Frontier Pharma: Liver Cancer - Identifying and Commercializing First-in-Class Innovation

Description: Frontier Pharma: Liver Cancer - Identifying and Commercializing First-in-Class Innovation

Summary:

Large and Diverse Pipeline

The liver cancer pipeline contains 238 products in active development, approximately 47% of which are first-in-class. The percentage of the pipeline devoted to innovative products is considerably larger than both the industry and oncology average, which is a promising sign for novel therapeutics reaching the liver cancer market.

The contrast between the market and pipeline is vast. Analysis showed that the market contains 70 products, the majority of which are generic formulations of chemotherapies that are not frequently used in treatment, particularly in advanced-stage patients. Nexavar (sorafenib) is the dominant therapeutic on the market, and is also the only targeted therapy that is in regular use for advanced-stage liver cancer patients. However, pipeline analysis revealed that targeted therapies aimed at the underlying oncogenic signaling pathways are under much greater focus in the pipeline than in the market. The success of targeted therapies across the oncology market as a whole implies that the diversity and innovation in the pipeline is a promising sign, with products currently in development having the potential to transform and improve the relatively open liver cancer market.

Alignment of First-in-Class Molecular Targets with Disease Causation

The liver cancer pipeline is showing signs of adapting to the increasing understanding of aberrant signaling pathways and causes of liver cancer. A large portion of pipeline products target components of known dysfunctional signaling pathways, such as Wnt/ß-catenin signaling, which is commonly mutated in liver cancer tumor samples. By aligning the treatment with specific disease-causing features, the damaging off-target cytotoxic effects of treatment can be reduced, resulting in safer and more efficacious therapies.

The available analysis identified substantial variation in the alignment of first-in-class products to underlying dysfunctional signaling at protein and genetic level. The first-in-class products were compared in an in-depth analysis using various parameters to measure the potential of each target, with the most promising targets being further substantiated by published clinical and scientific evidence. Results of the analysis suggested that first-in-class status is not a feature that, in its own right, will create a successful product. However, there are a large number of first-in-class products backed by clinical and Preclinical data that are exciting future prospects for the liver cancer market.

Analysis of Patent Data

The report features an analysis of granted patent applications in the liver cancer market, which was used as an indication of innovation at the earliest stage of product development. Patent analysis provides an insight into the pre-developmental landscape, and identifies long-term future trends within a disease market. In liver cancer, the trend in patent applications in terms of predominant molecular targets reflects the pipeline landscape, suggesting that liver cancer therapeutics will continue to target key oncogenic signaling pathways in the long term.

The frequency at which companies apply for patents within the market helps to identify companies that are trying to establish themselves or increase their liver cancer market share. This information identifies not only potential competitors, but also companies that may seek strategic partnerships to enter drug development.

First-in-Class Products in Licensing and Co-Development Deals

The deals landscape for liver cancer has been relatively active in recent years, with 62 licensing deals and 23
co-development deals between 2006 and 2014. However, the number pertaining to first-in-class products is very low.

A comparative analysis of the deals revealed that first-in-class products have the potential to command substantially higher deal values than non-first-in-class products, which is a reflection of their market potential and importance. A total of 68 first-in-class products that are currently in development have not yet been entered into a licensing or co-development deal. In a transforming market that will favor innovative, targeted therapies with a strong clinical record, there are numerous opportunities for strategic alliances to bolster a first-in-class portfolio or fund clinical development. Although not all are aligned to disease-causing signaling pathways, many are supported by robust scientific and clinical data, making them attractive prospects as both therapeutics and investment opportunities.

Scope:

The report includes:

- A brief introduction to liver cancer, including symptoms, pathophysiology, and an overview of pharmacotherapy and treatment algorithms
- Coverage of the changing molecular target landscape and particular points of innovation in the pipeline
- A comprehensive review of the pipeline for first-in-class therapies, analyzed by stage of development, molecule type and molecular target
- Analysis of patent trends and patent families in liver cancer
- Identification and assessment of first-in-class molecular targets, with a particular focus on early-stage programs of which clinical utility has yet to be evaluated, as well as literature reviews of novel molecular targets
- Industry-wide analysis of first-in-class deals compared to non-first-in-class deals
- An assessment of the licensing and co-development deal landscape for liver cancer therapies, and benchmarking of deals comparing first-in-class and non-first-in-class-products

Reasons to Purchase:

The report will enable business development and enable marketing executives to strategize their product launches by allowing them to:

- Understand the focal shifts in molecular targets in the liver cancer pipeline
- Understand the distribution of pipeline programs by phase of development, molecule type and molecular target
- Understand the patent trends in liver cancer and what this means for long-term innovation
- Access a scientific and clinical analysis of first-in-class developmental programs for liver cancer, benchmarked against non-first-in-class targets
- Assess the valuations of licensed and co-developed liver cancer treatments
- Access a list of the first-in-class therapies potentially open to deal-making opportunities

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