AVASTIN (NON-SMALL CELL LUNG CANCER) – FORECAST AND MARKET ANALYSIS TO 2022
Executive Summary

Avastin (bevacizumab): Key Metrics in NSCLC Markets

<table>
<thead>
<tr>
<th>2012 Avastin Sales</th>
<th>US</th>
<th>5EU</th>
<th>Japan</th>
<th>China</th>
<th>India</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$937.86m</td>
<td>$292.65m</td>
<td>$498.42m</td>
<td>$27.29m</td>
<td>$0.39m</td>
<td>$1,756.61m</td>
</tr>
</tbody>
</table>

Key Events (2012–2022)

<table>
<thead>
<tr>
<th>Level of Impact</th>
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<tbody>
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<td>↓↓↓</td>
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</tbody>
</table>

Avastin patent expiry in 7MM, China & India in 2019
Launch of ramucirumab in the US & 5EU (2015) and in Japan (2016)
Launch of nivolumab in the US & 5EU (2015) and in Japan (2016)

<table>
<thead>
<tr>
<th>2022 Avastin Sales</th>
<th>US</th>
<th>5EU</th>
<th>Japan</th>
<th>China</th>
<th>India</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$736.68m</td>
<td>$241.05m</td>
<td>$441.47m</td>
<td>$17.59m</td>
<td>$0.52m</td>
<td>$1,437.31m</td>
</tr>
</tbody>
</table>

Sales for Avastin (bevacizumab) in the Global NSCLC Market

Global drug sales for Avastin are forecast to decrease from $1.76bn in 2012 to $1.44bn in 2022 at a negative Compound Annual Growth Rate (CAGR) of 1.99%.

The major drivers of Avastin sales growth in the NSCLC therapeutics market will include:

- Specifically targets angiogenesis and inhibits tumor growth
- Used in first line and maintenance therapy
- A growing aging population and increasing NSCLC incident cases in the majority of the markets covered, especially in Japan and the emerging markets of China and India

The major barriers responsible for the decline in Avastin sales of NSCLC therapeutics will include:

- Avastin will lose patient shares in the first line as rates of EGFR and ALK testing increases in most of the markets and identifies more patients eligible for Iressa, Tarceva and Xalkori
- Avastin will lose patient share in the second line to ramucirumab and nivolumab beginning in 2015 and 2016, respectively

Source: GlobalData
5EU = France, Germany, Italy, Spain, and UK; 7MM = US, 5EU, and Japan
NA: Not Available
Executive Summary

The below figure illustrates the sales of Avastin for NSCLC in the seven major markets, China, and India during the forecast period.

**Avastin (bevacizumab) Sales for NSCLC by Region, 2012–2022**

- **2012 Total:** $1,756.61m
  - US: 28.37%
  - EU: 53.93%
  - Japan: 16.66%
  - China: 1.55%
  - India: 0.02%

- **2022 Total:** $1,437.31m
  - US: 30.72%
  - EU: 51.25%
  - Japan: 16.77%
  - China: 1.22%
  - India: 0.04%

Source: GlobalData

**What Do the Physicians Think?**

“There are a lot of unmet medical needs for squamous [non-small cell lung cancer] because we have not so many possibilities to treat the patients. And also, we have made progress in [the] first line [for non-squamous patients] with Avastin and with TKIs, but [in the] second and third line, we have no very effective treatment [for non-squamous patients], so a lot of unmet medical needs are there.”

OUS KOL, March 2013

“[For access to new drugs,] I think it will depend on the magnitude of the benefit we will get in clinical studies. I think if there is a statistically significant difference, but it is not clinically meaningful, I think it will be difficult to have reimbursement…at this time. The drug can be approved, but the reimbursement, access to the market, will be more difficult to obtain for the company.”

OUS KOL, March 2013

“There [has] been a big backlash in the lung cancer world against Avastin most recently … that is a drug that probably has a modest impact and one that is quite expensive and also which has a pretty good rate of complication. So I think we are looking for drugs that are effective which don’t have a high rate of complication and if something meets those standards we will use it.”

US KOL, February 2013
Executive Summary

“We have the problem with the testing in some cases you don’t have so much tissue you need to re-biopsy the patients to do further testing ... It would be great to have an upfront testing for about 10 to 20 alterations, so you have the information at the beginning of the treatment with the limited tissue you have.”

OUS KOL, March 2013
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Introduction

2 Introduction

2.1 Catalyst

Non-small cell lung cancer (NSCLC) is the second most common cancer in both men and women. Diagnosed patients have an extremely poor prognosis, with five-year survival rates limited to approximately 2% in US patients diagnosed at stage IV of the disease. Historically, treatment options for advanced-stage NSCLC patients have been dominated by platinum-based chemotherapy. However, the launch of targeted therapies such as Iressa (gefitinib) in 2003, Tarceva (erlotinib) in 2004 and Xalkori (crizotinib) in 2011 for specific molecular subpopulations of NSCLC patients has revolutionized the treatment landscape. During the forecast period, the competitive landscape will continue to evolve as new targeted therapies are launched that address specific biomarkers or histology in the first and second lines of therapy. The NSCLC market will continue to grow during the forecast period, driven by a rising aging population and increasing incident cases of NSCLC in the US, EU, Japan, China and India.

In addition, the launch of emerging premium-priced pipeline agents will drive the uptake of new therapies and prolong the time of patients on therapy in the second line and beyond. Physicians will have several treatment options to choose from to address the high unmet needs of their NSCLC patients, including Gilotrif and LDK378 for the treatment of patients who develop resistance to first-line treatment with epidermal growth factor receptor (EGFR) and anaplastic lymphoma kinase (ALK) therapies, and necitumumab for the first-line treatment of squamous NSCLC patients. In addition, launch of the first-in-class PD1 immunotherapy, nivolumab, will be a significant contributor to market growth during the forecast period.

2.2 Related Reports

“Non-small cell lung cancer (NSCLC) is the second most common cancer in both men and women. Diagnosed patients have an extremely poor prognosis, with five-year survival rates limited to approximately 2% in US patients diagnosed at stage IV of the disease.”
Introduction

- GlobalData (2013). Non-Small Cell Lung Cancer - Italy Drug Forecast and Market Analysis to 2022. GDHC1127CFR
- GlobalData (2013). Alimta (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC195DFR
- GlobalData (2013). Abraxane (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC196DFR
- GlobalData (2013). Iressa (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC197DFR
- GlobalData (2013). Tarceva (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC198DFR
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- GlobalData (2013). Xalkori (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC199DFR
- GlobalData (2013). onartuzumab (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC201DFR
- GlobalData (2013). necitumumab (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC202DFR
- GlobalData (2013). ramucirumab (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC203DFR
- GlobalData (2013). custirsen (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC204DFR
- GlobalData (2013). ganetespib (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC205DFR
- GlobalData (2013). nintedanib (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC206DFR
- GlobalData (2013). Gilotrif (afatinib) (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC207DFR
- GlobalData (2013). dacomitinib (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC208DFR
- GlobalData (2013). LDK 378 (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC209DFR
- GlobalData (2013). Yervoy (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC210DFR
- GlobalData (2013). nivolumab (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC211DFR
- GlobalData (2013). GSK1572932A (MAGE-A3) (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC212DFR
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- GlobalData (2013). Halaven (Non-Small Cell Lung Cancer) - Forecast and Market Analysis to 2022. GDHC213DFR
- GlobalData (2013). Non-Small Cell Lung Cancer - Current and Future Players. GDHC1017FPR
- 

2.3 Upcoming Related Reports

Appendix

7.8 About GlobalData

GlobalData is a leading global provider of business intelligence in the healthcare industry. GlobalData provides its clients with up-to-date information and analysis on the latest developments in drug research, disease analysis, and clinical research and development. Our integrated business intelligence solutions include a range of interactive online databases, analytical tools, reports, and forecasts. Our analysis is supported by a 24/7 client support and analyst team.

GlobalData has offices in New York, Boston, London, India, and Singapore.

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