Frontier Pharma: Versatile Innovation in Oncology - Identifying and Commercializing Versatile First-in-Class Innovation

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Summary

The oncology therapy area comprises a large and diverse range of indications, encompassing virtually all sites and tissues in the human body. These indications are the leading cause of death in economically developed countries and the second-leading cause of death in developing countries and present a major global health burden. Across the pharmaceutical industry as a whole, the oncology pipeline is far larger than any other therapy area, with 6,484 products in active development across all oncology indications, and 2,084 first-in-class products in development across all stages.

Due to a degree of crossover between oncology indications in terms of their underlying pathophysiology, it is not uncommon for products being developed for this therapy area to have developmental programs testing them across multiple indications. Some 473 first-in-class pipeline products are in concurrent development for two or more of the top 20 cancer sites ranked by incidence. The most promising versatile first-in-class molecular targets predominantly consist of receptor tyrosine kinases and their downstream signal transduction kinases, although a number of other cancer-related processes such as DNA repair, cancer immunosurveillance and apoptotic pathways are also targeted.

Scope

- With 6,484 products in active development across all oncology indications, this is the largest therapy area pipeline by a considerable margin.
- What factors are driving this high level of R&D activity?
- Which indications have the highest concentration of pipeline products?
- Although the unmet need varies between and within indications, this need is primarily for improved overall survival rates in patients, particularly those at the late stage of the disease.
- Which first-in-class molecular targets appear able to best address the key unmet needs within oncology?
- The variation in molecule type has shifted away from small molecules, the dominance of which has decreased from 94% across marketed products to 49% across the pipeline.
- What are the dynamics of the remaining 51% of the pipeline?
- How does this reflect the need for novel targeted therapies?
- There has been a significant shift towards inhibitors of receptor tyrosine kinases, their ligands and signal transduction proteins, as well as drugs targeted against cancer antigens.
- What is the scientific rationale behind these targets? Across which indications are they being developed?
- How successful have drugs against these targets been?
- A number of versatile first-in-class targets appear to be particularly promising, including HER3, FGFR3, telomerase reverse transcriptase, and others.
- Why are these targets considered to be particularly promising?
- Why are these targets being developed across such a wide range of indications?

Reasons to buy

- Understand the current clinical and commercial landscape by considering disease pathogenesis, diagnosis, prognosis, and the treatment options across the key oncology indications
- Acquire a detailed understanding of the 20 most common oncology indications by incidence, pinpointing the unmet needs for each indication
- Assess the market for oncology in terms of the molecular targets that are approved across multiple indications and the predominant molecule types and targets
- Analyze the oncology pipeline and stratify by stage of development, molecule type, molecular target, and first-in-class status
- Understand the level of versatility across the pipeline and within each molecular target. Assess the pipeline activity of each versatile first-in-class product and the indications that they are in development for
- Analyze the therapeutic potential and developmental footprint of versatile first-in-class targets and understand which are the most promising. Understand which targets are being developed in each indication, for how many pipeline products, and how well they align with the underlying pathophysiology of cancer.
- Identify commercial opportunities in the oncology deals landscape by analyzing trends in licensing and co-development deals for versatile first-in-class products.
- Identify versatile first-in-class pipeline products that have not been previously involved in licensing or co-development deals and are thus more likely to be available for in-licensing or co-development.

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