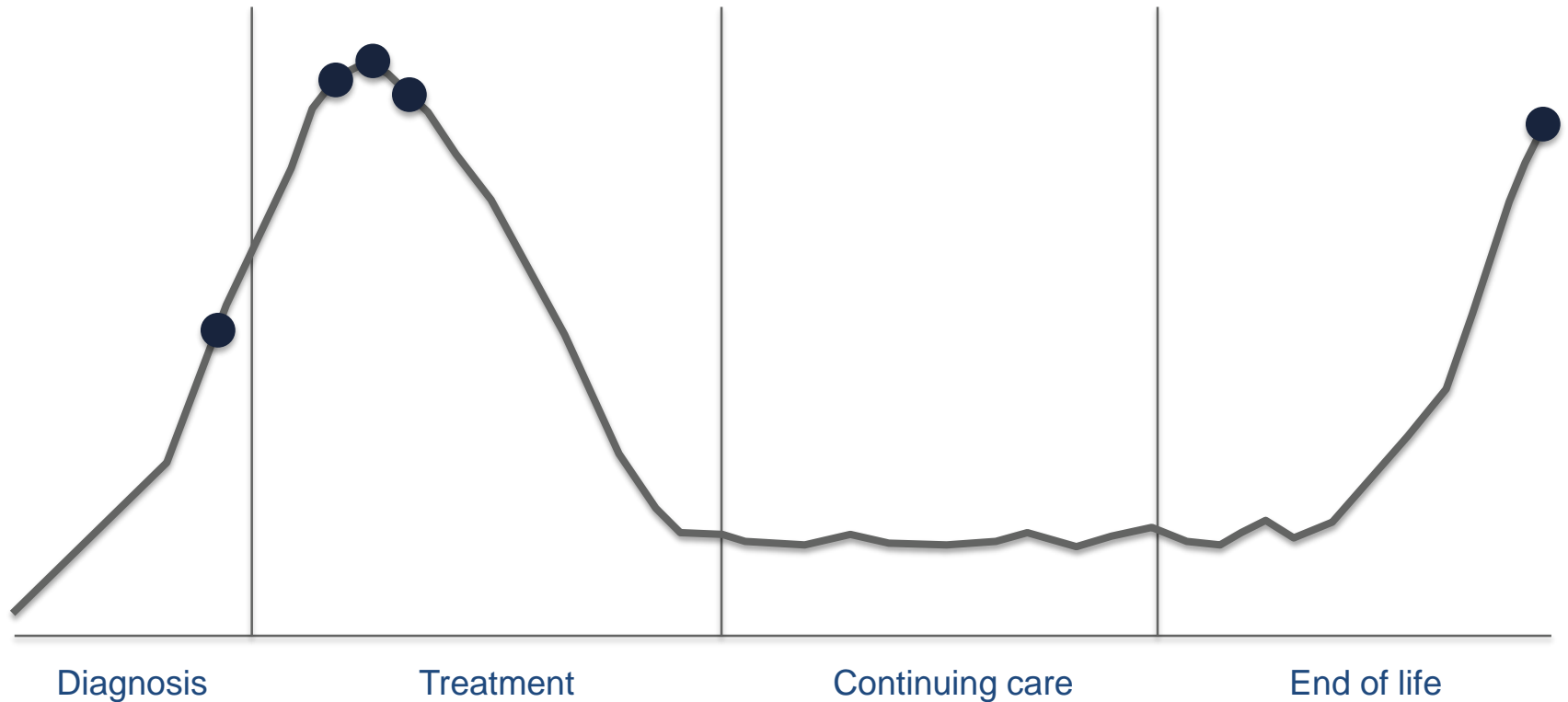
Use of:
Chemo/Radiation
Advanced imaging
Hospital use
Hospice use

Place of death

Data driven insights

The patient story

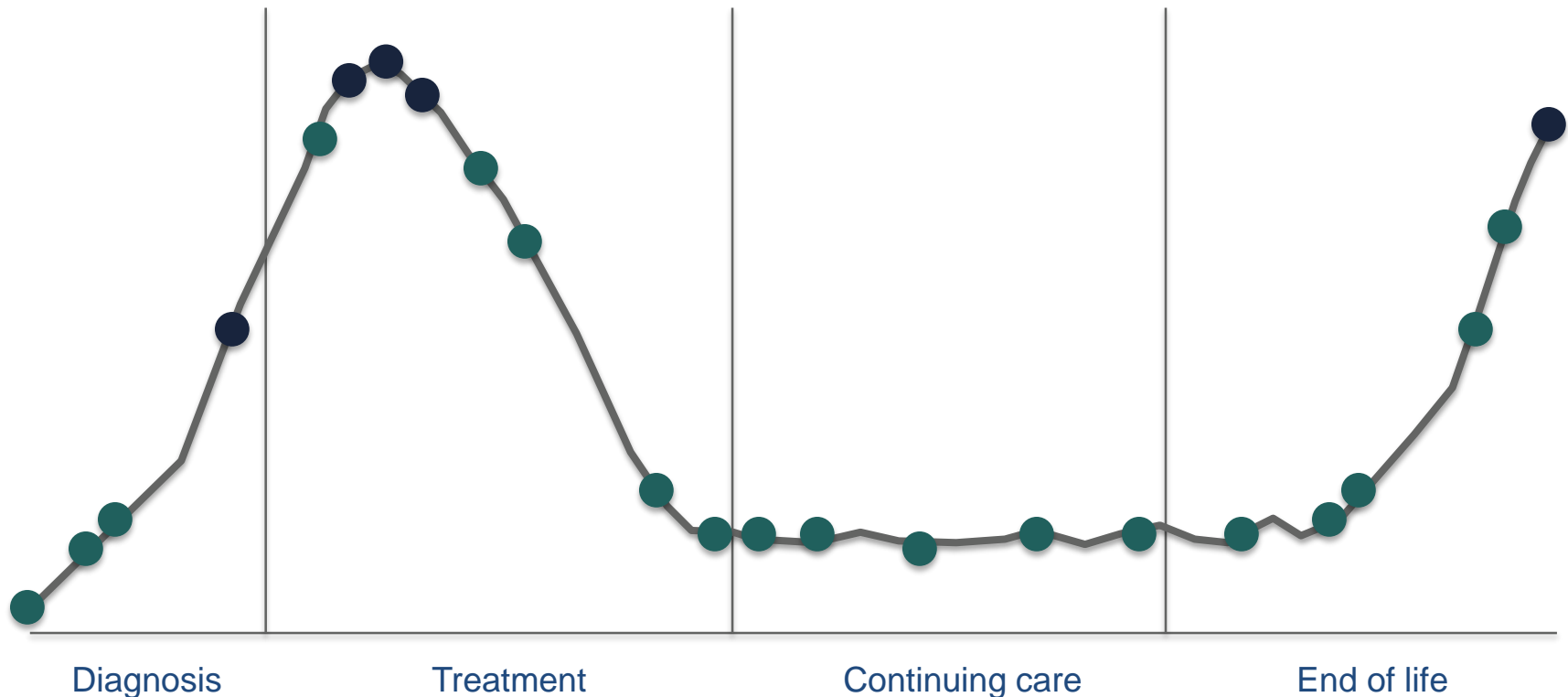
● CANCER REGISTRY, pathological outcomes



Data driven insights

The patient story

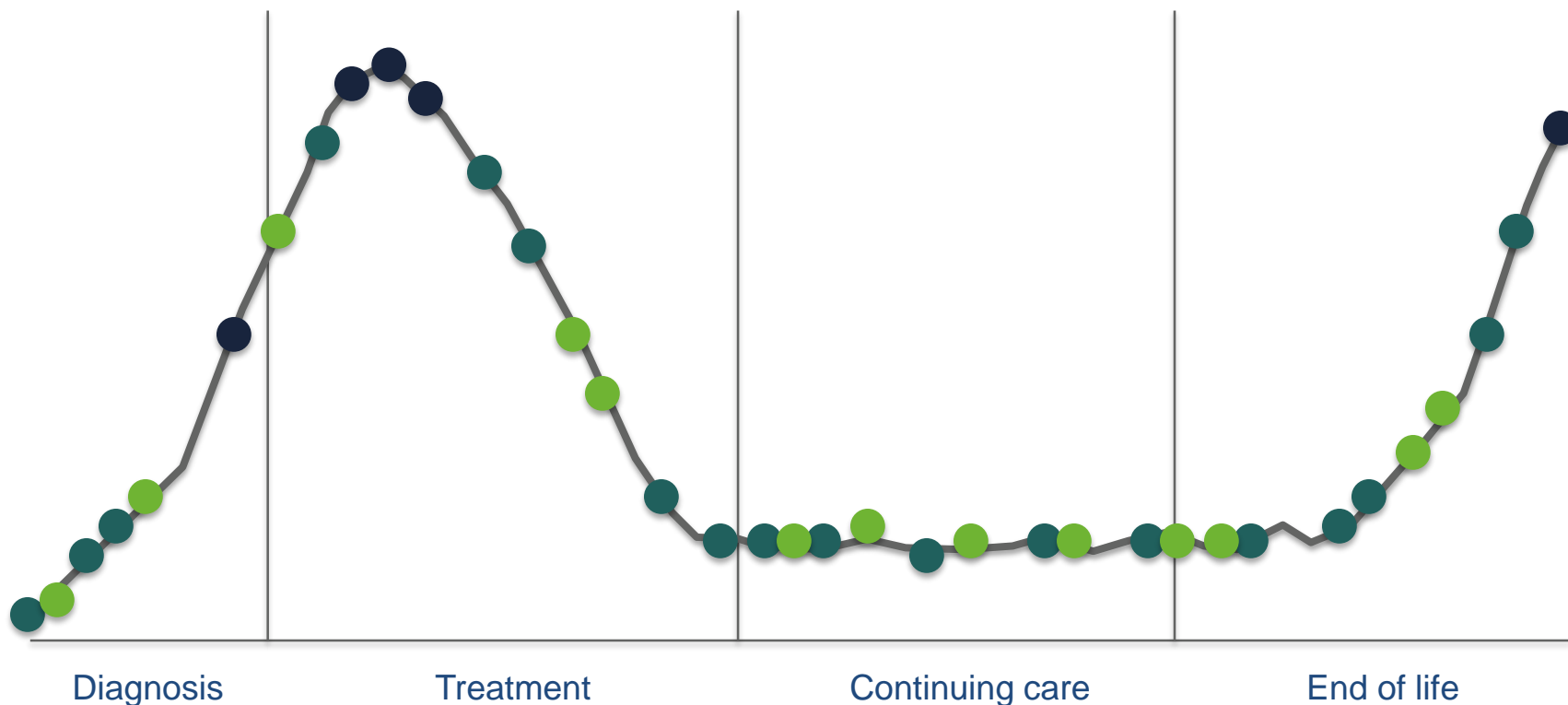
- CANCER REGISTRY, pathological outcomes
- CLAIMS, utilization and costs



Data driven insights

The patient story

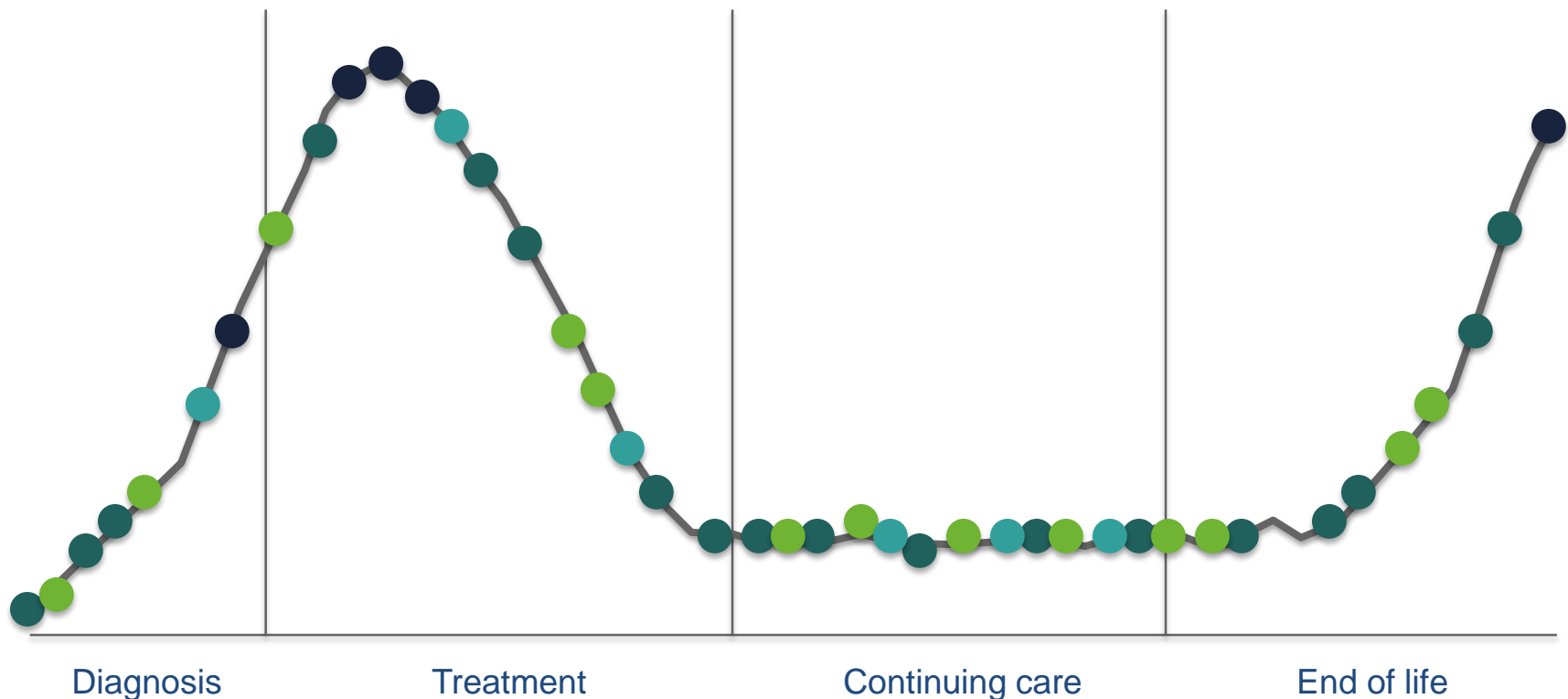
- CANCER REGISTRY, pathological outcomes
- CLAIMS, utilization and costs
- EMR (Electronic Medical Forms), clinical results



Data driven insights

The patient story

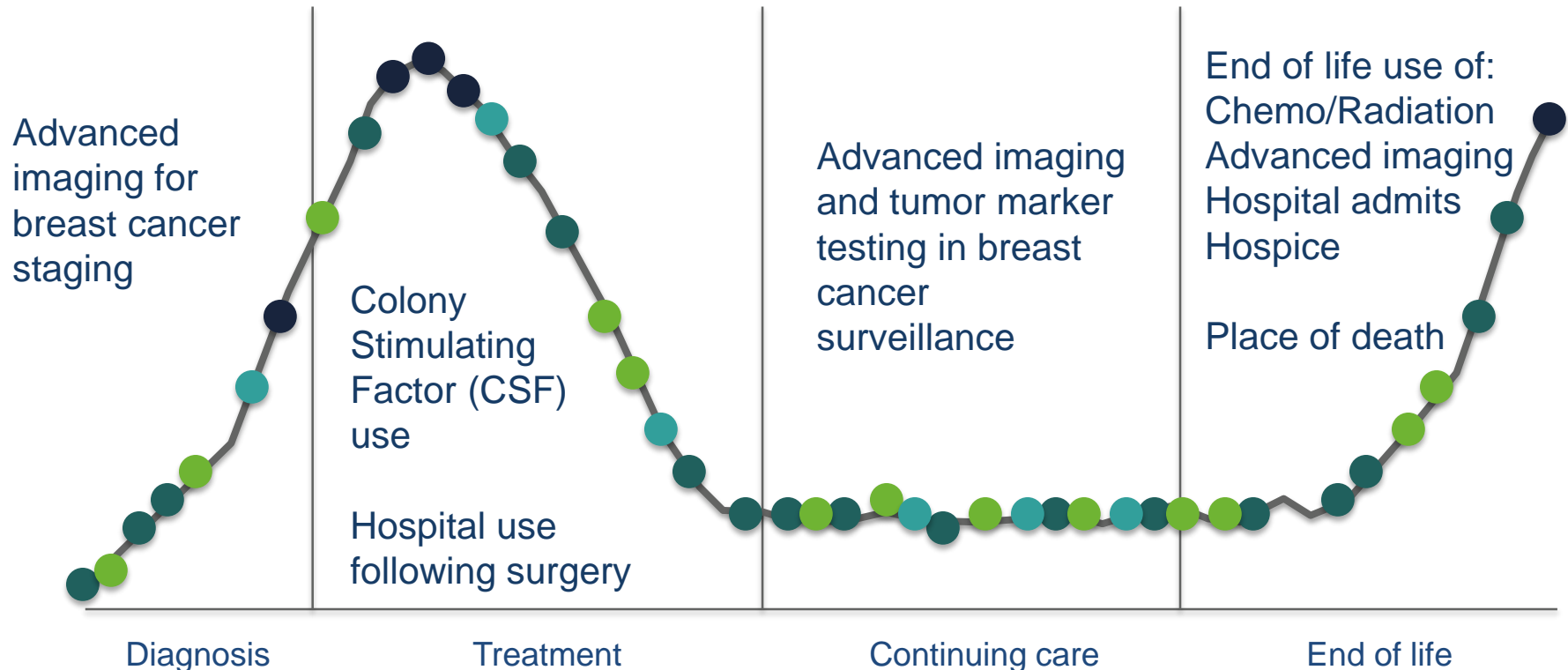
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- PROs (Patient Reported Outcomes) quality of life and patient experience



Data driven insights

The patient story

- CANCER REGISTRY, pathological outcomes
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Current data sources: claims + registry

Linking Data Sources

The Database

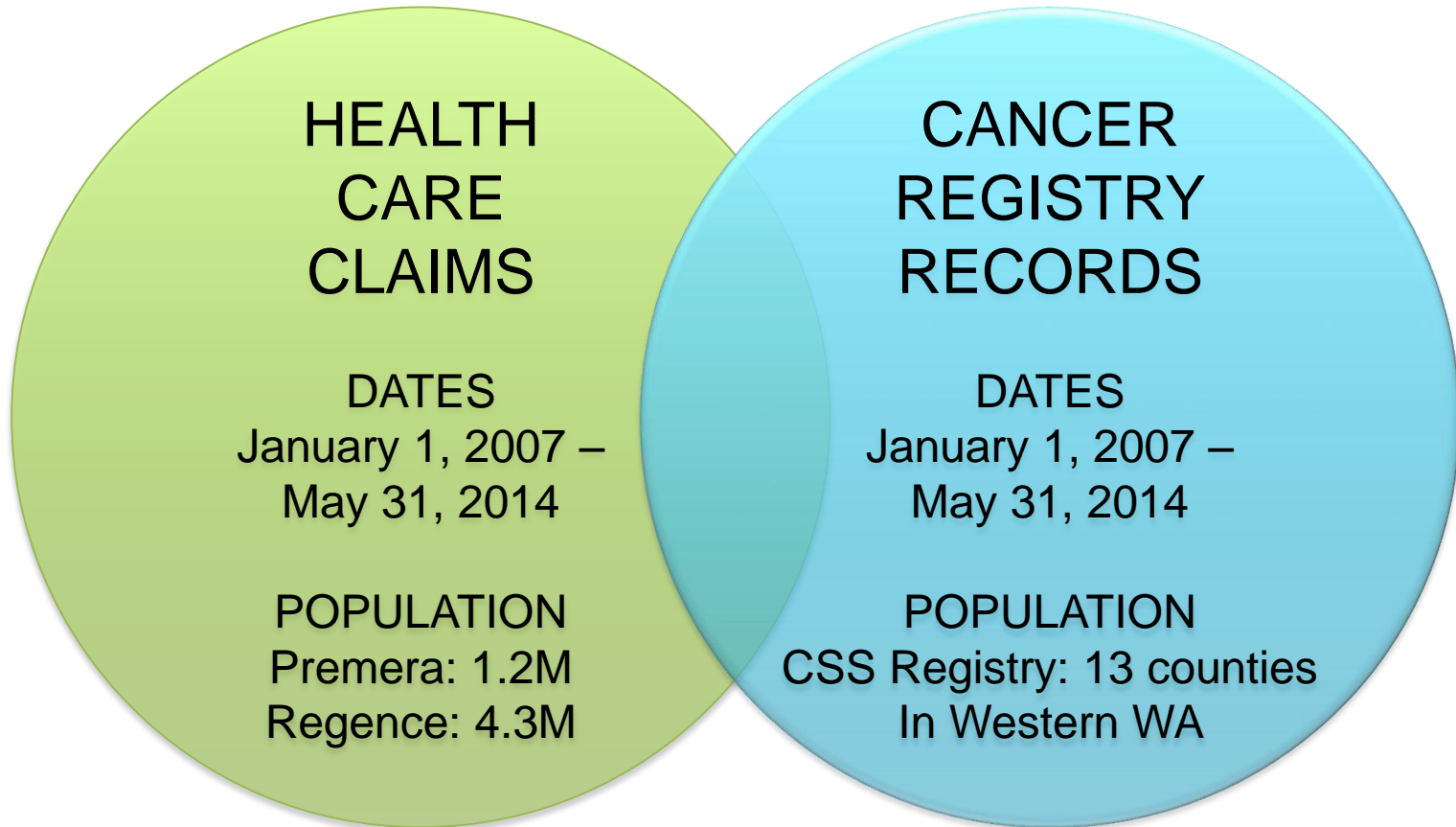
HEALTH
CARE
CLAIMS

DATES
January 1, 2007 –
May 31, 2014

POPULATION
Premera: 1.2M
Regence: 4.3M

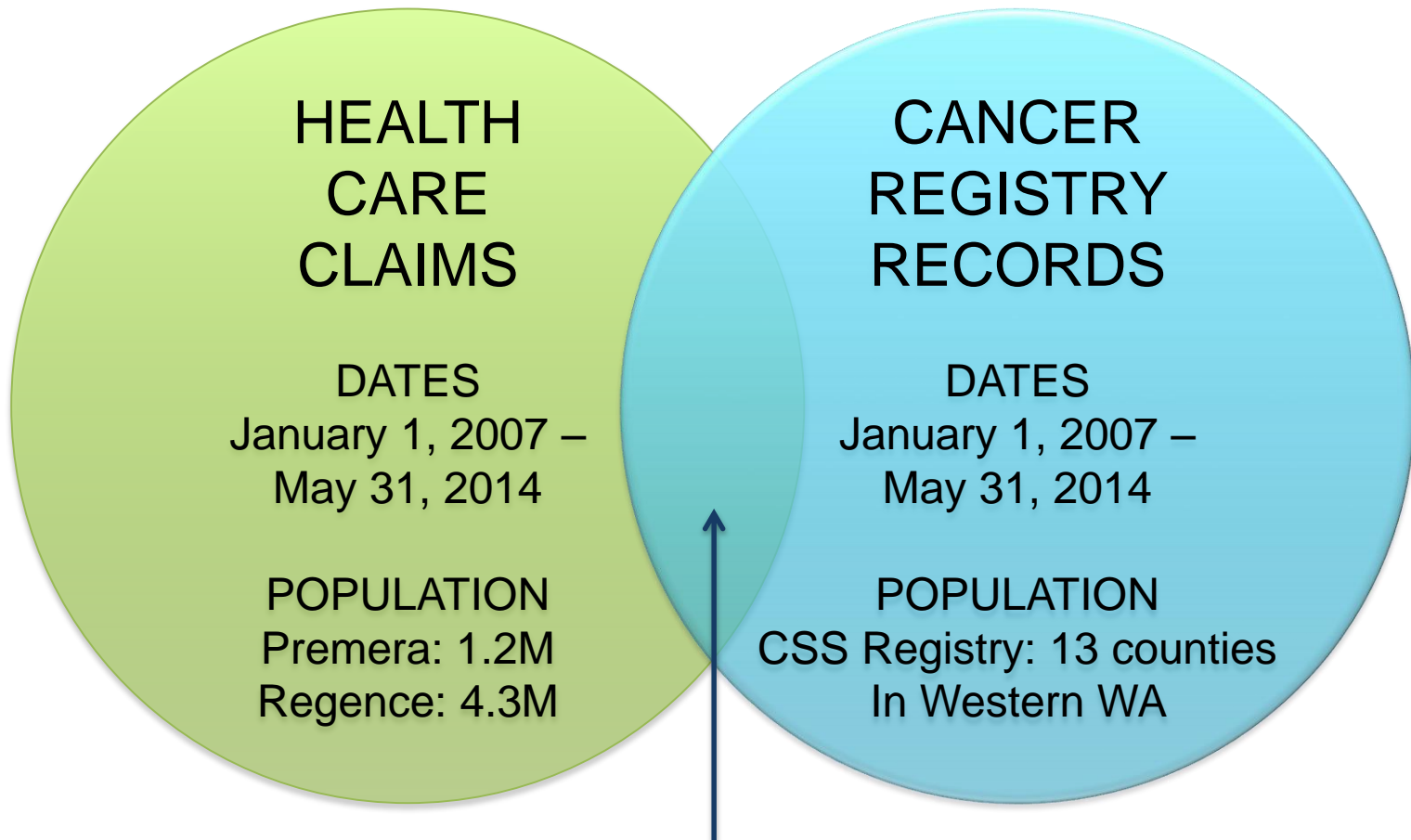
Linking Data Sources

The Database



Linking Data Sources

The Database



66,000+ cancer patients **linked** between the two data sources
Almost 25,000 patients enrolled at time of diagnosis

Tool: Oncology Informatics Platform

Community Reporting

HICOR IQ



Customize Report

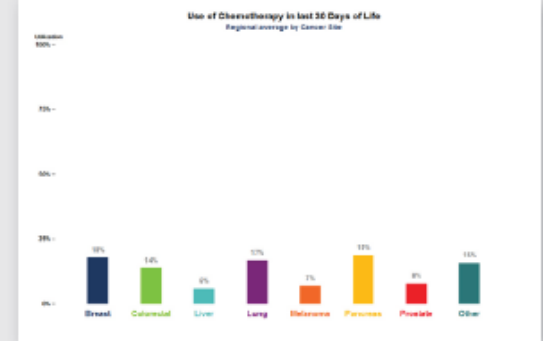
View:

Breakdown:

Population:

by Age: <input checked="" type="checkbox"/> Select all <input type="checkbox"/> <40 <input type="checkbox"/> 40s <input type="checkbox"/> 50s <input type="checkbox"/> 60+	by Cancer Site: <input checked="" type="checkbox"/> Select all <input type="checkbox"/> Breast <input type="checkbox"/> Colorectal <input type="checkbox"/> Lung	by Clinic Volume: <input checked="" type="checkbox"/> Select all <input type="checkbox"/> High <input type="checkbox"/> Low <input type="checkbox"/> Medium	by Risk: <input checked="" type="checkbox"/> Select all <input type="checkbox"/> Low Risk <input type="checkbox"/> Intermediate Risk
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by Gender: <input checked="" type="checkbox"/> Select all <input type="checkbox"/> Male <input type="checkbox"/> Female	by Race: <input checked="" type="checkbox"/> Select all <input type="checkbox"/> White <input type="checkbox"/> Black <input type="checkbox"/> Hispanic (any race) <input type="checkbox"/> Asian/Pi <input type="checkbox"/> Other/Unknown	by Stage: <input checked="" type="checkbox"/> Select all <input type="checkbox"/> Localized <input type="checkbox"/> Regional <input type="checkbox"/> Distant <input type="checkbox"/> Unstaged
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Other screen views

HICOR IQ_{BETA}

HICOR's oncology informatics platform

- Provides interactive reports of regional performance metrics
- Allows for exploration of regional and clinic-level variation of metrics

Welcome to HICOR's Regional Oncology Informatics Platform

Vision

Provide patients, payers, providers and health systems with transparent information to support decision-making in cancer care. We view performance reporting as a first step in a community process to improve value in cancer care.

Please provide feedback on HICOR IQ Beta.

The initial launch includes a limited initial set of regional performance reports based on [ASCO/ABIM 2012 Choosing Wisely Recommendations](#), generated from the HICOR cancer registry-health insurance claims linked [Database](#).

Please provide feedback here: <https://www.surveymonkey.com/s/HICORIQ>

Future HICOR IQ iterations will include:

- Expanded data sources including electronic medical records and patient reported outcomes
- Additional data providers – payers, health systems and patients
- Expanded set of performance measures based on regional consensus
- Expanded functionality including partner-specific views

Contact us at hicorIQ@fredhutch.org with suggestions or questions

Links

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Reports ▼

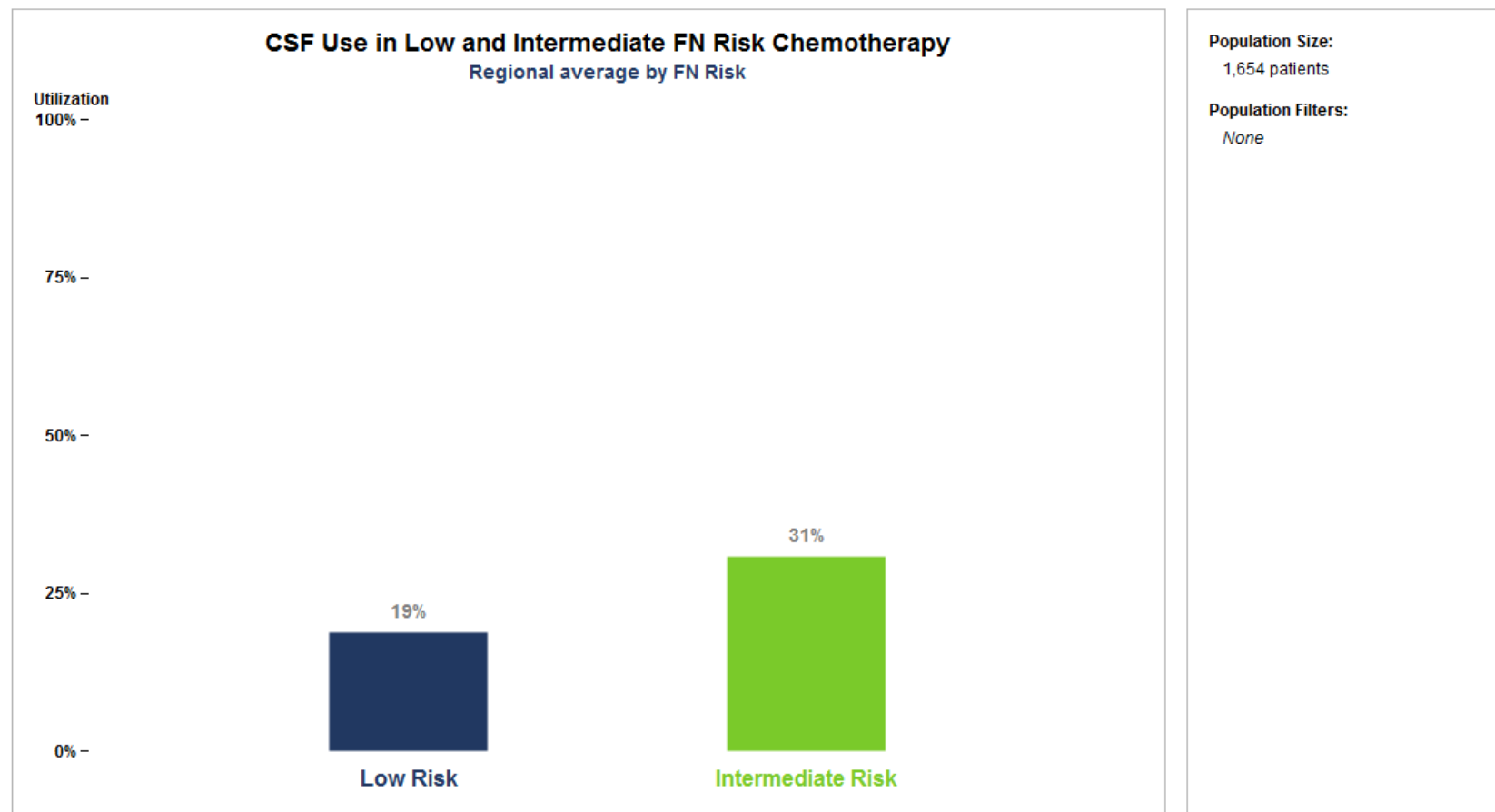

☐ Mine

Name	Modified
Diagnosis	
Use of Advanced Imaging for Staging Breast Cancer	2015-03-26
Use of Advanced Imaging for Staging Prostate Cancer	2015-03-26
Treatment	
Colony-Stimulating Factor Use in Low and Intermediate FN Risk Chemotherapy	2015-03-26
Continuing Care	
Use of Advanced Imaging for Breast Cancer During Surveillance Period	2015-03-26
Use of Testing for Breast Cancer During Surveillance Period	2015-03-26
Use of Tumor Markers for Breast Cancer During Surveillance Period	2015-03-26
End of Life	
Use of Chemotherapy in last 30 Days of Life	2015-03-26
Use of Chemotherapy or Radiation Therapy in last 30 Days of Life	2015-03-26
Use of Radiation Therapy in last 30 Days of Life	2015-03-26

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HICOR Reports > CSF Use in Low and Intermediate FN Risk Chemotherapy

[CUSTOMIZE REPORT](#)
[DOWNLOAD GRAPH](#)


For more information about the methods used to create this visualization please read this [documentation](#)

HICOR Reports > CSF Use in Low and Intermediate FN Risk Chemotherapy

Customize Report

View:

by Region ▾

Breakdown:

by Stage ▾

Population:

by Age:

- ☒ Select all
- ☒ <40
- ☒ 40s
- ☒ 50s
- ☒ 60+

by Cancer Site:

- ☐ Select all
- ☒ Breast
- ☒ Colorectal
- ☐ Lung

by Clinic Volume:

- ☒ Select all
- ☒ High
- ☒ Low
- ☒ Medium

by FN Risk:

- ☐ Select all
- ☐ Low Risk
- ☒ Intermediate Risk

by Gender:

- ☒ Select all
- ☒ Male
- ☒ Female

by Race:

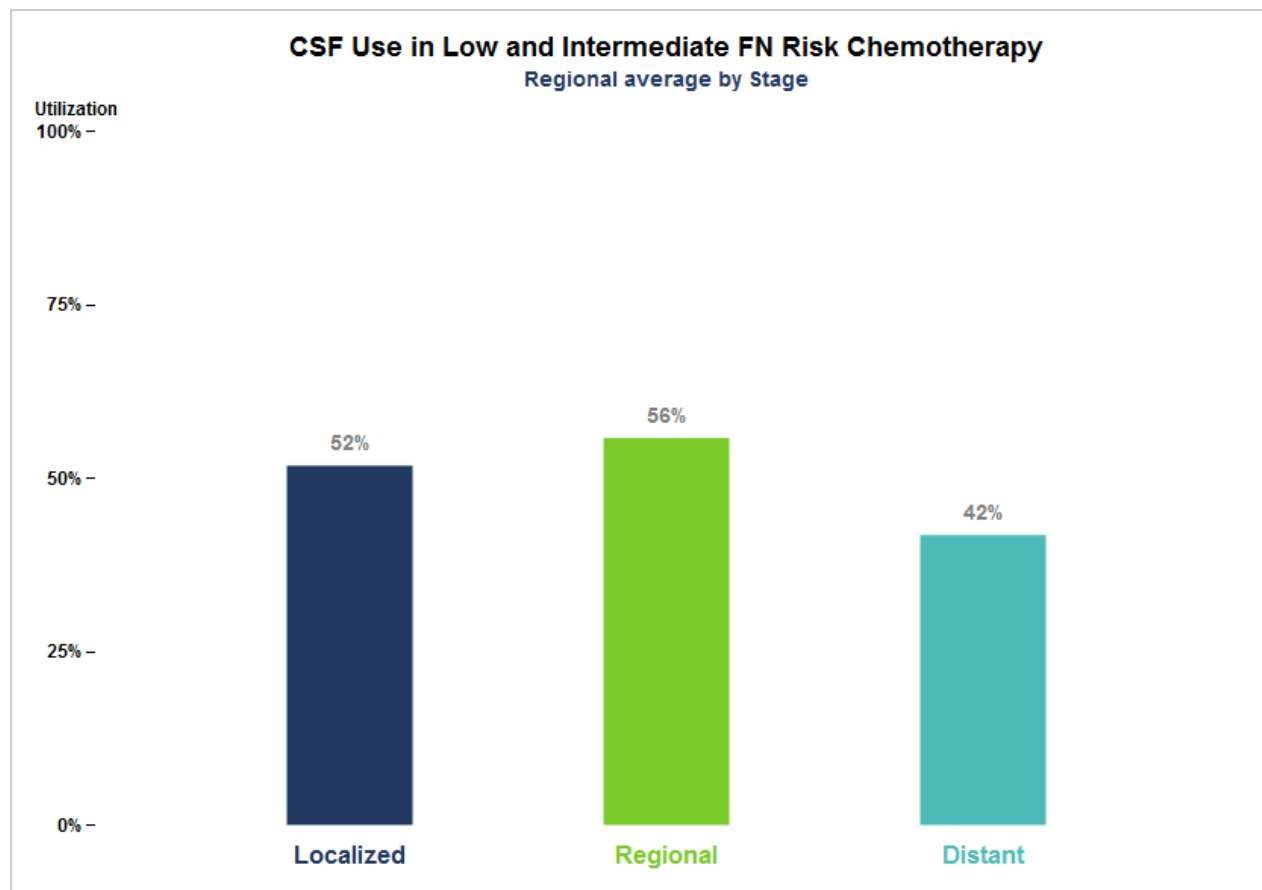
- ☒ Select all
- ☒ White
- ☒ Black
- ☒ Hispanic (any race)
- ☒ Asian/PI
- ☒ Other/Unknown

by Stage:

- ☒ Select all
- ☒ Localized
- ☒ Regional
- ☒ Distant
- ☒ Unstaged

[UPDATE](#)[CANCEL](#)

HICOR Reports > CSF Use in Low and Intermediate FN Risk Chemotherapy

[CUSTOMIZE REPORT](#)
[DOWNLOAD GRAPH](#)


Population Size:

399 out of 1,654 patients

Population Filters:

Cancer Site - Breast

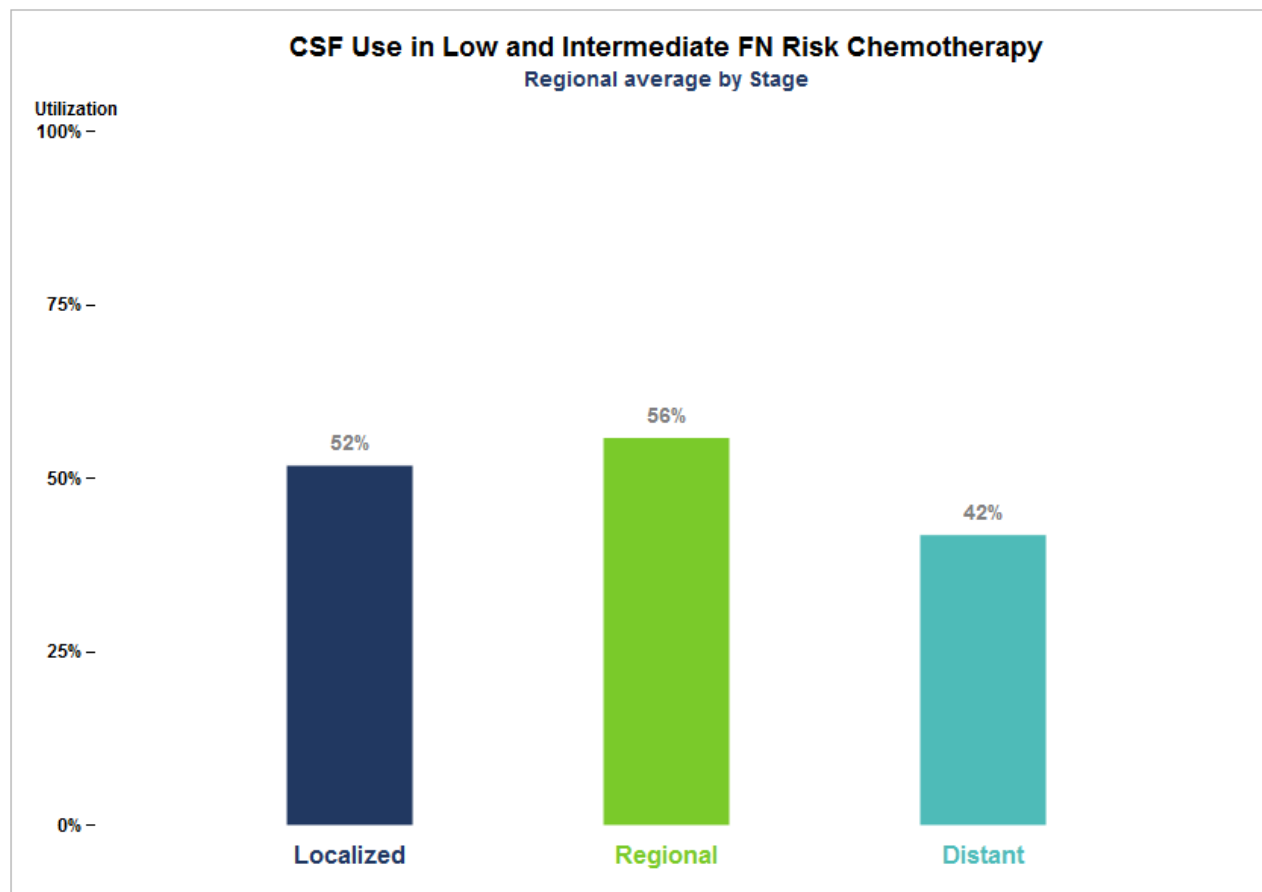
FN Risk - Intermediate Risk

Excluded due to population size restrictions:

- *Unstaged*

For more information about the methods used to create this visualization please read this [documentation](#)

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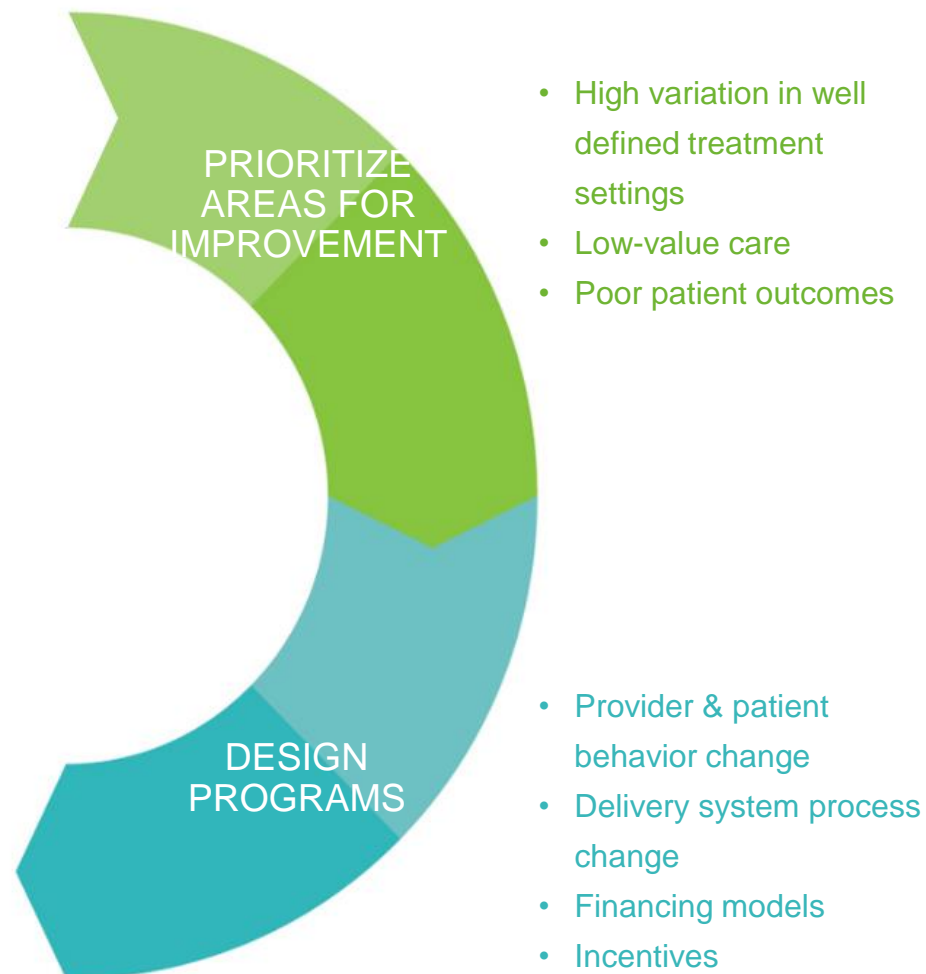
HICOR IQ: Neutral,
trusted, accessible data-
source for identifying
opportunities to improve
care

How we work

- Treatment patterns
- Guideline adherence
- Utilization
- Cost
- Survival
- Benchmarking relative to region



How we work



Choosing Wisely Regional Reporting

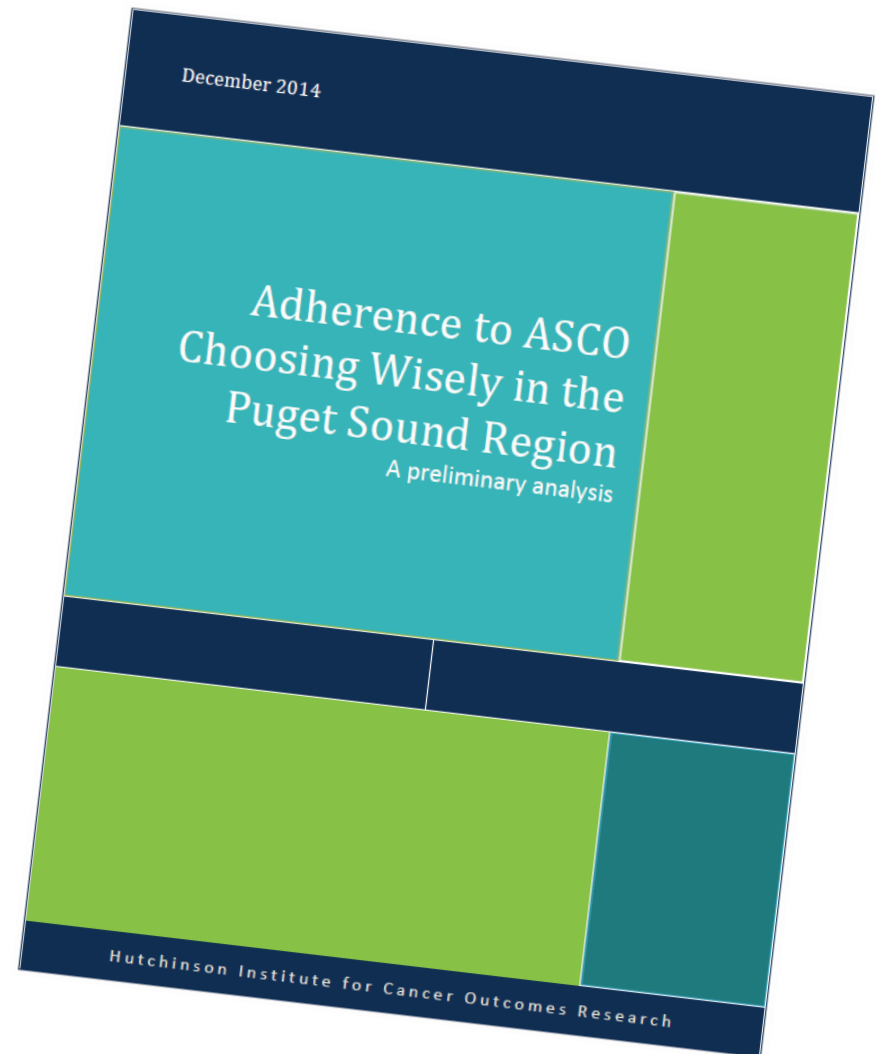
In December 2014, HICOR held a Premera-sponsored meeting with oncology practices to share results

Participants

- HICOR
- Premera
- Stanford University
- Cancer Care Northwest
- Everett Clinic
- MultiCare
- Northwest Medical

Specialties

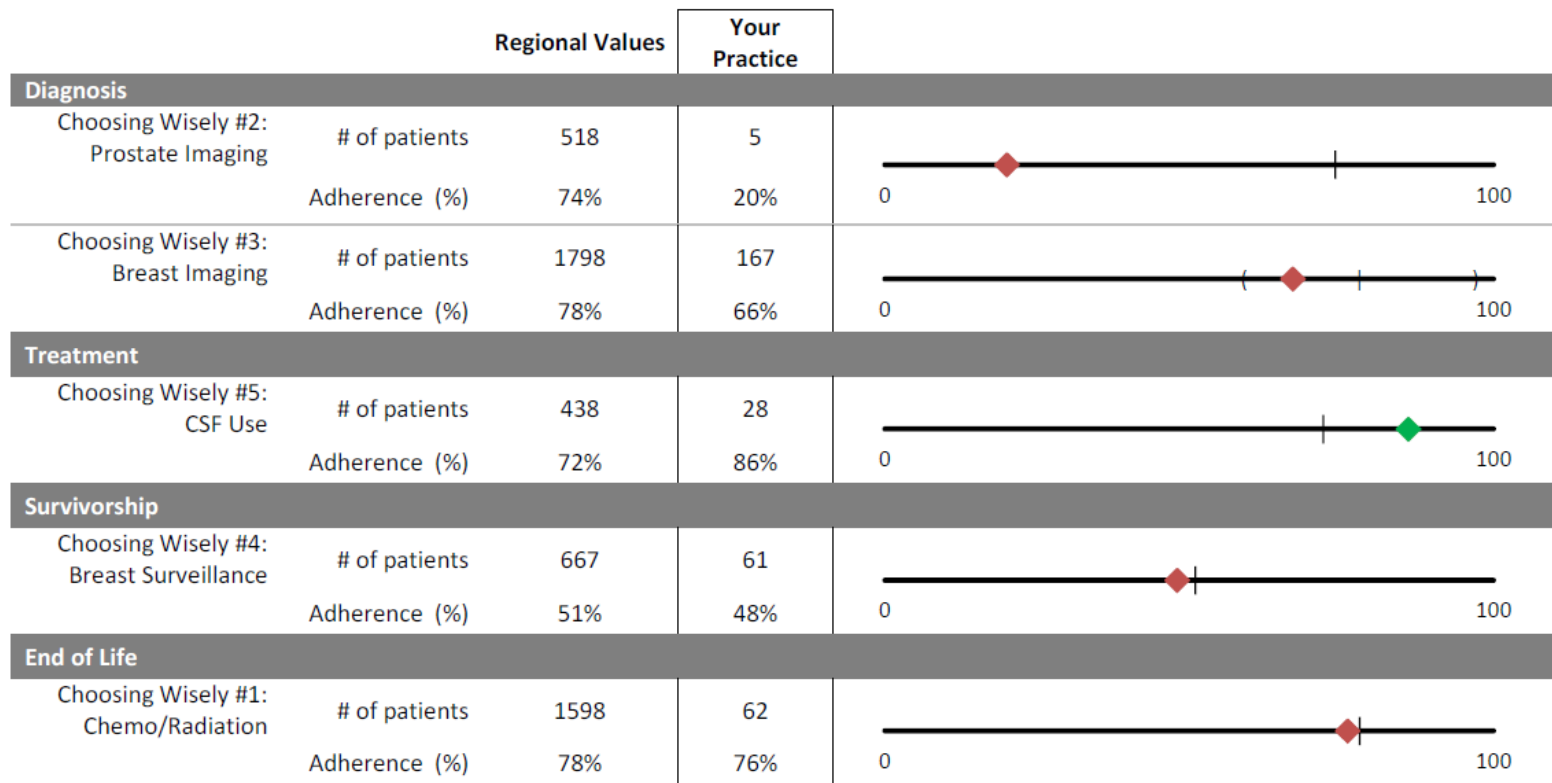
- Overlake Hospital
- Providence
- Proliance
- Seattle Cancer Care Alliance
- Skagit Valley Hospital
- Swedish Cancer Institute
- University of Washington
- Virginia Mason



Oncology Practice Reports

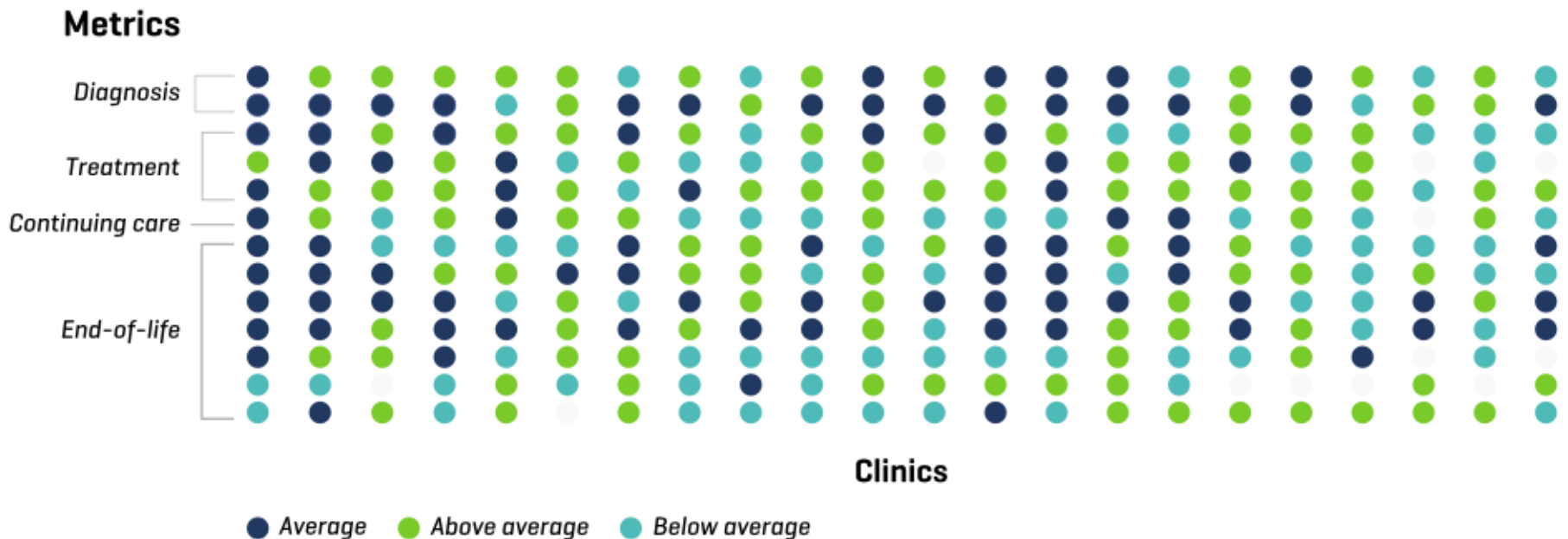
In addition to the Regional Report, oncology practices received their own clinic-specific data

Clinic specific information was shared with practices at the conclusion of the December 2014 meeting



Opportunity to learn from each other

No one clinic is consistently above average or below average in all areas



Note: Clinics defined as average are those that fall within + or - 3 % points of the regional average.

The background is a light gray collage. On the left, there is a network diagram with nodes and connecting lines. In the center, a large clock face is visible, showing numbers 2, 3, 4, and 5. On the right, there are several rows of books on a shelf.

Where are we going?

Welcome to HICOR's Regional Oncology Informatics Platform

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HICOR IQ Projects



PREMERA

In development

PREMERA
INNOVATION
COLLABORATI
ON

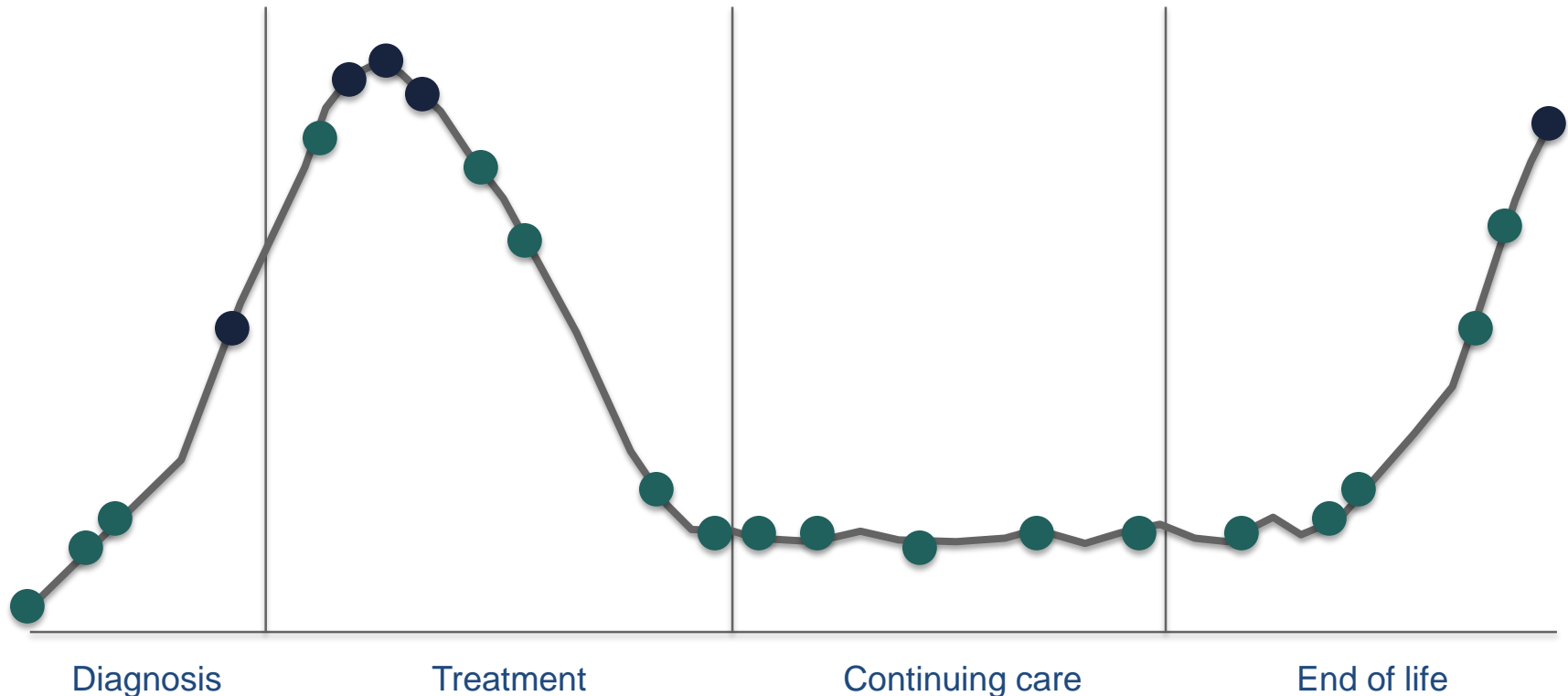
Data driven insights

The patient story

● CANCER REGISTRY, pathological outcomes

● CLAIMS, utilization and costs

Current database



Data driven insights

The patient story

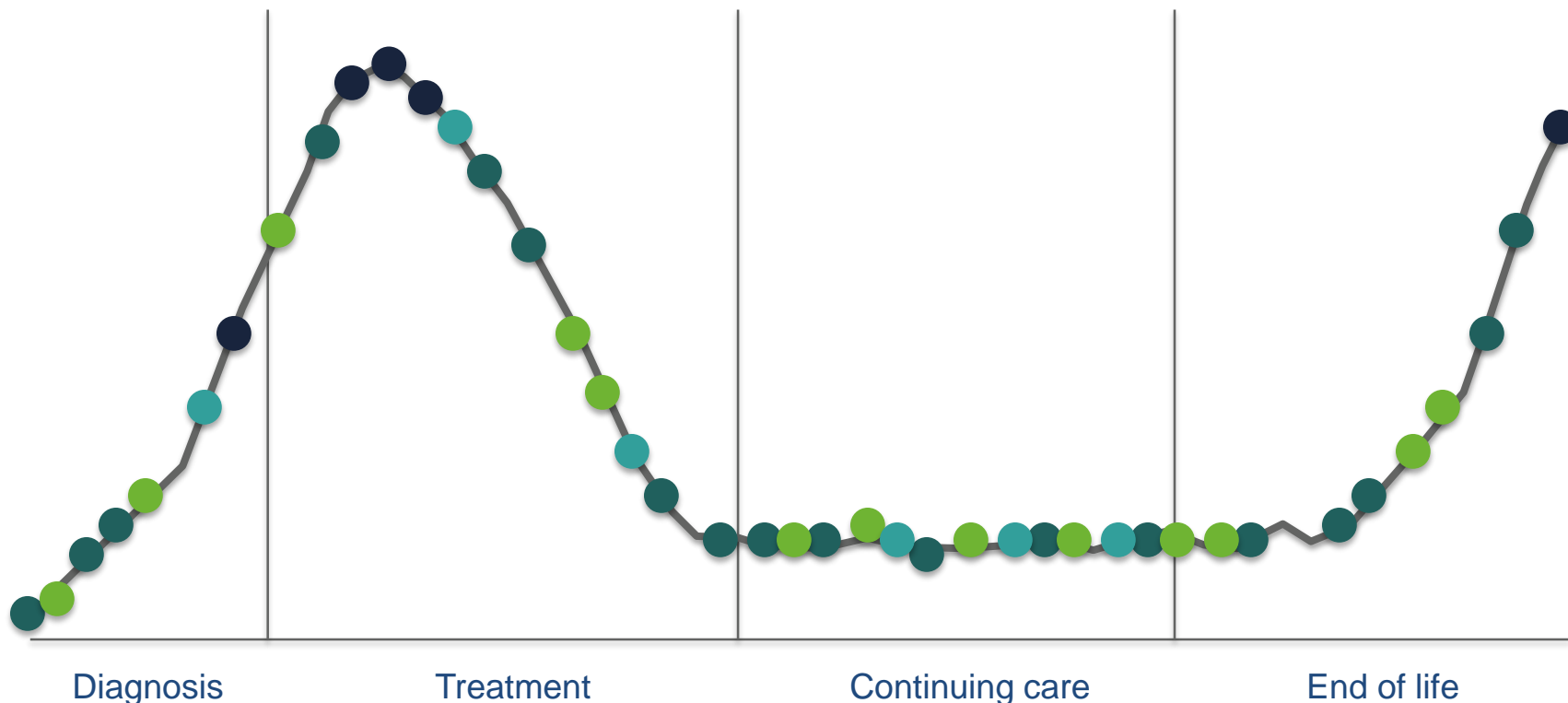
● CANCER REGISTRY, pathological outcomes

● CLAIMS, utilization and costs

● EMR (Electronic Medical Forms), clinical results

● PROs (Patient Reported Outcomes) quality of life and patient experience

Example: MPower



Goals for HICOR IQ

Expand the flexibility of the tool

Integrate community feedback



Summary



Partnership with LabKey to achieve goals of data transparency has included:

- Both out-of-the box software and custom development
- User interviews/feedback throughout the development process
- Collaboration on data visualization

Together we have developed a tool to get actionable data to healthcare decision-makers