A PROPOSED, SCALABLE APPROACH TO IMPLEMENTING INNOVATIVE PAYMENT AGREEMENTS

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EFPIA has identified four key enablers of Innovative Payment Agreements(1)

Key Enablers

1 Concept	2 Data Access	3 Reimbursement mechanics	4 Contracts
Gain endorsements from key stakeholders (especially academia and HTA) on the concept of MIP and combination pricing	Demonstrate the ability to efficiently collect relevant data compliant with all data privacy and IT compliance regulations	Advance the way that systems review prices and purchase medicines	Design and implement contractual arrangements and implementation workflows (financial reconciliation)

Broad Stakeholder engagement underlying all efforts

(1) Enablers presented by Nathalie Moll at ECCO Summit September 2018

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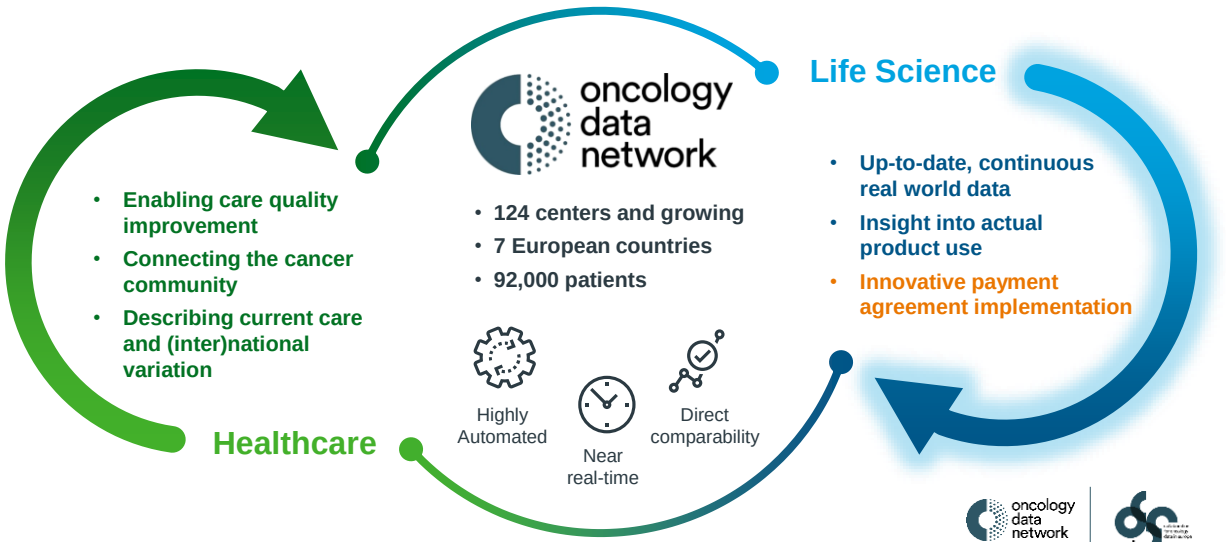
IQVIA'S Oncology Data Network



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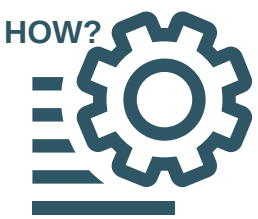
Two main implementation questions



How would we use the ODN, or other similar data sources, **to implement** innovative payment agreements?

For the purposes of agreement surveillance, **what size network** is needed to be **representative** of the national population?

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Simulating innovative agreements using synthetic Real World Data (RWD)

Methodology

1. A synthetic RWD set was prepared based on the ODN dataset, cleaned, and used to model two agreements: Duration of Therapy (DoT) and Indication Based Payments (IBP)
2. National and sub-national surveillance cohorts (50%, 25%, 12% of total population) tested the variation in agreement outcomes.
3. 10 steps were identified to design, measure, forecast and reconcile agreements.

Key Parameters

- **Product modelled** – a large, multi-indication product based on synthetic ODN-like data (Simulacrum data)
- **Agreements modelled** – Duration of Therapy (DoT) and Indication Based Payments (IBP)
- **Surveillance cohorts** – 25% of patients was used as the base case, with additional analyses on 12% and 50% patient coverage
- **KPI Metric selected** – % of patients on therapy for less than 28 days
- **Total product usage** – breast, lung, prostate, and other was measured
- **Forecast of expected "curve"** (pre-agreement implementation) and proportion of patients with less than 28 days duration of therapy was determined to be 11.9% of patients
- **Agreement tracking monthly** – at month 12, % of patients less than 28 days was determined for reconciliation of agreement

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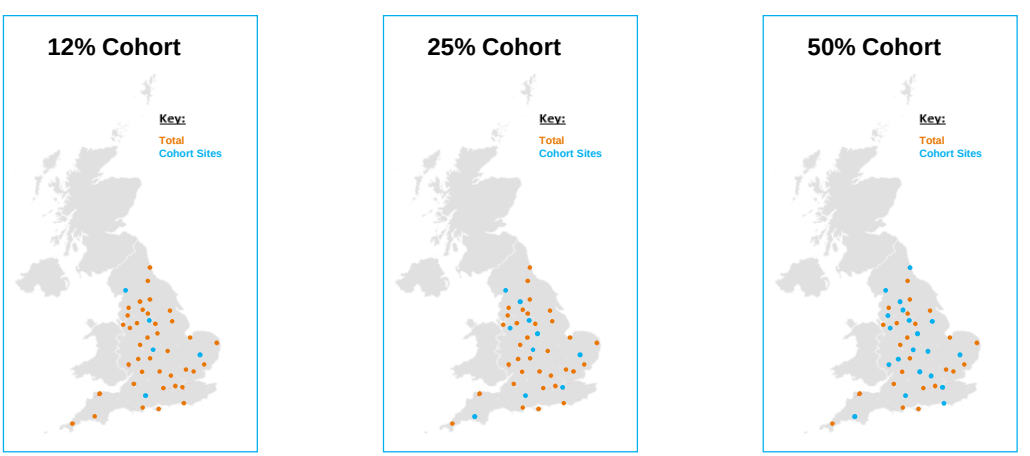
We created three sub-national surveillance cohorts

Surveillance cohorts of 12%, 25% and 50% of total population were compared to the 100% "universe" population



Analyses were executed for two agreement types for universe and cohorts.

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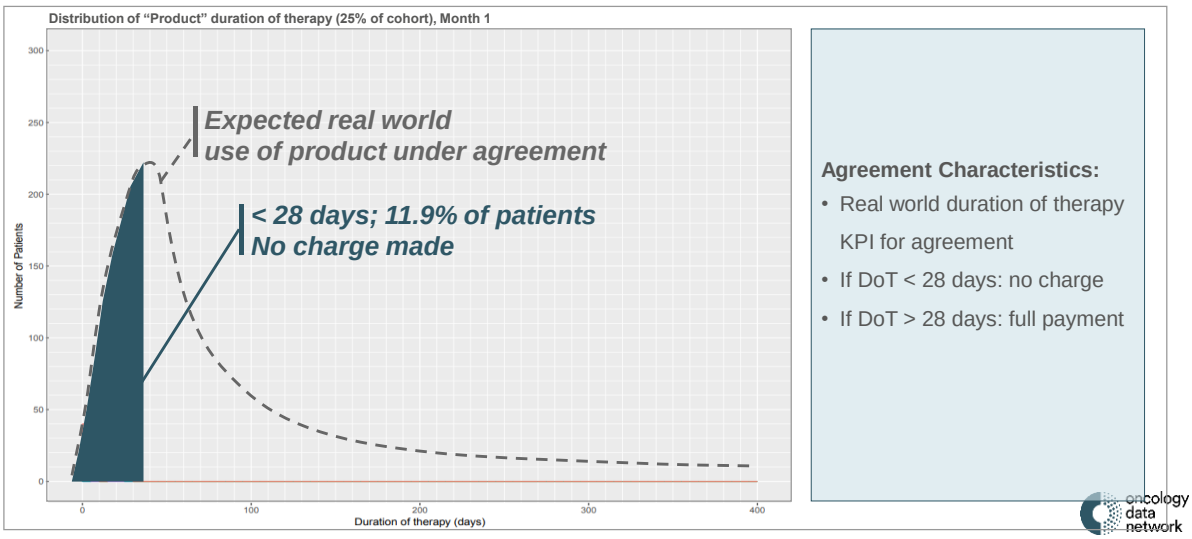
To simulate the Duration of Therapy (DoT) agreement we set assumptions for expected RW product use, DoT, and agreement characteristics



Agreement Characteristics:

- Real world duration of therapy KPI for agreement
- If DoT < 28 days: no charge
- If DoT > 28 days: full payment

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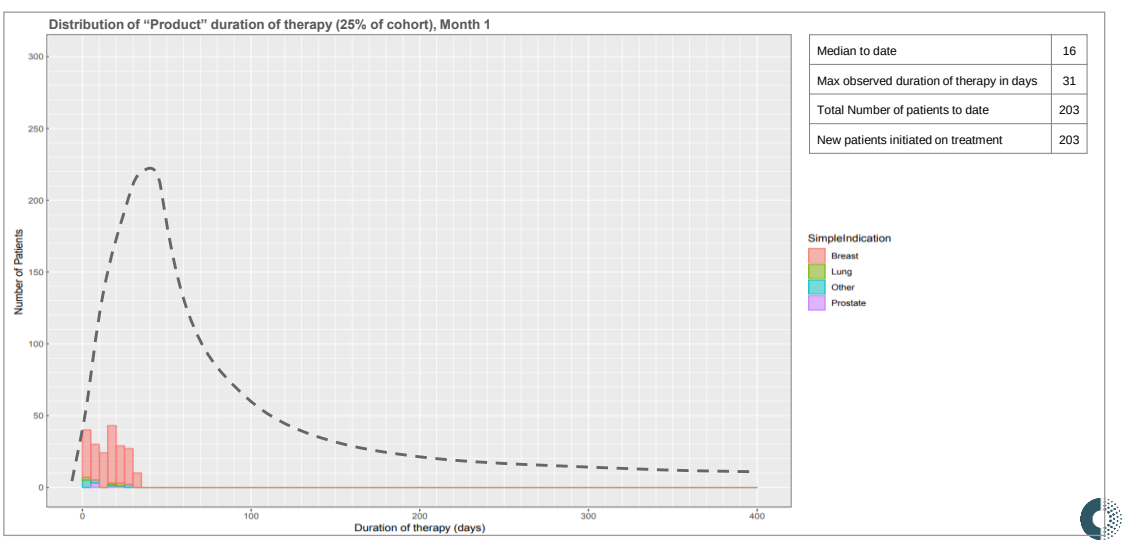
Results: Duration of Therapy Agreement - Month 1



Median to date	16
Max observed duration of therapy in days	31
Total Number of patients to date	203
New patients initiated on treatment	203

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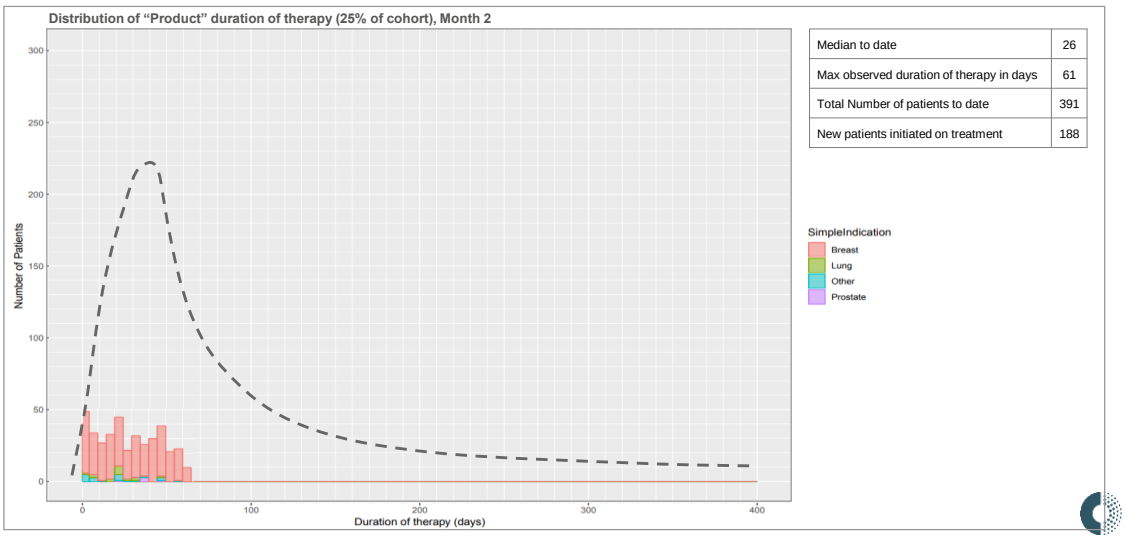
Results: Duration of Therapy Agreement - Month 2



Median to date	26
Max observed duration of therapy in days	61
Total Number of patients to date	391
New patients initiated on treatment	188

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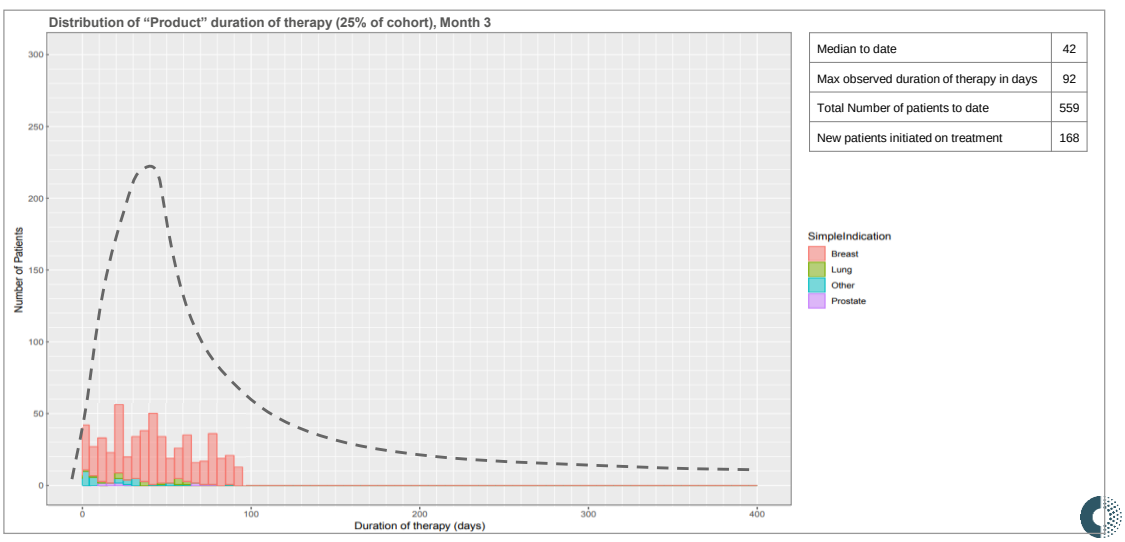
Results: Duration of Therapy Agreement - Month 3



Median to date	42
Max observed duration of therapy in days	92
Total Number of patients to date	559
New patients initiated on treatment	168

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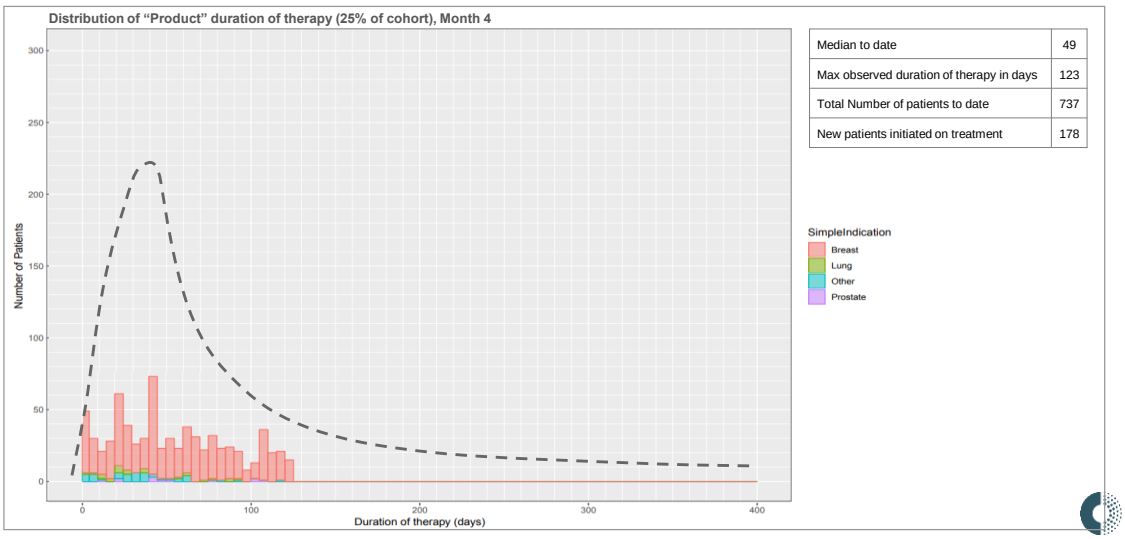
Results: Duration of Therapy Agreement - Month 4



Median to date	49
Max observed duration of therapy in days	123
Total Number of patients to date	737
New patients initiated on treatment	178

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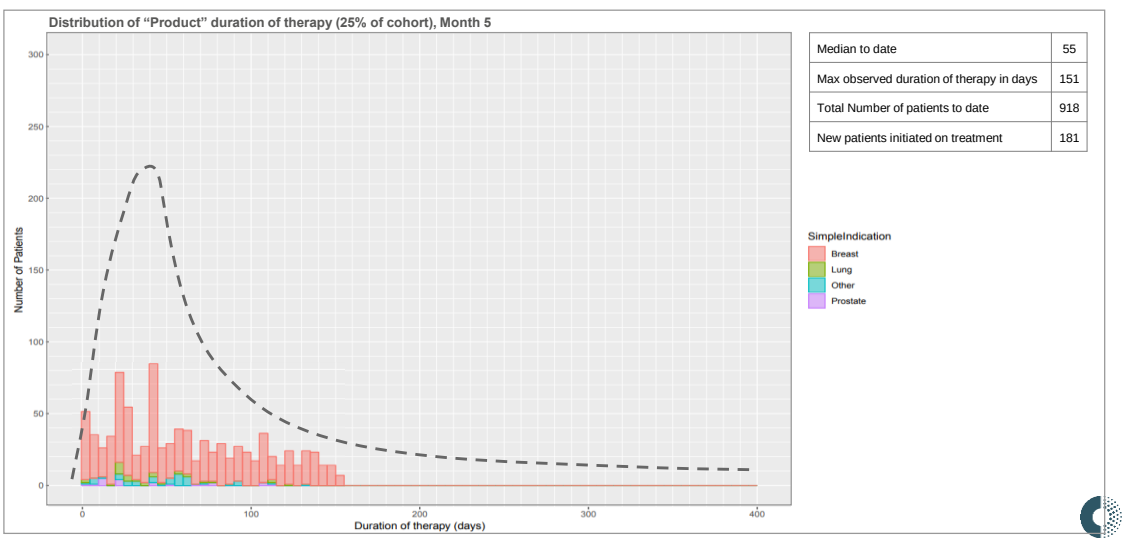
Results: Duration of Therapy Agreement - Month 5



Median to date	55
Max observed duration of therapy in days	151
Total Number of patients to date	918
New patients initiated on treatment	181

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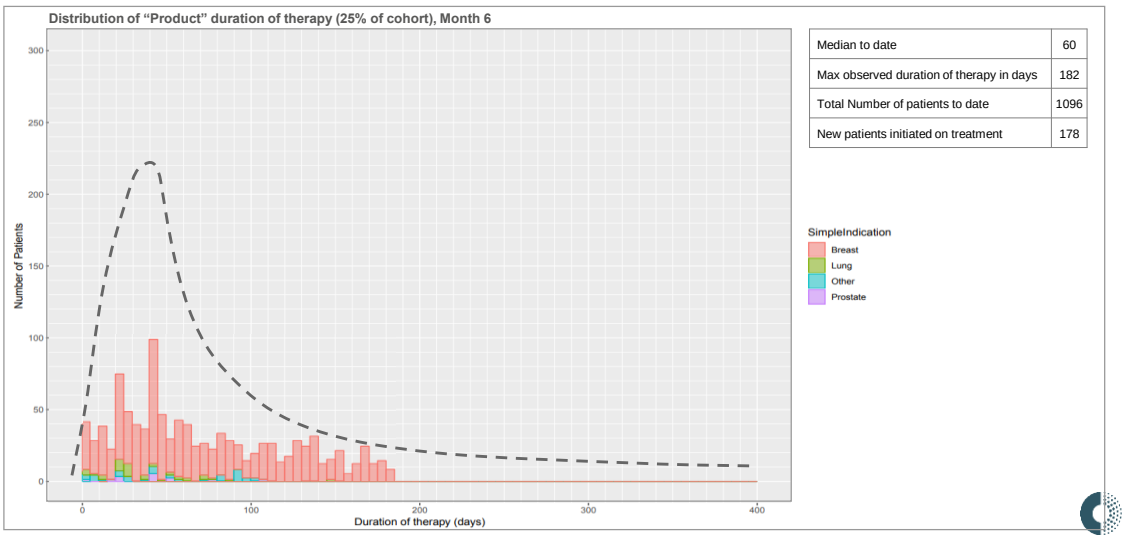
Results: Duration of Therapy Agreement - Month 6



Median to date	60
Max observed duration of therapy in days	182
Total Number of patients to date	1096
New patients initiated on treatment	178

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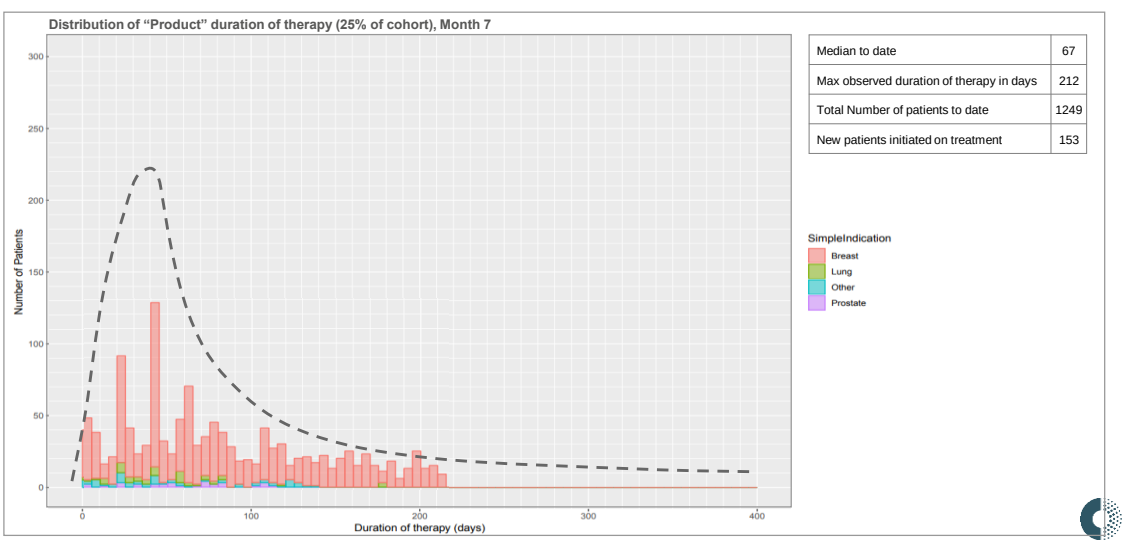
Results: Duration of Therapy Agreement - Month 7



Median to date	67
Max observed duration of therapy in days	212
Total Number of patients to date	1249
New patients initiated on treatment	153

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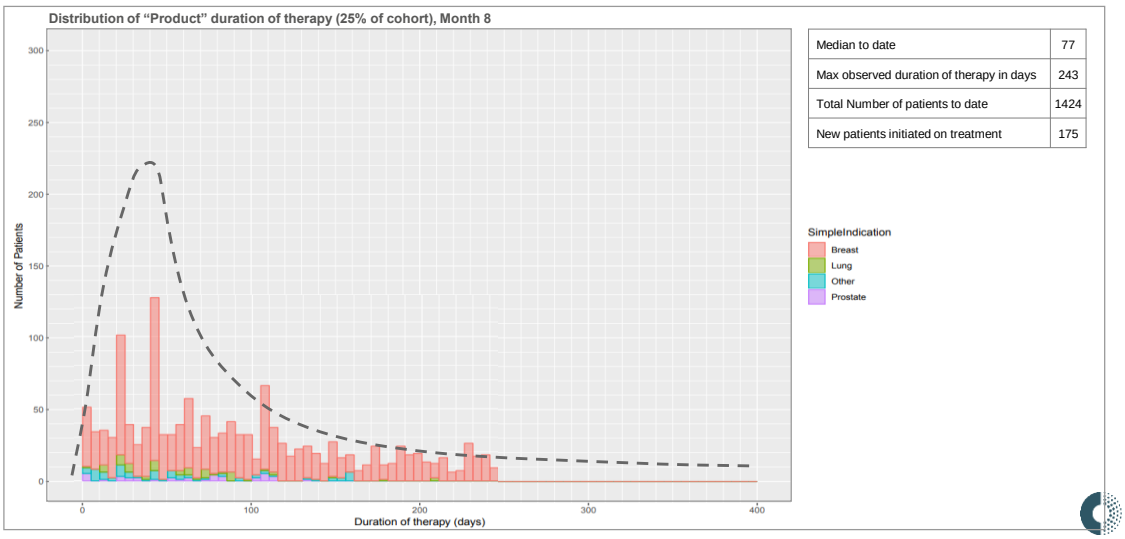
Results: Duration of Therapy Agreement - Month 8



Median to date	77
Max observed duration of therapy in days	243
Total Number of patients to date	1424
New patients initiated on treatment	175

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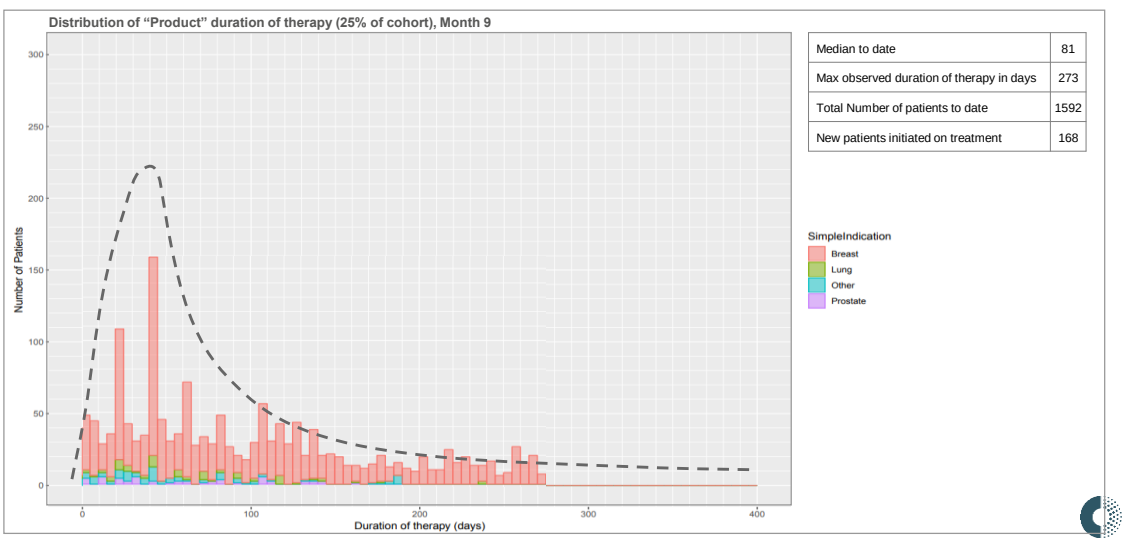
Results: Duration of Therapy Agreement - Month 9



Median to date	81
Max observed duration of therapy in days	273
Total Number of patients to date	1592
New patients initiated on treatment	168

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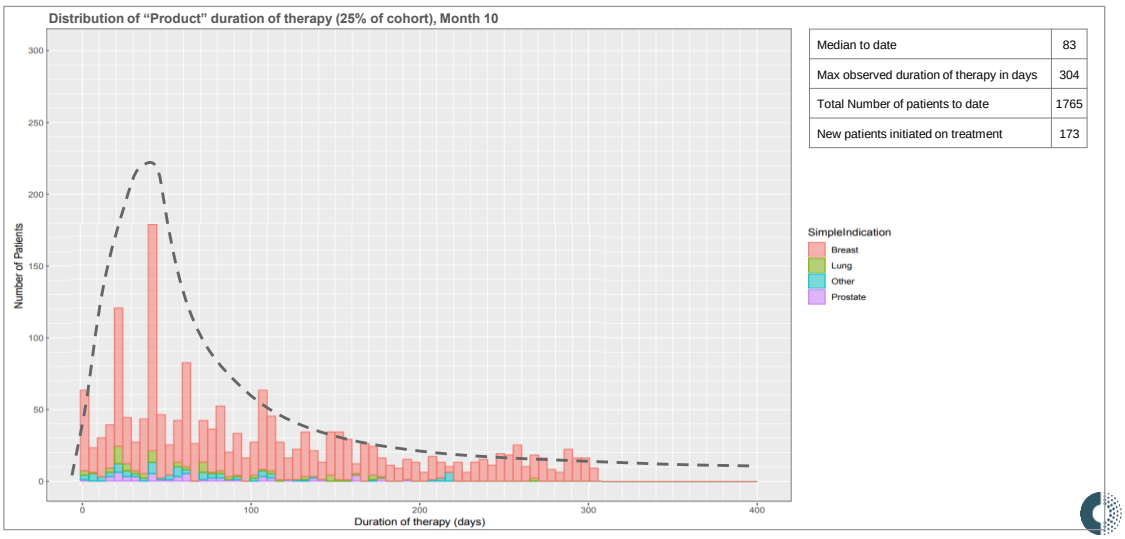
Results: Duration of Therapy Agreement - Month 10



Median to date	83
Max observed duration of therapy in days	304
Total Number of patients to date	1765
New patients initiated on treatment	173

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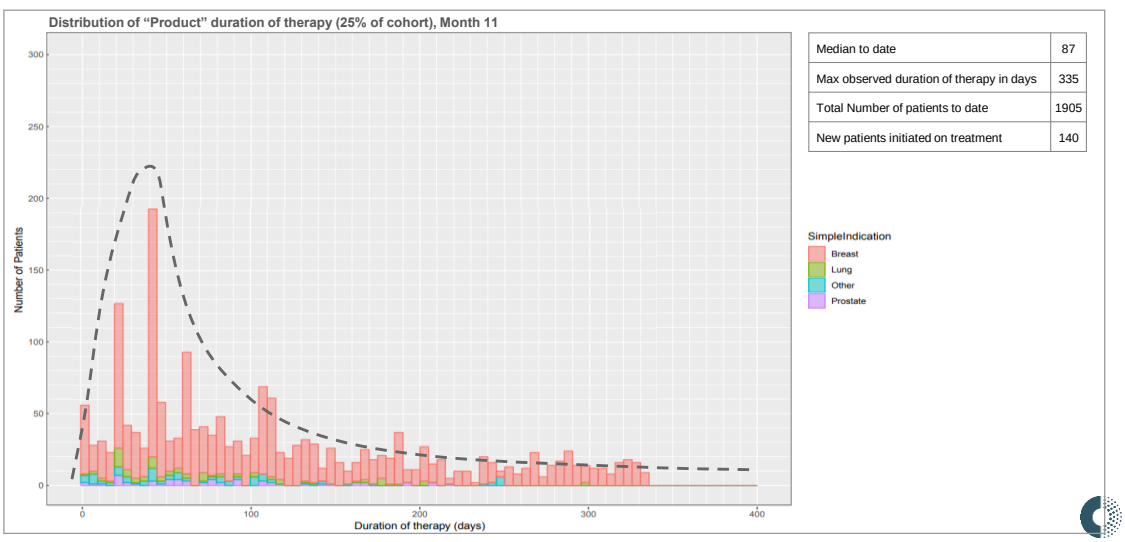
Results: Duration of Therapy Agreement - Month 11



Median to date	87
Max observed duration of therapy in days	335
Total Number of patients to date	1905
New patients initiated on treatment	140

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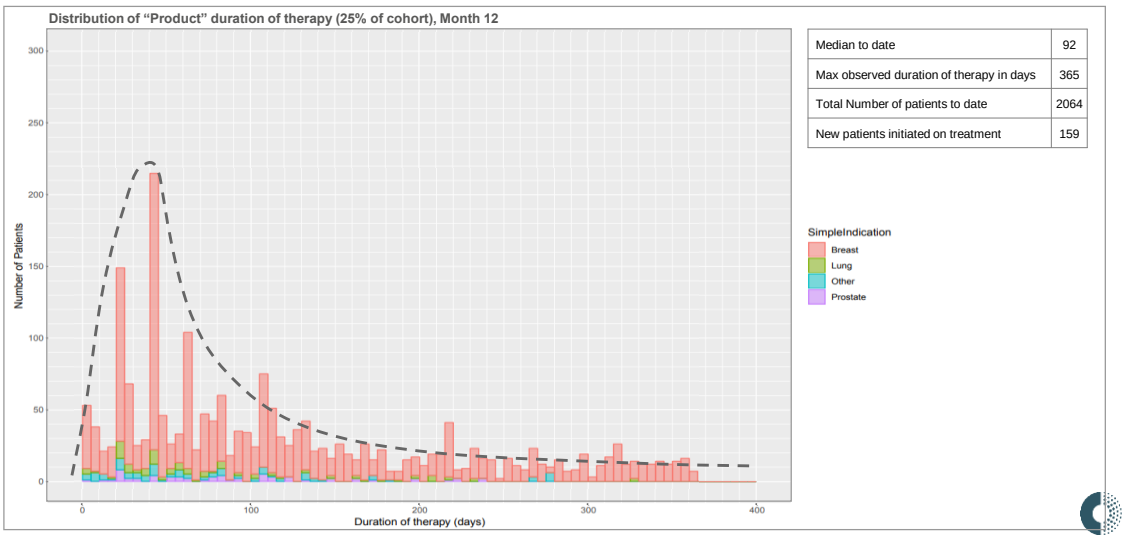
Results: Duration of Therapy Agreement - Month 12



Median to date	92
Max observed duration of therapy in days	365
Total Number of patients to date	2064
New patients initiated on treatment	159

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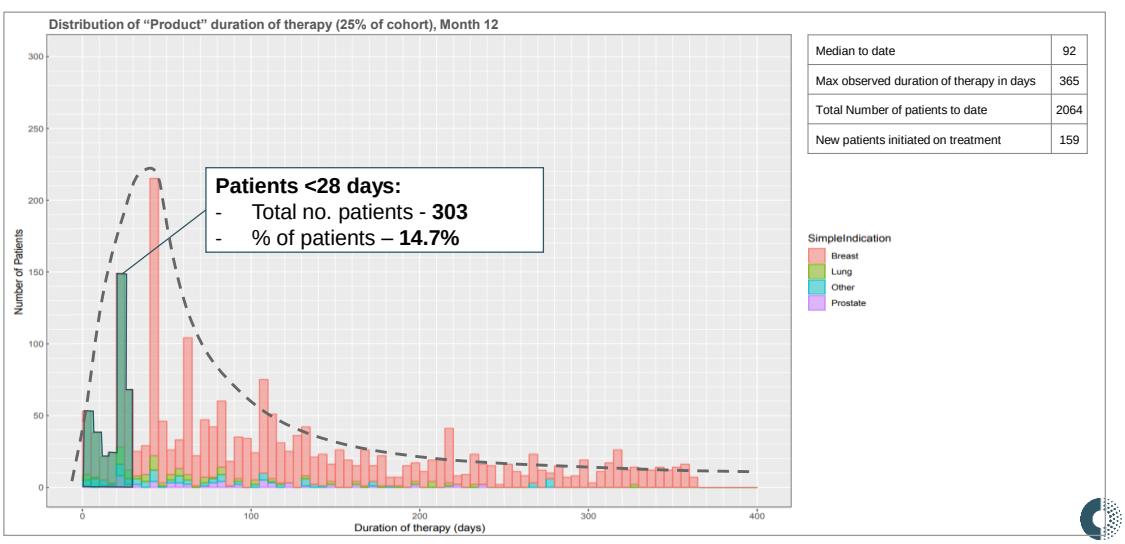
Results: Duration of Therapy Agreement - Month 12



Median to date	92
Max observed duration of therapy in days	365
Total Number of patients to date	2064
New patients initiated on treatment	159

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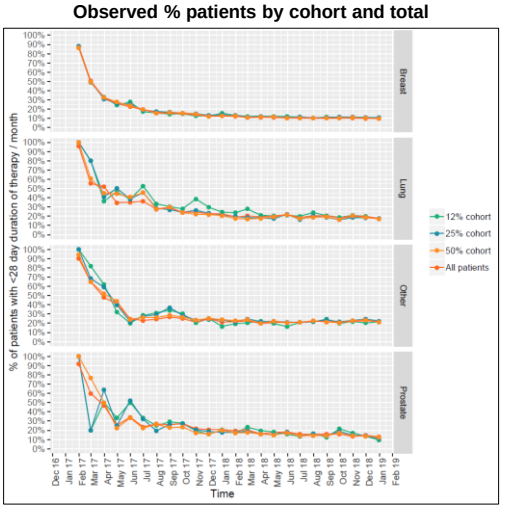
Minimal variation across cohort sizes was observed over a 2 year period, demonstrating that a representative cohort could be a pragmatic approach

Metric: % of Patients with Duration of Therapy less than 28 days

Observed % patients by cohort and total



Tumour Type	N of Patients		
	Jan 2017	Dec 2017	Dec 2018
Breast	183	1809	2943
Lung	5	96	191
Other	10	97	192
Prostate	5	62	135

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This process revealed a repeatable 10 step approach

Data Source and Metrics Selection

INPUT DECISIONS

Agreement Type → Agreement Metrics → Data Source → Surveillance Cohorts → Computation of KPIs

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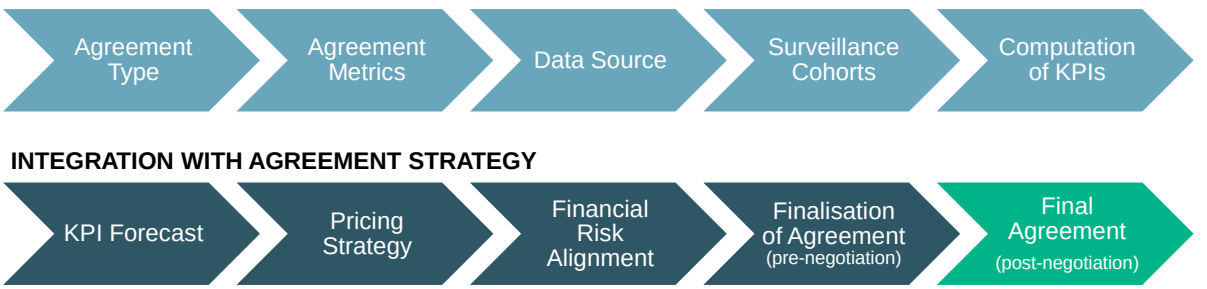
This process revealed a repeatable 10 step approach



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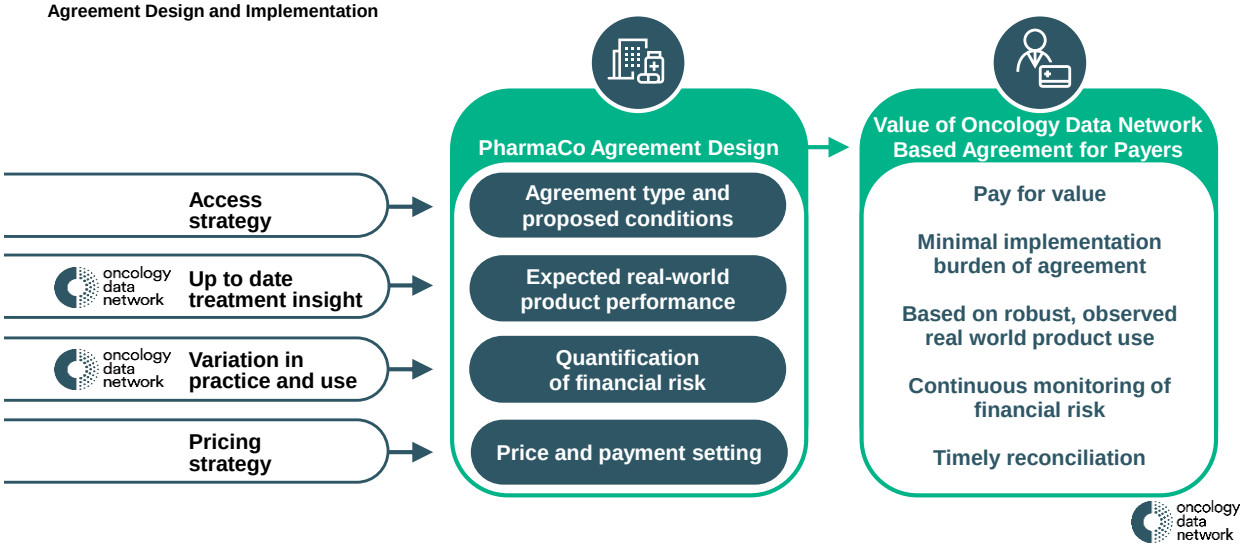
This approach and the ODN provide a pragmatic solution to implementing innovative payment models

Agreement Design and Implementation



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Appendix

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Abstract

A PROPOSED, SCALABLE APPROACH TO IMPLEMENTING INNOVATIVE PAYMENT AGREEMENTS

Woolmore AL[1], Belcher MD[2], Chin-A-Young L[2], Drage EP[2], Wiinberg L[2], Ogley RJ[2]

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OBJECTIVES: Interest in Innovative Payment Agreements (IPAs) that link product value or risk sharing to real-world practice e.g. by indication or Duration of Therapy (DoT) is increasing. Despite this and the existence of many real-world data (RWD) sources, no standard methodology for designing and implementing IPAs using RWD currently exists.

The European Oncology Data Network (ODN), established by the Collaboration for Oncology Data in Europe (CODE), led by IQVIA, is a collaborative near-real time RWD sharing platform designed to provide information on anti-cancer therapy usage and support the negotiation and implementation of IPAs.

In parallel to ODN development and in anticipation of its use supporting IPAs, this study aimed to describe a scalable approach to the design and implementation of IPAs using RWD.

METHODOLOGY: A simulated RWD set was prepared based on the ODN dataset, cleaned, and used to model two agreements: DoT and Indication Based Payments (IBP). Working with CODE members, nine steps were identified to design, measure, forecast and reconcile agreements. National and sub-national surveillance cohorts (50%, 25%, 12% of total population) tested the variation in agreements' outcomes.

RESULTS: Complexities of using existing RWD sources not designed to support IPAs were revealed, including analytical choices (e.g. preparing and cleaning the data), evolving interpretation of the data (e.g. variations in DoT or indication over time) and requirements for measuring contextual variables (e.g. volume, new patients or indications) throughout the agreement. Variations based on surveillance cohort size, were quantified in the context of the risk associated with RWD measurement vs reliability of forecasting the future performance of the agreement.

CONCLUSION: This study highlighted the challenges inherent in using RWD for IPAs and proposed an approach to address them. It reinforced the need and benefit of using a 'tailormade' infrastructure with highly structured, near-real time data to develop and monitor IPAs.

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