Comparing Trends in Oncologic and Pharmaceutic Growth

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INTRODUCTION

The cancer industry is growing rapidly, but how does it compare to the overall pharmaceutical drug market? This project aims to understand that relationship and use it to predict future trends and interpret differences in the two markets.

BACKGROUND AND SIGNIFIGANCE

There has been a lot of progress in oncology research and therapies in these past few decades. The following few statistics summarize its progress:

- The number of FDA approved cancer drugs has risen from 4 in 2000 to 21 in 2015 (CenterWatch)

| 2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
4	7	8	8	6	2	4	6	5	9	6	12	19	12	10	21

- The overall mortality rate for contracting cancer has decreased from 215 deaths per 100,000 people in 1991 to 161 per 100,000 people in 2014 (SEER). This translates into 21 million fewer deaths.
- The 5-year relative survival rate for cancers has increased from 49% in 1975-1977 to 69% in 2006-2012 (SEER). Most of this change is due to rise in survival rates of a few specific cancers, such as prostate and breast cancers, while others such as laryngeal cancer is largely unaffected.

Between 2001 - 2014, the revenue of the overall pharmaceutical industry has increased 2.7x from 390.2 Billion US Dollars (Statista). Oncology has consistently been the biggest sector of the pharmaceutical industry. As the largest section of the medical industry above areas such as diabetes, dermatology, and mental health (Arnum), progress on cancer is especially important marker of progress of the overall medical industry.

RESEARCH METHODOLOGIES

The research was purely observational, and was a hybrid of qualitative and quantitative data, although it was mostly be quantitative. The data was retrieved from individual cancer companies and databases, including the SEER database, cancer.org, and the NIH. During data gathering, data about mortality, efficacy and prevalence of cancer drugs, as well as data about treatment efficacies in both oncology and pharmaceutical areas was sought.

The population studied is the set of companies in the entire pharmaceutical market, and the sample being studied is the set of companies and drugs within those companies that target cancer therapies. The information about the change in cancer-related mortality rates and treatment successes will be compared with the growth of cancer treatments and drugs (by comparing graphs and visualizing trends) and the growth of pharmaceutical companies.

DATA

DATA + ANALYSIS

Source: IMS Health, MIDAS, Q4 2015
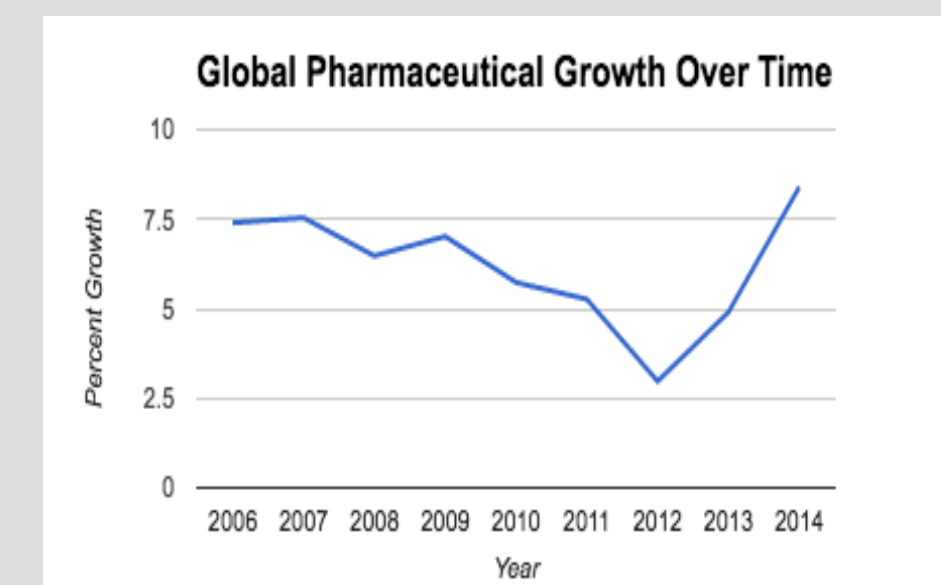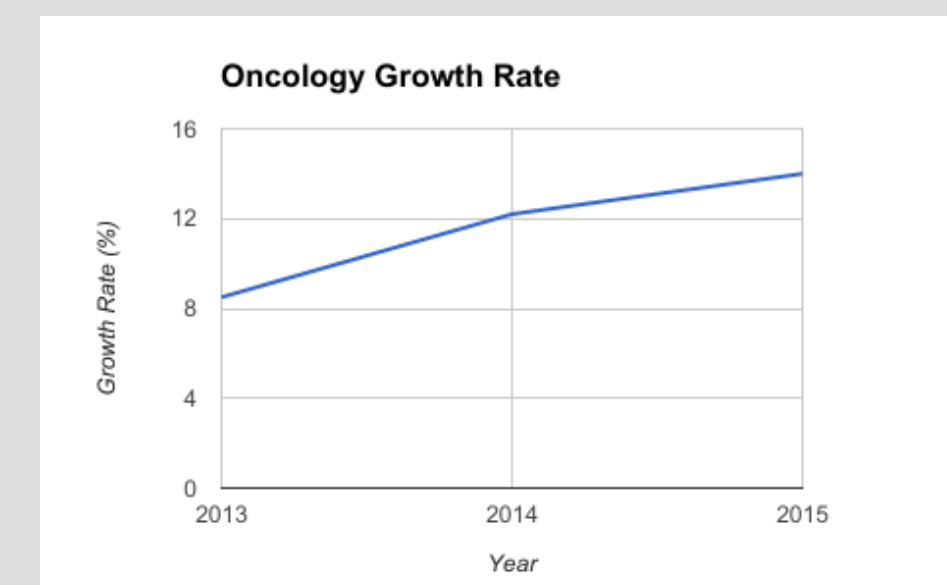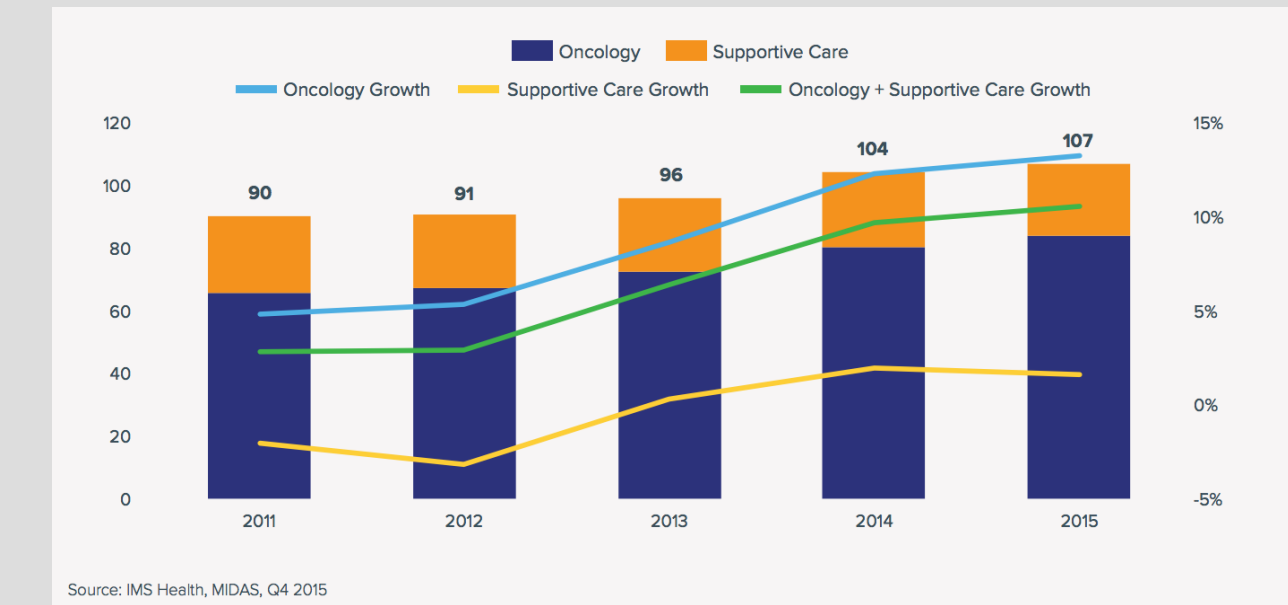
- Global medicine spending increased 9% between 2014-2015 largely due to hepatitis and cancer medicines, while for cancer it is only increasing 7.4% over the past 5 years (QuintilesIMS)
- Cancer drugs account for 11.5% drug costs, rising from 10.5% in 2011 (QuintilesIMS)
- Oncology is projected to have a compound annual growth rate (CAGR) of 12.5% between 2016-2022, while overall drug sales have a predicted CAGR of 6.7% (EvaluatePharma). Is predicted to shift from 10.7% to 16.3% of the world market by 2022.

Source: IMS R&D Focus, Sept 2016; QuintilesIMS Institute, Oct 2016
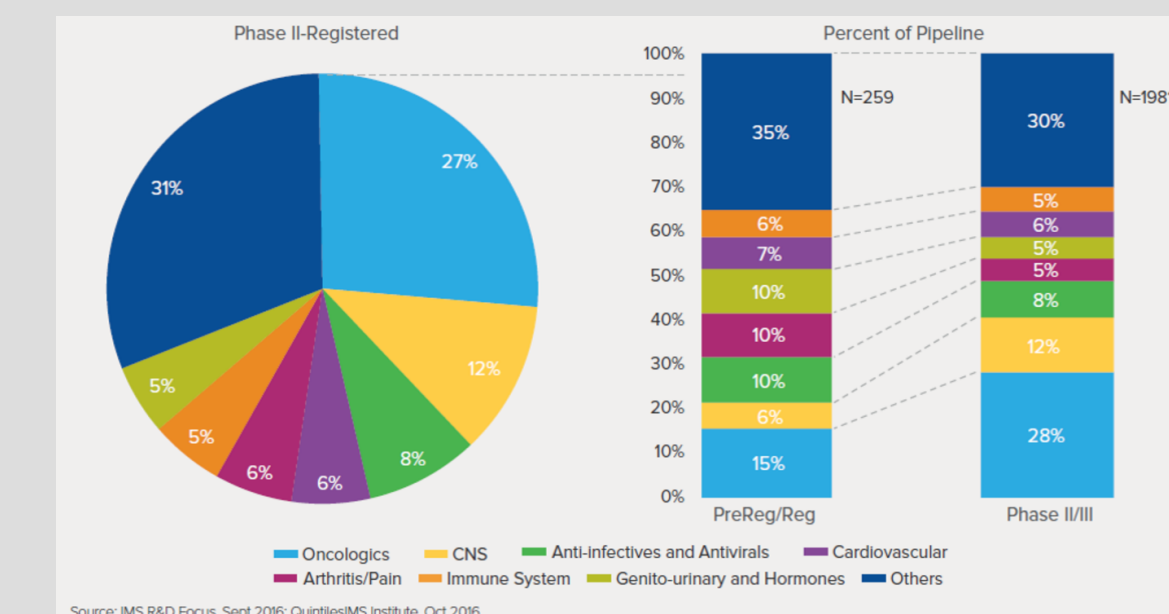
- Cancer pipeline has increased 63% over the past two years

Oncologist seems to be leading the overall pharmaceutical industry in current production and future growth according to current trends.

ACKNOWLEDGEMENTS / REFERENCES

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