Health Plan Administrative Data in Study Designs to Benefit Older Adults

Improving the Evidence Base for Treatment Decision-Making for Older Adults with Cancer: A Virtual Workshop

Jennifer Malin, MD, PhD, Sr. Medical Director, Oncology and Genetics

January 27, 2021

United Healthcare

United Healthcare

Medicare & Retirement

12.5M
people served.

Serves
1 in 5
Medicare beneficiaries.

Employer & Individual

28M
people served.

Nearly
250,000
employers as customers.

Community & State

6M
people served.

Over
100
different health care programs managed.

Nearly
50M
members

Metrics Available from Claims Data

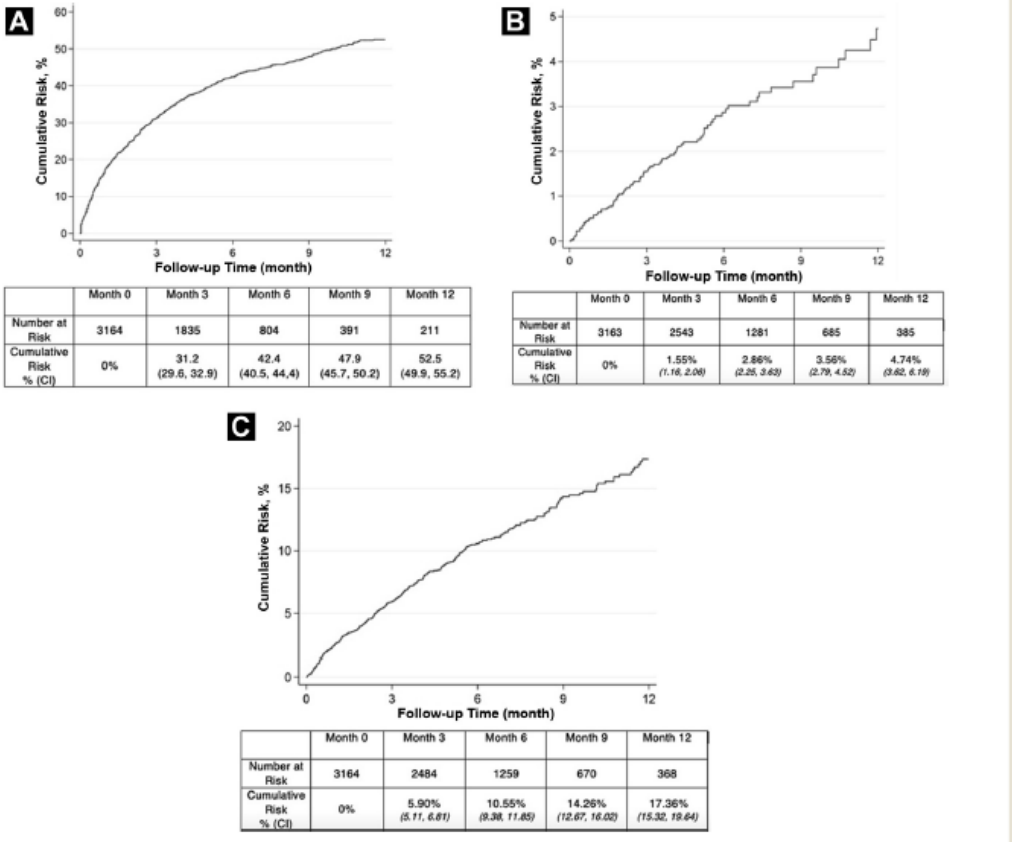
Patterns of Care	Outcomes
Surgery	Time to next treatment (rwTTNT)
Radiation	Adverse Events
Cancer therapeutics/drugs	Hospitalizations
Line of therapy	ED visits
Duration of treatment (rwTTD)	Procedures related to AE
Related Procedures	Visits for AE
Hospice	Cost of care
	Total cost of care
Comorbid conditions	Cancer-specific costs
Diagnoses	Drug costs
Drugs to treat comorbid conditions	Patient out-of-pocket costs

Benefits: real world evidence; timely (although need to account for duration of therapy and 3 months claims run out)

Limitations: lack of data on stage of disease biomarkers

Claims Data Used to Estimate AEs Associated with Immunotherapies

Figure 2 A, Cumulative Occurrence of Immune-related Adverse Events Over Time. B, Cumulative Occurrence of Hypophysitis. C, Cumulative Occurrence of Pneumonitis



	Month 0	Month 3	Month 6	Month 9	Month 12
Number at Risk	3164	1835	804	391	211
Cumulative Risk % (CI)	0%	31.2 (29.6, 32.9)	42.4 (40.5, 44.4)	47.9 (45.7, 50.2)	52.5 (49.9, 55.2)

	Month 0	Month 3	Month 6	Month 9	Month 12
Number at Risk	3163	2543	1281	685	385
Cumulative Risk % (CI)	0%	1.55% (1.16, 2.06)	2.86% (2.25, 3.63)	3.56% (2.79, 4.52)	4.74% (3.62, 6.19)

	Month 0	Month 3	Month 6	Month 9	Month 12
Number at Risk	3164	2484	1259	670	368
Cumulative Risk % (CI)	0%	5.90% (5.11, 6.81)	10.55% (9.38, 11.85)	14.26% (12.67, 16.02)	17.36% (15.32, 19.64)

Clinical Lung Cancer 2020; 21:421-7

OPTUM Labs®

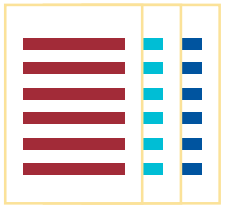
Augmenting Claims with Prior Authorization Data

PRIOR AUTHORIZATION

Data Elements from Prior Authorization

- Stage
- Histology
- Line of Therapy
- Biomarkers

Prior auth. data



Claims data

✓ Additional Insight

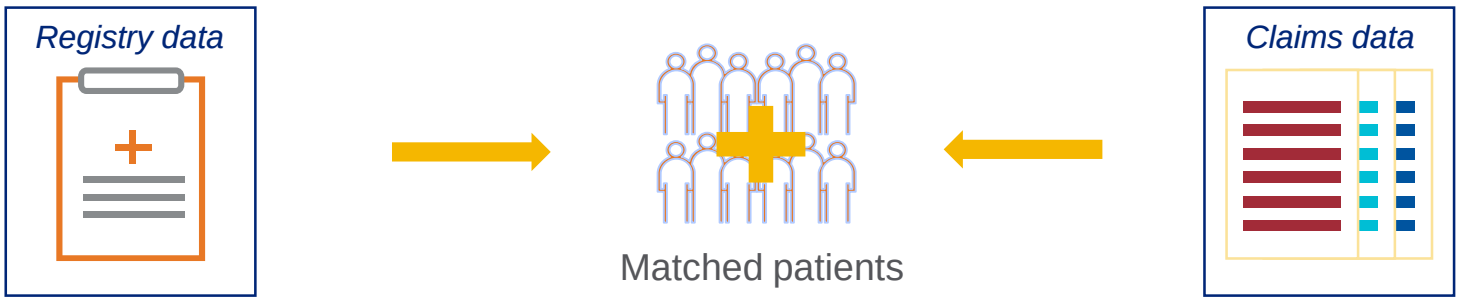
Visibility for patients
What regimens and benefit do other patients like me receive?

Treatment insight for physicians
What treatment paths have worked for comparable patients?

Input for NCCN guidelines
What are adverse effects?

Enhanced quality/cost outcomes
What treatment modalities are most cost effective?

Generating Real World Evidence: Linking SEER cancer registry data with a nationally representative, longitudinal commercial claims data set



- No Personally Identifiable Information (PII) is sent to OptumLabs
- One-way hashing & salting algorithms are applied to prevent patient identification
- Linkable data sets are de-identified and certified fully compliant with HIPAA standards for research

Linking claims data with SEER data adds critical variables for cancer research:

- Tumor characteristics (site, morphology)
- Stage at diagnosis
- Outcomes (survival)

Real World Evidence Augments Clinical Trial Data

	Outcomes from Clinical Trials			Real World Evidence		
Regimen	**OS**	**PFS**	**Toxicity**	**All-Cause inpatient stays (%)**	**Duration of Therapy Median (Mean)**	**Total Cost of Care (Average,SD)**
Fluorouracil + Leucovorin + Irinotecan + Oxaliplatin (FOLFIRINOX mFOLFIRINOX)	11.1 months (Conroy T et al) 9.0 months (Mahaseth H et al)	6.4 months (Conroy T et al) 8.5 months (Mahaseth H et al)	FN – 5% Fatigue – 24% Nausea - NR Vomiting – 15% Diarrhea – 13% Neuropathy – 9% Thromboembolism – 7%	34%	85 (112) days	$87,971 ($92,818)
Gemcitabine + Albumin-bound paclitaxel (G-nP)	8.5 months NR (LAPACT)	5.5 months (MPACT) 10.8 months (LAPACT)	FN – 3% Fatigue – 17% Neuropathy – 17% Diarrhea – 6% Nausea/Vomiting – 0%	37%	80 (101) days	$80,132 ($79,466)
Gemcitabine + Erlotinib	6.2 months	3.8 months	Diarrhea – 6% Fatigue – 15% Infections – 17% Rash – 6% Stomatitis - <1%	NR	NR	NR
Gemcitabine + Capecitabine	7.1 months (Cunningham et al) 8.4 months (Herrmann R et al)	5.3 months (Cunningham et al) 4.3 months (Herrmann R et al)	Fever – 4% Nausea – 7% Vomiting – 6% Lethargy – 21% Diarrhea – 5% Stomatitis – 2% Hand Foot Syndrome – 4%	23%	64 (92) days	$33,667 ($23,311)

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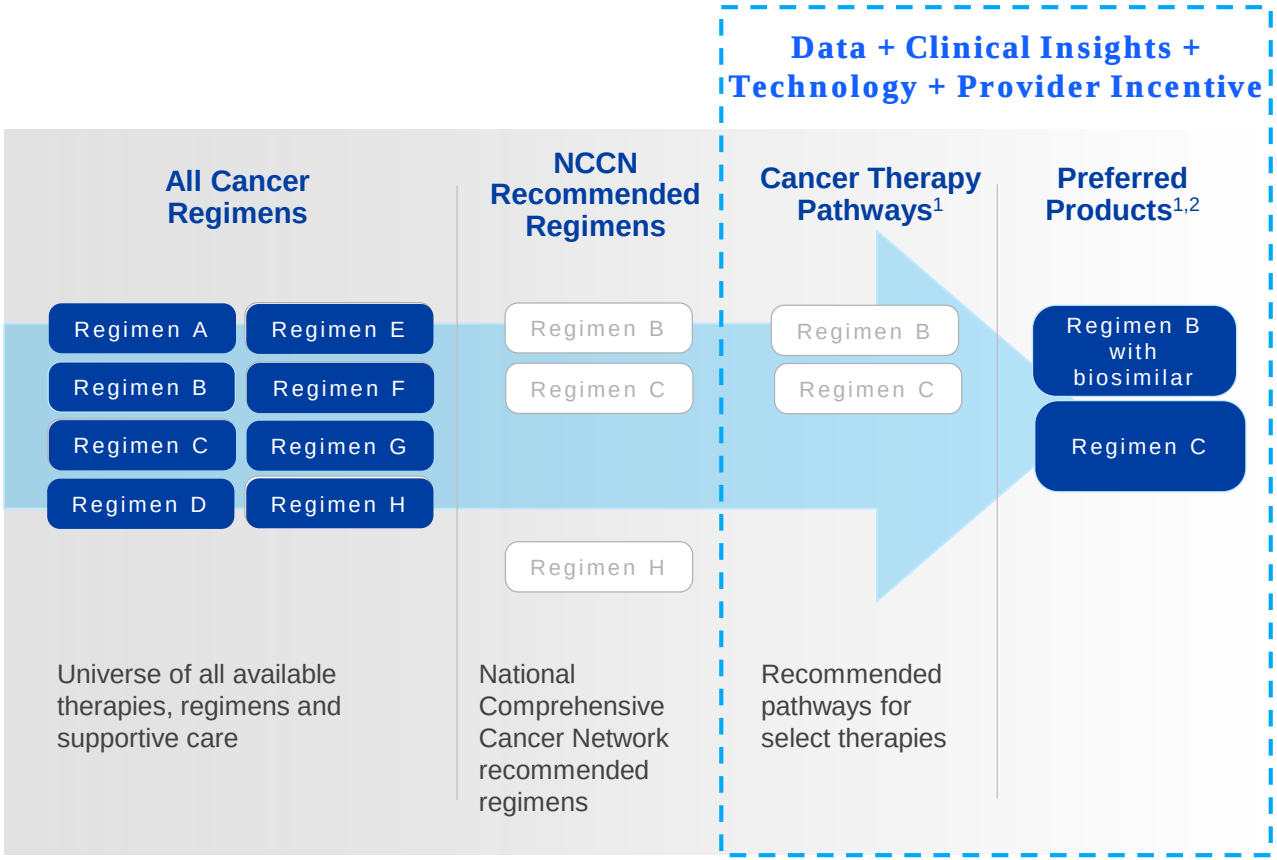
Cancer Guidance Program

Maximizing the value and effectiveness of cancer therapy.



Cancer Guidance Program

- Single platform for providers.
- Drill-down of pathway regimens and lower cost biosimilar option if available.
- Developed with team insights from 8 medical directors, 5 specialty pharmacists,150+ oncology nurses.
- Real-time patient specific results based on clinical evidence.
- 65% of the PAs are auto-decisioned[3], the remaining 35% go through review and education outreach, resulting in <1% denials[4].

1. The pathway program and preferred products are separate and distinct management strategies under CGP. 2. Oncology class Q4 2019. Remaining classes 2020. 3. Auto-approval rate report 5/1/19 – present.
4. Optum book of business 2018-2019.

Summary

- Health Plan data can enhance evidence obtained from clinical trials on benefits of cancer therapy in older adults
- Linkages with cancer registry data and prior authorization data can be used to obtain clinical information including stage, histology, biomarkers and line of therapy supplementing administrative claims data
  - Linked prior authorization and claims data available to academic researchers through collaborations with Optum Labs and to industry partners through Optum Life Sciences
  - UHC claims and SEER data linkage in process
- Real World Evidence provides information on additional outcomes typically not reported in clinical trials