



Sachs Associates 7th Annual Immuno-Oncology Innovation Forum

Pricing and Reimbursement: Implications for Oncology Investing and Partnerships

May 2021

realendpoints.com

CONFIDENTIAL DRAFT

Biopharmas flee to oncology, where payers don't often say "no"

Number of M&A and Partnerships by Therapeutic Area⁽¹⁾

| | Oncology | CV / Renal / Metabolic | Immunology | Neuroscience | Other / Multiple | Infectious Disease | Hematology | Ophthalmology | Respiratory |
|----------------------|----------|------------------------|------------|--------------|------------------|--------------------|------------|---------------|-------------|
| abbvie | 13 | - | 5 | 4 | 2 | 1 | - | - | - |
| AMGEN | 6 | 2 | 3 | 1 | 4 | - | - | - | - |
| AstraZeneca | 12 | 5 | - | 1 | - | - | 1 | - | 4 |
| Biogen | - | 1 | 1 | 19 | 2 | - | 2 | 3 | - |
| Bristol Myers Squibb | 15 | 4 | 2 | 1 | 1 | - | - | - | - |
| GILEAD | 14 | 6 | 4 | - | - | 6 | - | - | - |
| gsk | 5 | 1 | 1 | 1 | 4 | 6 | - | - | - |
| J&J | 10 | 4 | 5 | 2 | 4 | 5 | - | 1 | 2 |
| Lilly | 8 | 3 | 7 | 7 | 4 | - | - | - | - |
| MERCK | 17 | 3 | 1 | 3 | 1 | 7 | - | 1 | - |
| NOVARTIS | 16 | 5 | 2 | 5 | 1 | 2 | 1 | 3 | - |
| Pfizer | 10 | 7 | 2 | 2 | 4 | 4 | 1 | - | - |
| Roche | 25 | 1 | 9 | 9 | 6 | 5 | 1 | 2 | 2 |
| SANOFI | 11 | 6 | 4 | 4 | 3 | 4 | 2 | - | - |

And therefore pricing is far more flexible than in other categories where payers have more influence

Source: PJT Partners

¹Excludes Allergan and Celgene deals

Why payers have limited ability to restrict oncology prescribing

In virtually every other category, payers can restrict physician choice. Not so much in oncology.

- **Oncology one of 6 Medicare protected classes**
 - But less protected than formerly...because step edits allowed
 - Genericization less draconian among oncologics

- **Buy-and-bill economics provides significant income for providers**
 - The more expensive, the more profitable

- **Most payers require “prior auths to label” – but in oncology, PAs to compendia guidelines**
 - Guidelines are both up-to-date and allow wide latitude for providers

- **Cancer is the scariest disease we can do something about**
 - Headline payers fear most: “Local mother denied life-saving cancer drug”

But higher prices lead to higher cost-shares

And Medicare patients – the majority of oncology patients – have high cost-sharing responsibilities

Annual Average Out-of-Pocket Costs for Patients Taking Oncology Brand Medicines, 2019*

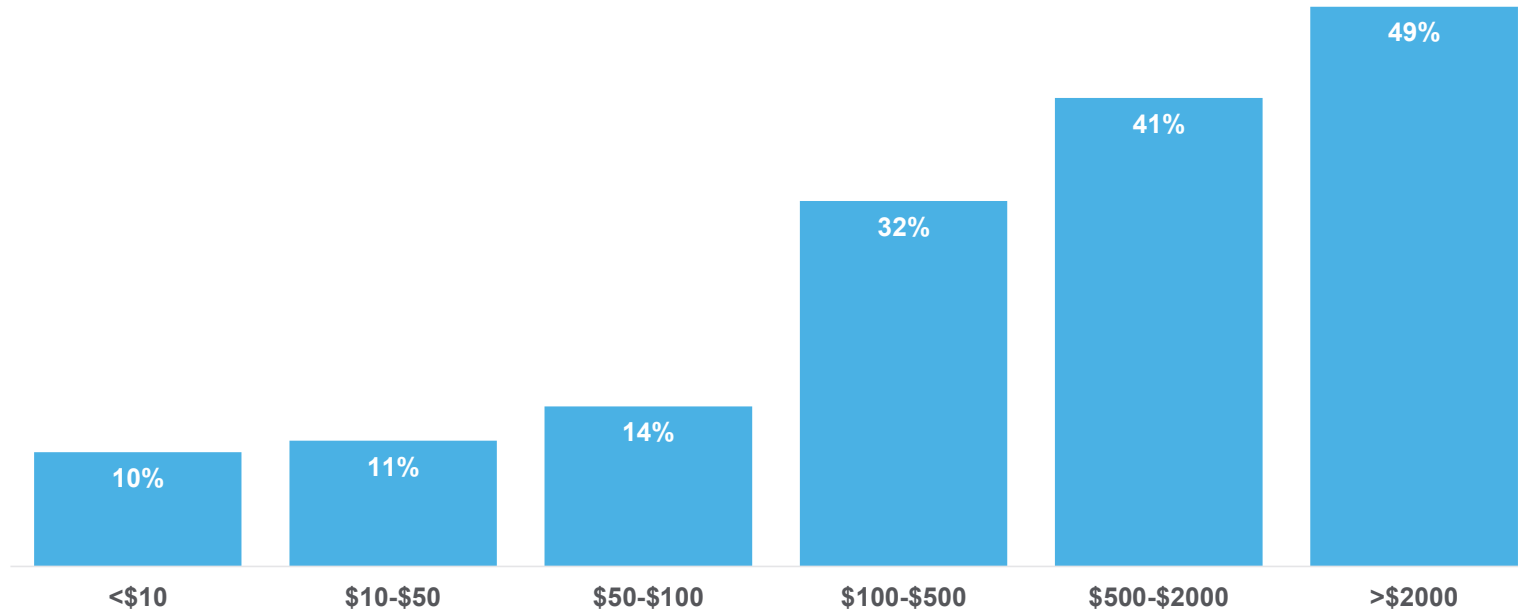


*Reflects final annual average out-of-pocket spending for patients taking condition-specific medicines
Source: IQVIA, Medicine Spending and Affordability in the United States, August 2020

So the patient-as-payer is self-restricting

Patients with highest cost sharing were 5 times more likely to abandon treatment than patients with lowest cost sharing

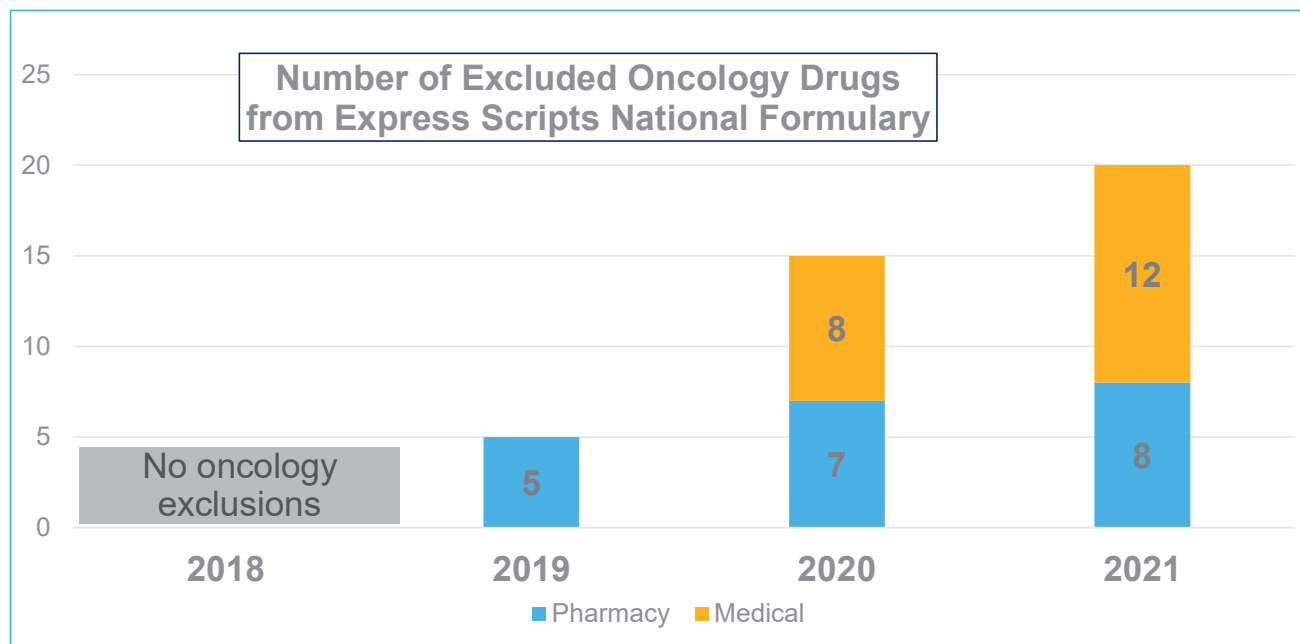
Oral Oncolytic Abandonment Rate by Patient Out-of-Pocket Amount



Source: Doshi JA, Li P, Huo H, Pettit AR, Armstrong KA. Association of Patient Out-of-Pocket Costs With Prescription Abandonment and Delay in Fills of Novel Oral Anticancer Agents. Journal of Clinical Oncology. 2017 Dec 20;JCO-2017

Meanwhile, some payers are trying to lower their costs by stricter formulary management

Express Scripts has been particularly aggressive



2019: Kisquali, Kisquali Femara Co-Pak, Piqray, Xpovio, Inrebic

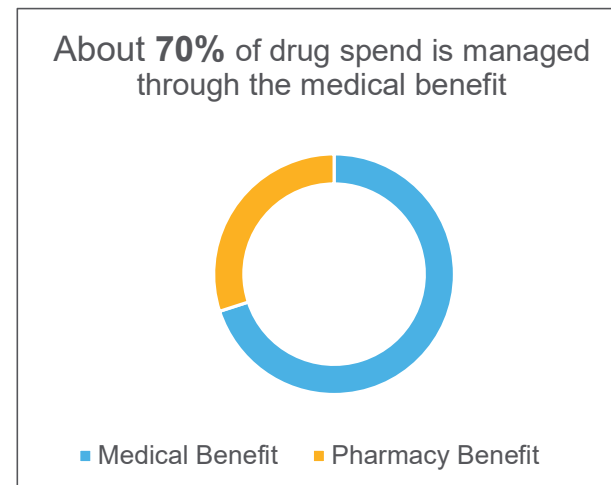
2020: Alecensa, Alunbrig, Avastin, Kisquali, Kisquali Femara Co-Pak, Piqray, Xpovio, Inrebic, Ninlaro, Trelstar, Rituxan, Rituxan Hycela, Herceptin, Hereptin Hylecta, Ogivri

2021: Avastin, Kisquali, Kisquali Femara Co-Pak, Piqray, Calquence, Blenrep, Xpovio, Inquovi, Inrebic, Trelstar, Rituxan, Rituxan Hycela, Truxima, Herceptin, Herceptin Hylecta, Herzuma, Ogivri, Ontruzant, Phesgo, Qinlock

Oral therapy is the testing ground for oncology contracting

Smaller spend; easier – but by no means easy – to manage

- Maximum oncology rebates for branded orals with no generic competition: 7%
- “For us to prefer a specific [undisclosed] inhibitor [even with a significant rebate], the drug not only has to be preferred or co-preferred in the NCCN guideline, but we have to get all the docs on board. Otherwise it won’t work.”
 - Chief Pharmacy Officer, major Integrated Delivery Network
- But interest in value-based contracting alternatives growing among payers... and among some of the pharmas with new oral drugs and limited prospect of market-share gains
 - Payers looking to establish precedent they can use in other oncology categories
 - In at least one VBA in which RE involved, rebate up to 20%



Payers have established a beachhead in provider-administered drugs via biosimilars

Biosimilars now have >42% of the Avastin market; >38% of the Herceptin market

| | <u>VEGF Inhibitors</u> | <u>Breast Cancer</u> | <u>CD20 mAB</u> | <u>CSF Long Acting</u> | <u>CSF Short Acting</u> |
|--------------------|------------------------|----------------------|-----------------|------------------------|-------------------------|
| Innovator | Avastin | Herceptin | Rituxan | Neulasta | Neupogen |
| Biosimilars | Mvasi | Kanjinti | Ruxience | Udenyca | Zarxio |
| | Zirabev | Ogivri | Truxima | Fulphila | Nivestym |
| | | Ontruzant | | Ziextenzo | Granix |
| | | Trazimera | | Nyvepria | |

- Exploits new Medicare step-therapy regs for medical-benefit drugs
- Payers getting rebates-for-preference from both brands and biosimilars
- Idea can be applied to categories without biosimilars – but plans will look to substitute preferred brands in specific indications where there are overlapping approvals/guidelines recommendations

The next frontier could be crowded med benefit categories, like PD-1/PD-L1's
 So far, follow-ons have gone primarily for unique niches rather than rebate-for-share strategies

| Type of Cancer | Keytruda | Opdivo | Libtayo | Bavencio | Imfinzi | Tecentriq | Jemperli | Retifanlimab* |
|--|----------|--------|---------|----------|---------|-----------|----------|---------------|
| Cutaneous squamous cell | X | | X | | | | | |
| Melanoma | X | X | | | | X | | |
| Non-small cell lung cancer | X | X | X | | X | X | | |
| Small cell lung cancer | | | | | X | X | | |
| Head & neck squamous cell | X | X | | | | | | |
| Classic Hodgkin Lymphoma | X | X | | | | | | |
| Large b-cell Lymphoma | X | | | | | | | |
| Urothelial cancer | X | X | | X | | X | | |
| Microsatellite instability-hi | X | Colon | | | | | | |
| Gastric cancer | X | X | | | | | | |
| Esophageal cancer | X | X | | | | | | |
| Cervical cancer | X | | | | | | | |
| Hepatocellular carcinoma | X | X | | | | X | | |
| Merkel cell carcinoma | X | | | X | | | | |
| Renal cell carcinoma | X | X | | X | | | | |
| Mesothelioma | | X | | | | | | |
| Endometrial carcinoma | X | | | | | | X | |
| Triple negative breast cancer | X | | | | | X | | |
| Locally advanced/metastatic basal cell carcinoma | | | X | | | | | |
| Squamous cell anal canal | | | | | | | | X |

Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7140028/> Product Prescribing Information 5/13/2021

*Incyte's retifanlimab an example of a near-term pipeline candidate (PDUFA date July 2021) = unique indication within class

Similarly competitive story: genetically engineered cell therapies for hematological cancers (CAR-Ts and T-Cell Receptors)

18 are for leukemias and B-cell lymphomas; 4 are for multiple myeloma

Forecast approvals for cell and gene therapy by therapeutic class

| | Initial | 2021 | 2022 | 2023 | 2025 | 2030 |
|------------------------------|------------|------------|-------------|-------------|-------------|-------------|
| Cancer, hematological | 3 | 4.1 | 4.8 | 6.6 | 13.4 | 28.3 |
| Cancer, solid tumor | 0 | 0.0 | 0.0 | 0.2 | 0.7 | 1.8 |
| Cardiovascular | 0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.3 |
| Hematology | 0 | 1.2 | 2.4 | 3.5 | 5.1 | 7.6 |
| Immunological | 0 | 0.0 | 0.2 | 0.7 | 1.6 | 2.9 |
| Metabolic | 0 | 0.1 | 0.4 | 0.9 | 2.4 | 6.5 |
| Musculoskeletal | 0 | 0.0 | 0.0 | 0.2 | 0.6 | 1.6 |
| Neurological | 1 | 1.3 | 1.5 | 1.5 | 2.0 | 4.2 |
| Ophthalmological | 2 | 2.6 | 3.2 | 3.8 | 4.8 | 6.7 |
| Other | 0 | 0.2 | 0.4 | 0.6 | 1.2 | 2.6 |
| Total | 6.0 | 9.6 | 13.0 | 17.9 | 31.9 | 62.4 |

- Many of the hematological treatments are targeting approvals for subsets of patients
 - Within B-cell lymphoma – DLBCL, mantle cell and follicular, etc
- Hospitals may prefer one product over another if they are a center of excellence for one (and not the other)
- Otherwise prescribing will follow the dictates of guidelines

MIT FoCUS Pipeline assessment October 2020 – Monte Carlo model – estimated probabilities of trials' success

The price-cutter strategy: EQRx aims to shake up the PD-1 and other oncology markets

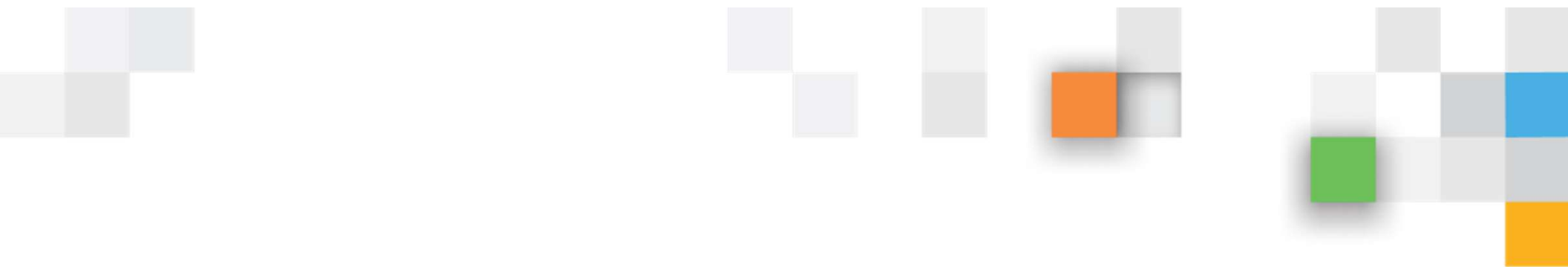
Investors love the idea: since 2020 founding, has raised \$750M

Approach

- In-license – inexpensively – me-too or me-better molecules (both biologics and NCEs)
 - Includes PD-1, PD-L1, CDK4/6, EGFR inhibitor
- Raise lower-cost capital based on lower-development risk: molecules with known MoA's and well-trod regulatory paths
- Sell drugs for WAC of 1/3 price of innovators, enough to manage payers' rebate hurdle and drive lower patient acceptance through lower out-of-pocket

Challenges

- New-molecule development risk
- No extrapolation
- Manufacturing costs for a broad pipeline
- Buy-and-bill incentives for oncologists
- Rebate guarantees



Thank you

