

# Therapeutic Trends

# Disease Dynamics

(An Excerpt from *IMS Intelligence.360, Global Pharmaceutical Perspectives 2005*)

*Insight and Outlook from IMS HEALTH*

Whether marked by promising developments in the battle against life-threatening disease, or providing reason to ponder the limitations of science, certain therapy classes stand out in their ability to elicit interest. In 2005, the four following therapy classes came to our attention:

- Oncology is making rapid advances and is now growing faster than virtually any other pharmaceutical sector
- Drugs to fight metabolic syndrome (MS) are gaining attention as the rise of obesity drives both diabetes and resistance to insulin
- Antiplatelet agents are also of interest, as a plethora of unmet medical needs are now being matched by a flurry of pharmaceutical company research activity
- Alzheimer's continues to defy all efforts to even understand its origins. It proceeds to spread in an aging population, impervious to attempts to relieve its symptoms or to hamper its progression

## ONCOLOGY

In 2005, the oncology market was worth an estimated \$29 billion (Figure 1). Presently, it is growing much faster than the overall industry growth rate of seven per cent. This sector will continue to grow between 17% and 18% in 2006 and may even double in importance before 2010, despite some pharmaceutical constraints.

Given the success of cancer drugs from Genentech/Roche, Biogen Idec, Novartis and ImClone Systems, the fastest growing area of cancer therapy is molecular-targeted treatment. This class, which includes both proteins and small molecule drugs, has demonstrated an improved efficacy and fewer adverse effects.

## METABOLIC SYNDROME

MS, once called syndrome X or insulin resistance syndrome, was first recognized about 40 years ago.

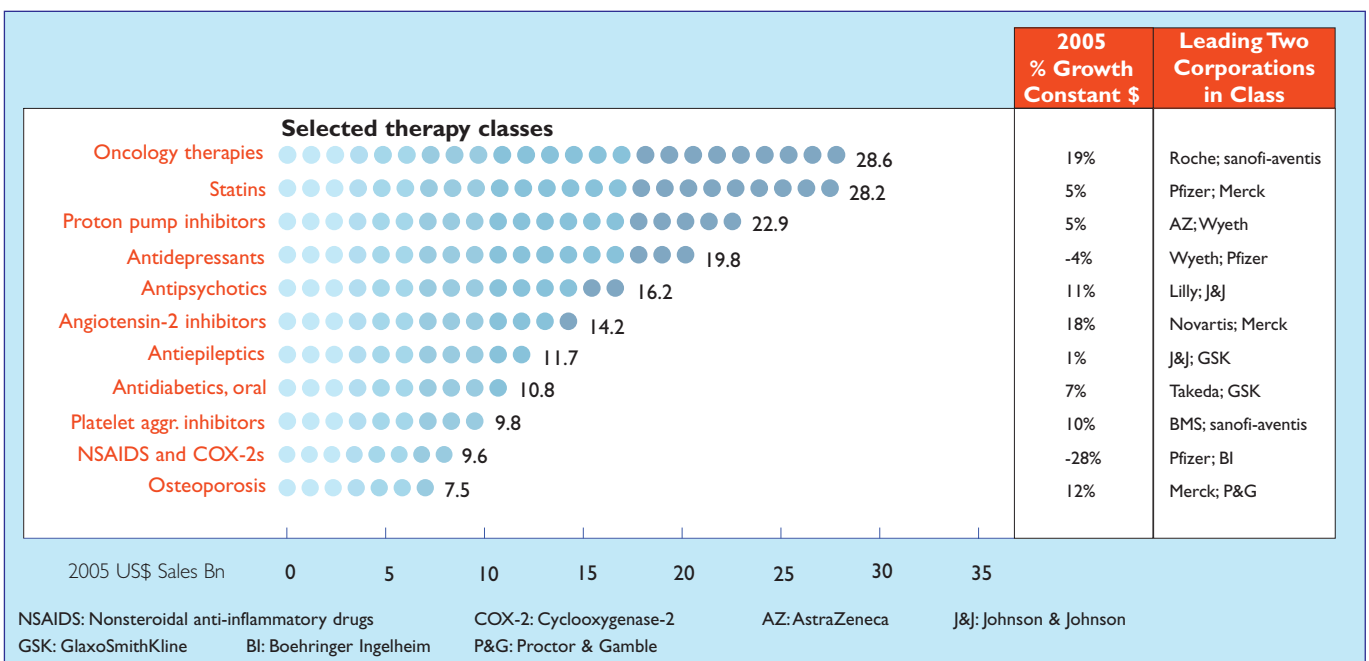


Figure 1. Selected therapy classes and worldwide sales.  
 SOURCE: IMS Health, MIDAS, December 2005.

However, the term itself did not come into wide use until the last decade. The definition of MS reflects a cluster of risk factors for diabetes and cardiovascular disease. These include high blood sugar, abdominal obesity, hypertension, high levels of triglycerides and low levels of high-density lipoprotein. Studies suggest that about 23.7% of all American adults meet the diagnostic criteria for MS, with little difference between the sexes.

Products that specifically attack the adiposity element, including sanofi-aventis' Acomplia®, a CB1 blocker in pre-registration, are now being developed. In addition, statins and hypoglycemic agents are being viewed as treatment options. Some clinicians suggest that the PPAR-alpha/gamma compounds may even attack more than the diabetes aspect of MS. Current regimens require a combination of the separate hypertension, hyperlipidemic and diabetes therapies. Within each of these areas, multiple compounds—including new modes of action, combinations and novel approaches—are in development. An obvious endpoint, though, is a single-pill approach that offers the advantage of better patient compliance.

### ANTIPLATELET AGENTS

The antiplatelet market encompasses both traditional platelet aggregation inhibitors, such as Aspirin® and Plavix®, as well as anticoagulants and antithrombins. Numerous novel oral antiplatelet agents are in development. These include direct thrombin inhibitors and factor Xa inhibitors.

Within the existing class of oral platelet aggregation inhibitors, Aspirin® remains the gold

standard for primary prevention, given its effectiveness and low cost. Plavix® is the market leader among the prescribed agents in this class, with \$5.9 billion in worldwide sales last year—a 16% increase over 2004. Projections for 2009 exceed \$10 billion.

Despite these optimistic projections, there are significant changes occurring within this therapeutic class that threaten Plavix®'s future—specifically, the need to replace warfarin, the top choice for primary prevention of thrombotic events. Two emerging competitors include Prasugrel (Eli Lilly/Daiichi Sankyo) and AZD6140 (Astra-Zeneca).

### ALZHEIMER'S DISEASE

The battle against Alzheimer's exemplifies a scientific endeavor to comprehend a widespread disease that defies the development of therapies which effectively relieve symptoms or restrain disease progression. A \$4 billion market with 55% of sales in North America, 31% in Europe and the remainder in the rest of the world, it has grown by 37% from 2000 to 2004. By 2010, it is estimated that the cost, in the US alone, to manage Alzheimer's will grow to about \$160 billion annually, excluding Medicaid-related residential care. It will likely take 10 to 15 years to develop more effective drugs.

Four recently approved agents work primarily through acetylcholinesterase inhibition. Pfizer's/Eisai's Aricept®, which constituted 55% of the total Alzheimer's market in 2005, Novartis' Exelon®, Johnson & Johnson's Reminyl/Razadyne® and First Horizon's Tacrine®. Another drug, Namenda® by Forest, is an NMDA antagonist. **CPM**

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