How is real-world oncology data

driving effectiveness and safety of therapeutics and diagnostics in cancer patients?

What are the foundations of high-quality oncology research data?

Data breadth
Population size across cancer types

Data depth
Completeness of cancer specific variables

Continuum of care
Care outside the oncology clinic

Data quality
Provenance and traceability

Robust patient populations across cancer types

Researchers working with Optum data can find significant patient populations across numerous types of cancers with defining genetic mutations, including:

Data breadth

- Breast cancer
- Prostate cancer
- Colorectal cancer
- Bladder cancer
- Kidney cancer
- Ovarian cancer
- Lung cancer
- Melanoma, squamous cell carcinoma and other skin cancers
- Multiple myeloma
- Several subtypes of leukemia
- Several subtypes of non-Hodgkin lymphoma

End-to-end patient journey

Optum data support longitudinal outcomes research by capturing information related to pre-cancer clinical encounters, labs, diagnostics and assessments, post-diagnosis treatment encounters, and post-surgical care.

Data depth

- Signs, symptoms
- Clinical assessment
- Labs, procedures, biomarkers
- Diagnosis/ staging
- Surgery
- Radiation therapy
- Chemotherapy
- Oral medication
- Follow-up care

Pre-diagnosis

Optum data are unique in that they capture encounter information from other specialties that test, diagnose and often treat cancer in its early phases.

Continuum of care

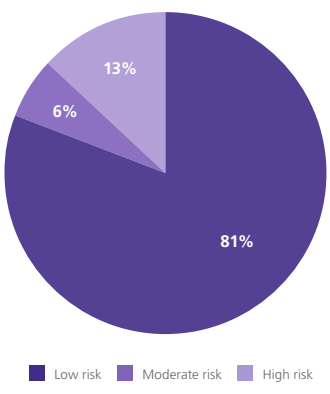
- Cardiology
- Psychology
- Gynecology
- Surgical oncology
- Medical oncology
- Osteopathic/ orthopedic oncology
- Primary care
- Radiology oncology

The role of non-oncologists in cancer care is critical. For example, urologists see and administer diagnostic testing to almost 50% of low to moderate risk prostate cancer patients.*

Identifying provider specialty at varied disease states

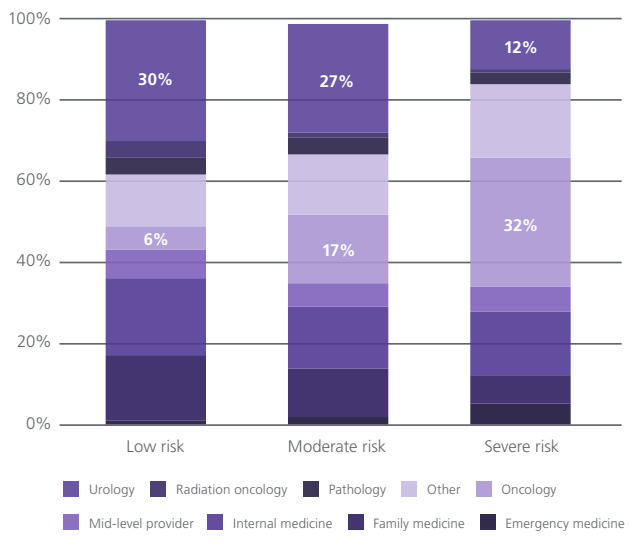
Prostate cancer severity defined using PSA lab results (low risk <10 ng/ml, moderate risk 10 ng/ml – 20 ng/ml, high risk >20 ng/ml)

Risk distribution by PSA result



N=1,192,273

Physician specialty by PSA severity



Linked EHR and claims support many types of economic analyses

Optum sits at the intersection of clinical care and reimbursement. Unlike oncology EMR systems or data aggregators, we collect whole-patient data that reflect patients' entire clinical journey and associated costs.

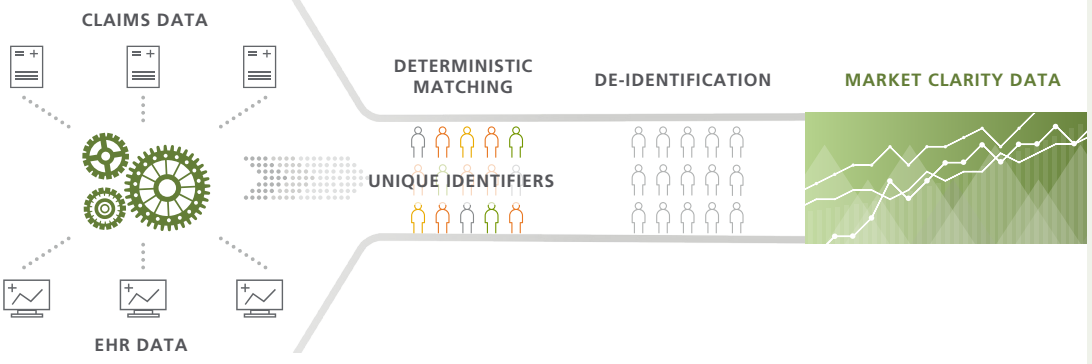
Data quality

CARE — DETERMINISTICALLY LINKED — REIMBURSEMENT

- Signs, symptoms
- Vital signs, labs
- Clinical assessments
- Care plans
- Radiology
- Pathology
- Filled Rx
- Reimbursed
- Submitted claims
- Care utilization

Using our de-identified, linked EHR and claims data sets, researchers can understand how nuanced clinical features affect burden of illness, total cost of care and the cost-effectiveness of therapies in a variety of patient populations.

Optum data can be used to measure differences in cost by symptoms, disease severity and care setting.



Real-world oncology data is essential to understanding the effectiveness and safety of therapeutics and diagnostics in cancer patients.

To learn how Optum oncology EHR data can help meet your needs, please contact us.

1-866-306-1321 | connected@optum.com | optum.com/life-sciences

*All data referenced are Optum electronic health records 2007–2018, Optum medical and pharmacy claims 2001–2018 or Optum integrated data 2018.

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11000 Optum Circle, Eden Prairie, MN 55344

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