CBI's 4th Annual Forum on Oncology Commercialization Strategies

Oncology Strategic Overview 2010-2015

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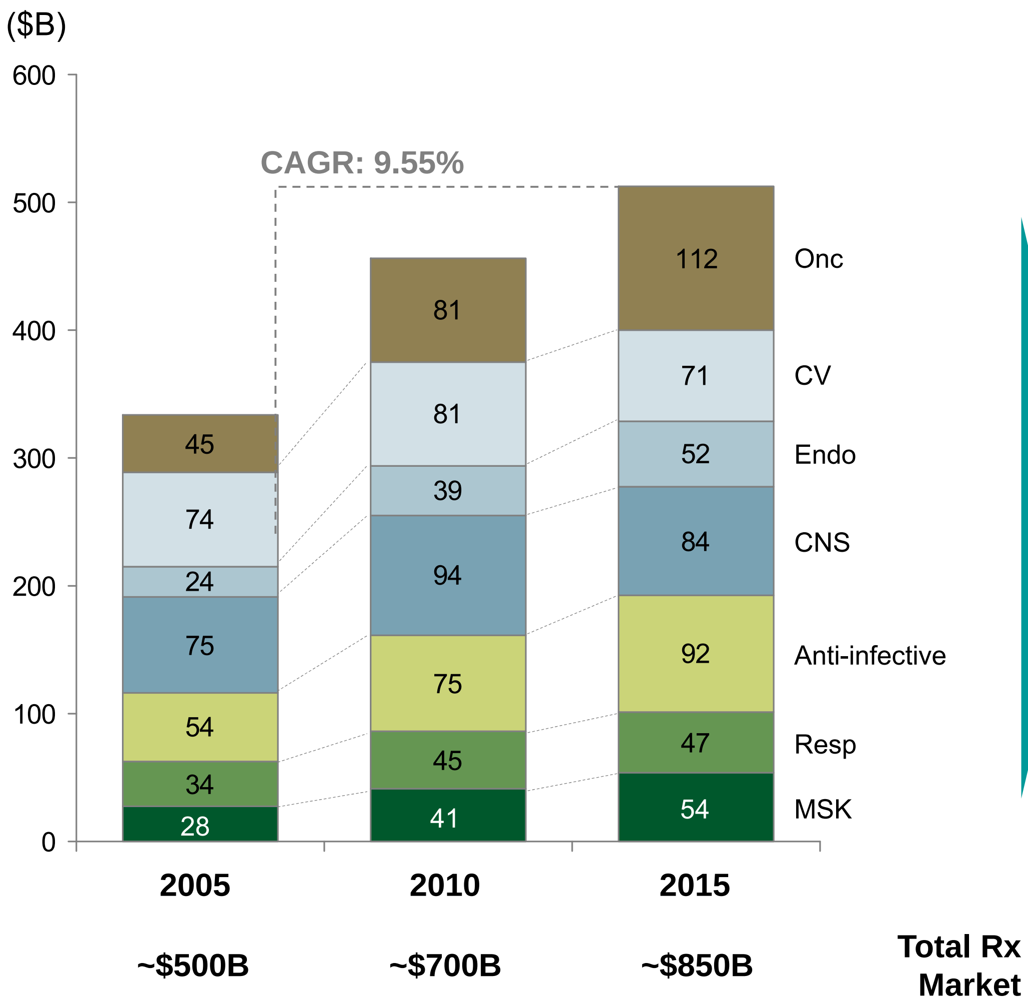
Oncology has been a fast growing market and should be the largest TA by 2015

Estimated revenues for major TAs



2nd largest TA today

Largest TA by 2015
→10% of total market

Growth expected to continue post 2015

Source: BCG Analysis; EvaluatePharma

The market consists of four therapeutic classes

Class	Share	Examples	Description
Targeted[2]	35%	AVASTIN, Tarceva	Compounds that have differential activity in tumor vs non-tumor cells
Supportive[1]	12%	Aranesp®	Drugs that modify the symptoms of cancer or chemotherapy, or enhance efficacy of other drugs
Cytotoxic /Cytostatic	11%	TAXOTERE®, Eloxatin™	Agents that damage or slow growth of all cells, not just tumor cells
Immunomodulator /Hormonal	21%	PREMIXED SC/IM ROFERON®-A	Compounds that modulate the immune system activity to influence tumor cell activity or decrease the activity of hormone sensitive cancers
Personalized Medicine	>10%	Herceptin, gleevec	Application of a biomarker to identify specific sub-populations for therapy: can be applied across all classes but most focus on targeted therapies

Note: ATC classes are not all included: L4 and prophylactic vaccines not included in analysis (e.g. Gardasil)
Source: BCG Analysis; EvaluatePharma

Most leaders built foundation over decades ...

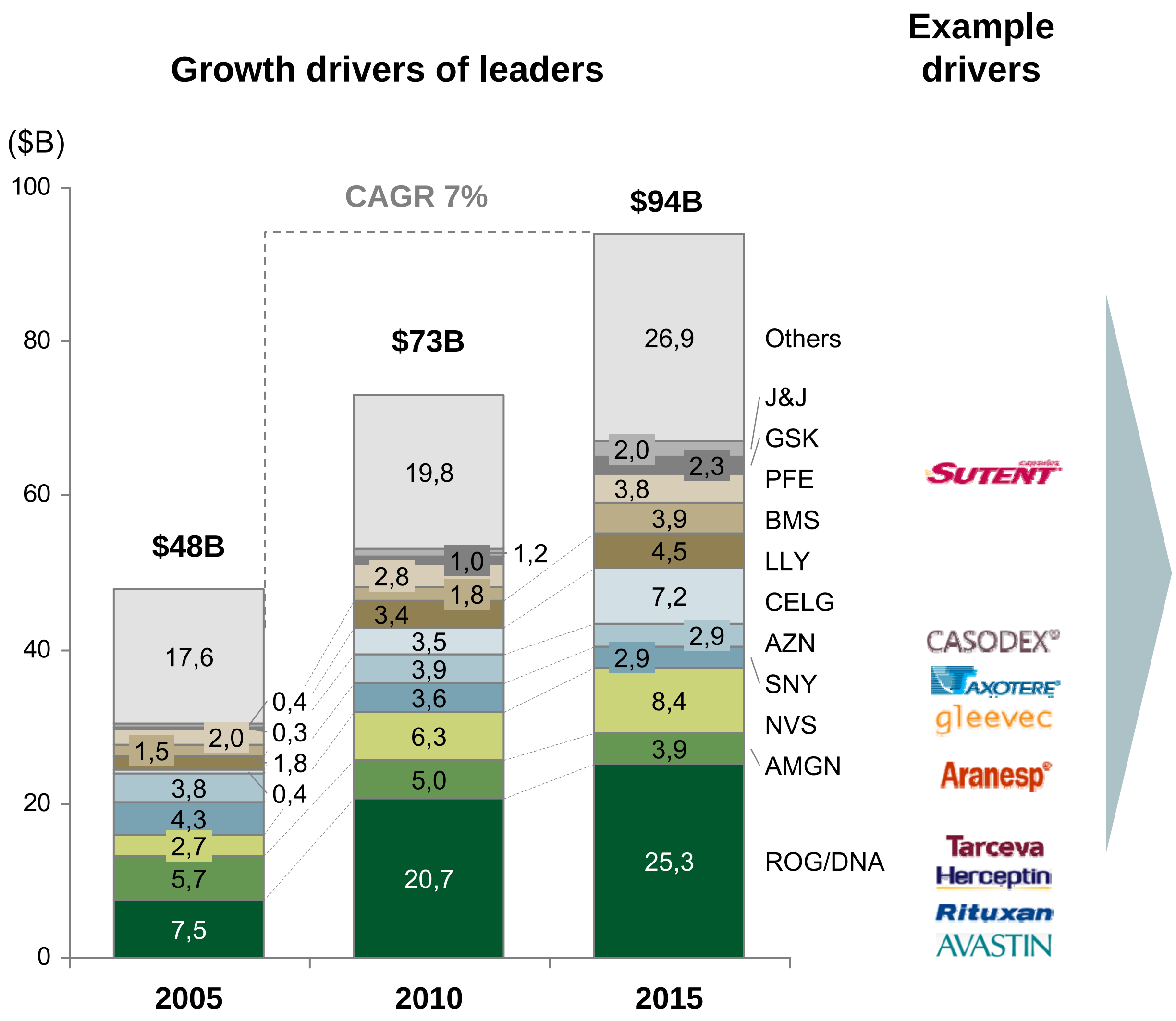
Company	First onc launch
AMGEN	1989
sanofi aventis	1984 (Rhone-Poulenc)
Roche (*)	1986
NOVARTIS	1989 (Henkel)
Celgene	1964
AstraZeneca	1973
Johnson & Johnson	1983
Lilly	1969
gsk GlaxoSmithKline	1953 (Wellcome)
Pfizer	1958 (Upjohn)
Bristol-Myers Squibb	1977

Multiple facets to longstanding presence ...

Of 11 benchmarked leaders
- 8 had products on market 20 years ago
- 7 had >$100M sales 15 years ago
- 6 had >$500M sales 10 years ago
- 6 have launched 5 drugs in last 10 years

(*) Included Genentech
Source: BCG Analysis; EvaluatePharma

... Following a Blockbuster model ...



Blockbusters are driving significant growth to 2010 and beyond

Blockbusters are marketed by today's leaders

First blockbusters were cytotoxics, but are increasingly targeted therapies

Source: BCG Analysis; EvaluatePharma

... Blockbusters often build the "Hard Way"

Gleevec ($3.9B in 2009) was a low-priority during most of its development

- CML affects small (4,600/year US) complication-prone population
- 6 years in preclinical after compound optimization, only prioritized after Phase I results
- Since approved, filed or in ongoing trials for 5 more indications

Gemzar ($1.47B in 2009) was an unexpected blockbuster

- Initially predicted to be a $50M drug – and prioritized for development accordingly
- Market potential only become clear over serial post-launch trials

Eloxatin ($1.3B US in 2009) was abandoned by Lilly after failed trial

- 10/00, Lilly returned US rights to Sanofi-Aventis after FDA rejection for 1st line CRC
- 8/02, fast-track FDA approval for new trial by SA for 2nd line CRC
  - and 2/04, approval for 1st line – now SOC

Avastin ($5.7B in 2009) failed in a key trial

- 9/02, failed to meet progression endpoint in breast, but 9/03 filed NDA in CRC
- 2/05, positive results for survival endpoint in breast

Blockbusters aren't always predictable – the more shots on goal, the better

- Hard to predict market potential of a product or indication
- Expansion to new indications often possible

Failures can occur even in most promising tumor type

- Benchmark leaders overcame through execution capabilities, capacity and commitment

Source: EvaluatePharma; analyst reports

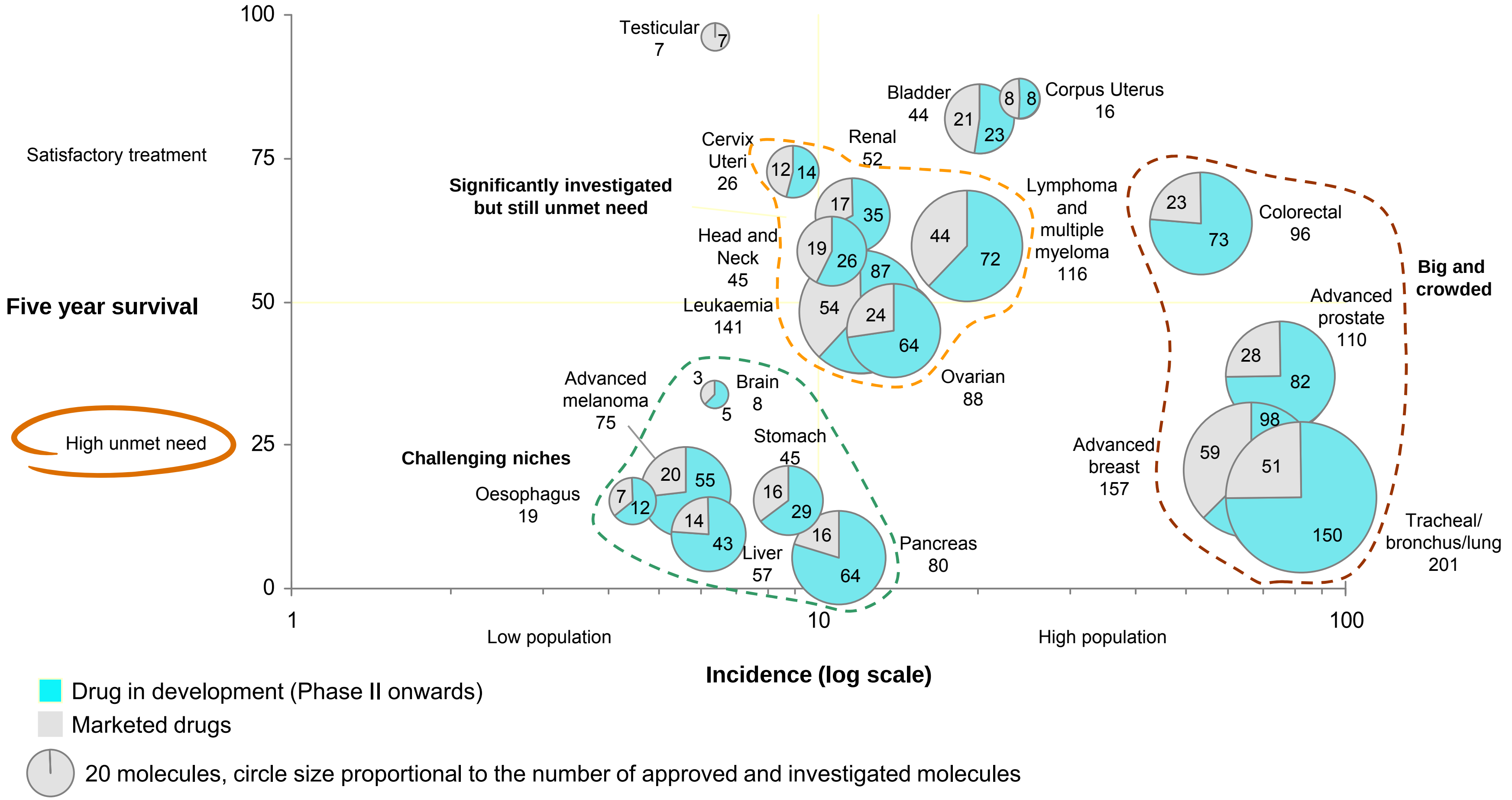
How does the future look like? (I)

Major Trends

High unmet need in oncology will continue to drive strong growth ...	• 10 million new cases of cancer every year worldwide • 5-year survival rates for the top 10 cancers remain <50% on average • Global oncology market is projected to grow 3.5% CAGR to ~$120 million in sales in 2016
... Despite external pressures	• Increasing pricing pressures from generic competition, regulatory bodies & payors • Growing influence of other healthcare system players, e.g., patient advocacy groups, cooperative groups
Complex science and development process drive micro-segmentation ...	• Evolving into personalized and sophisticated combination therapies • Fast-moving science with treatment paradigms rapidly evolving
... And massive competition	• Oncology is the most intensely researched therapeutic area • Oncology market is highly fragmented, where only 5 drugs have >5% market share • Massive competition at tumor and target level, as well as for patients and physicians

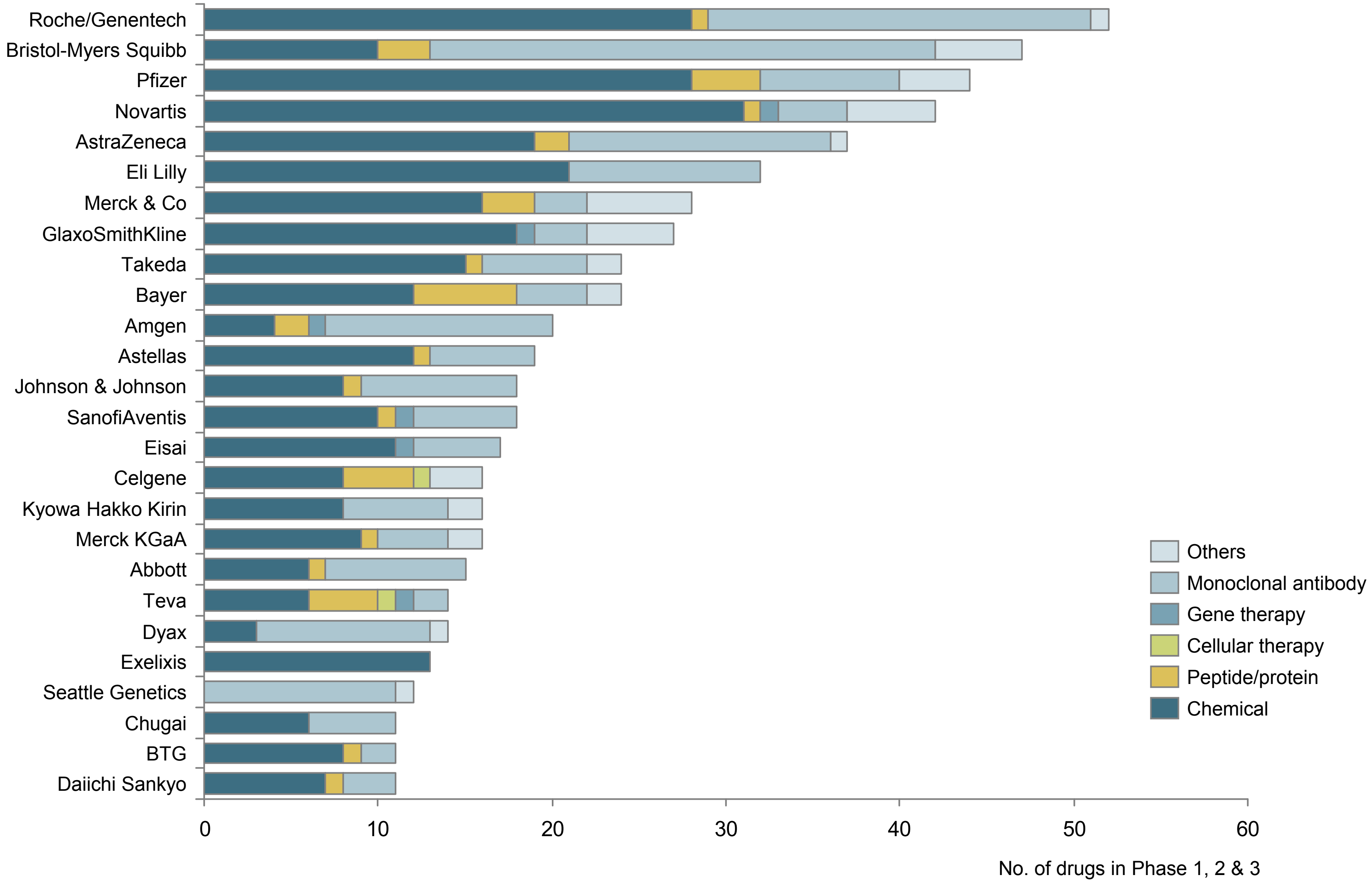
Cancer still high unmet need, with significant space for improvement

Patterns in marketed products and products in development[1] (as of Dec 2010)



1. Count of molecules
Note: Count of molecules by indication. The same molecule can be in development in different cancer indications
Source: Evaluate Pharma

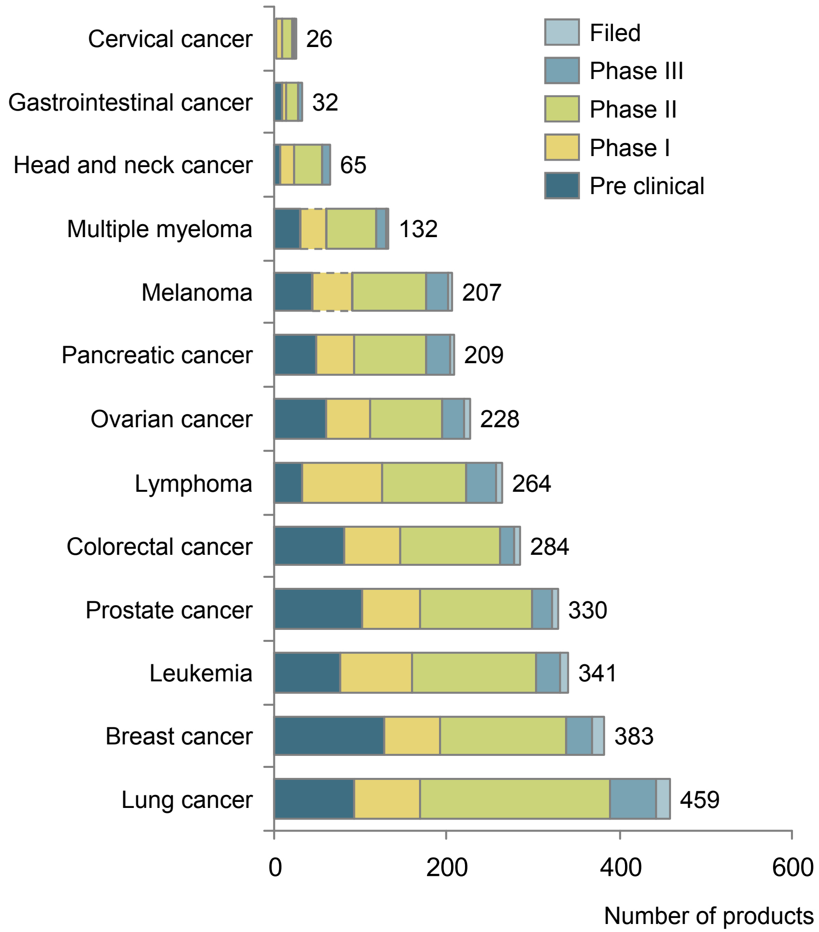
All players are placing their bets …



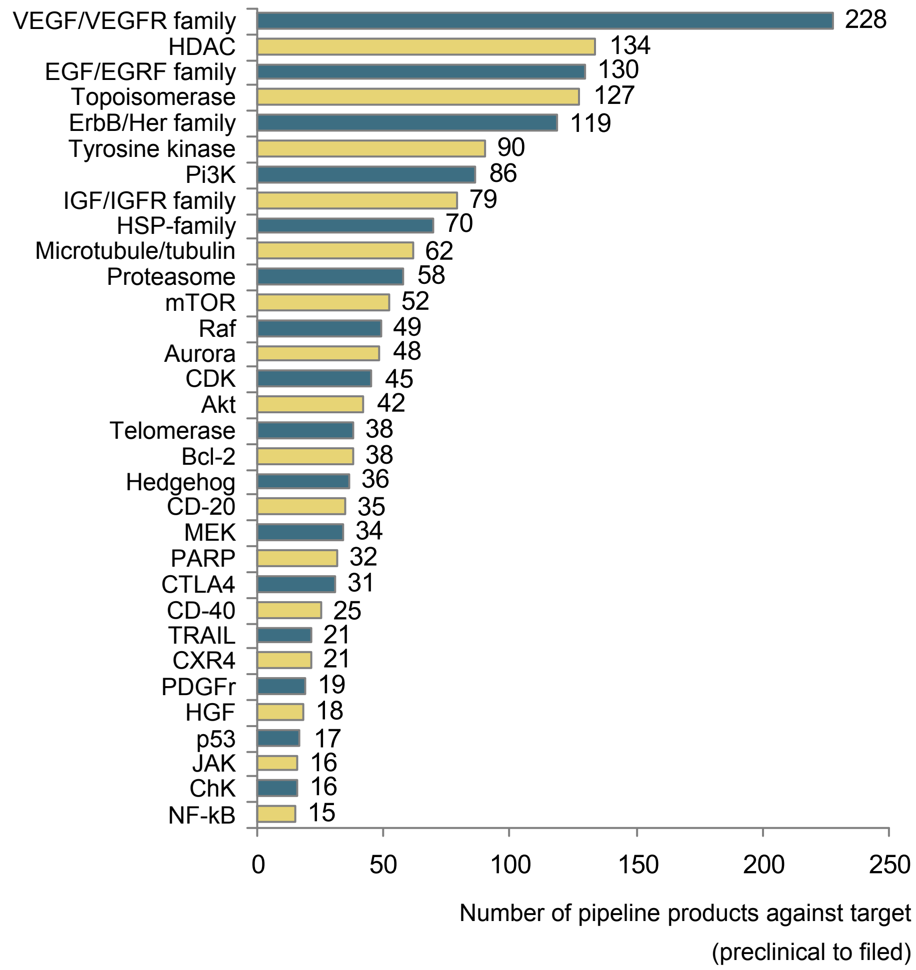
Source: BCG Analysis; EvaluatePharma

… and all bets are valid

Oncology pipeline by indication and phase



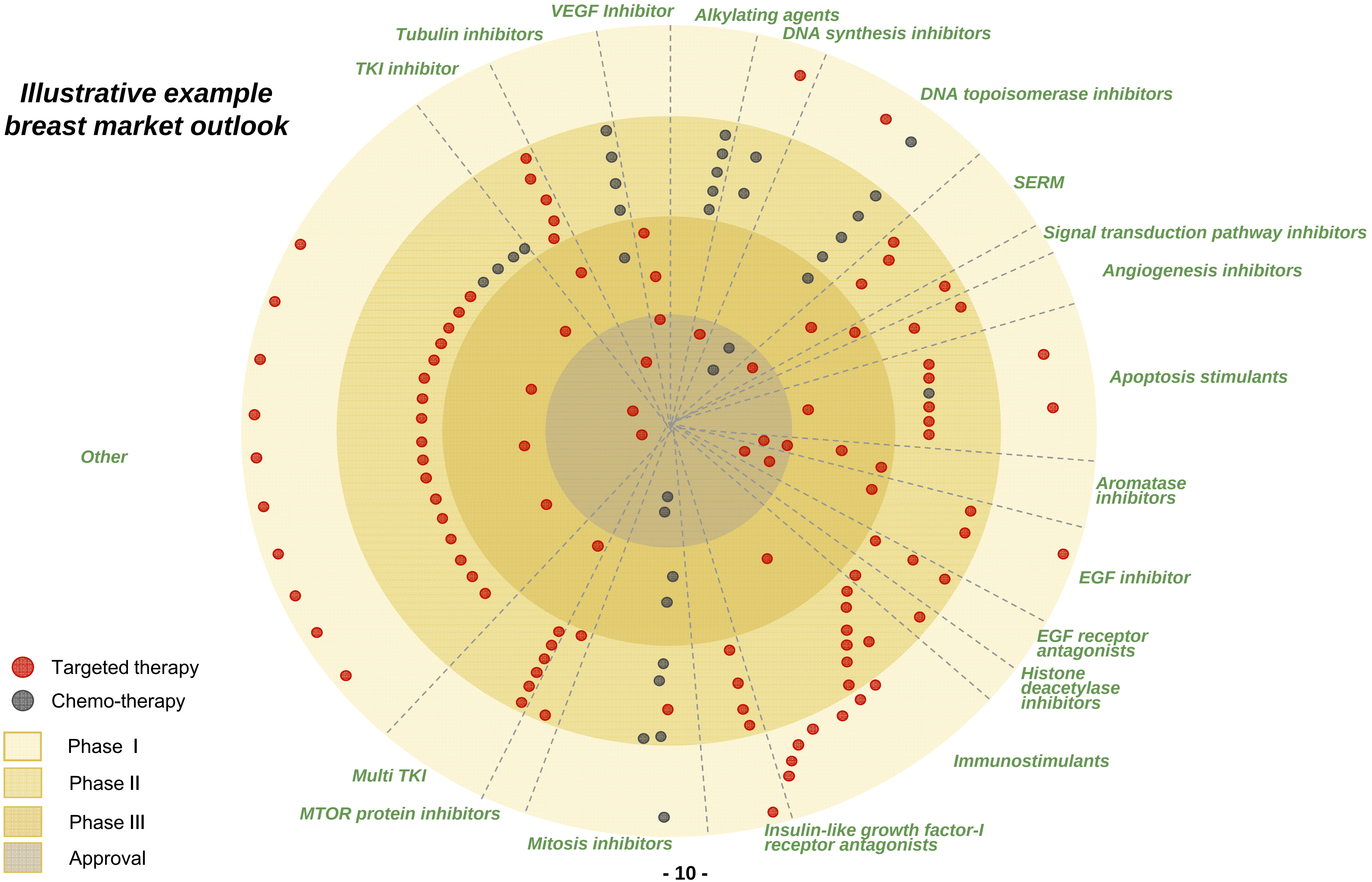
Pipeline products are directed against a huge variety & combination of molecular targets



Source: BCG Analysis; EvaluatePharma

… leading to an extremely competitive and crowded market

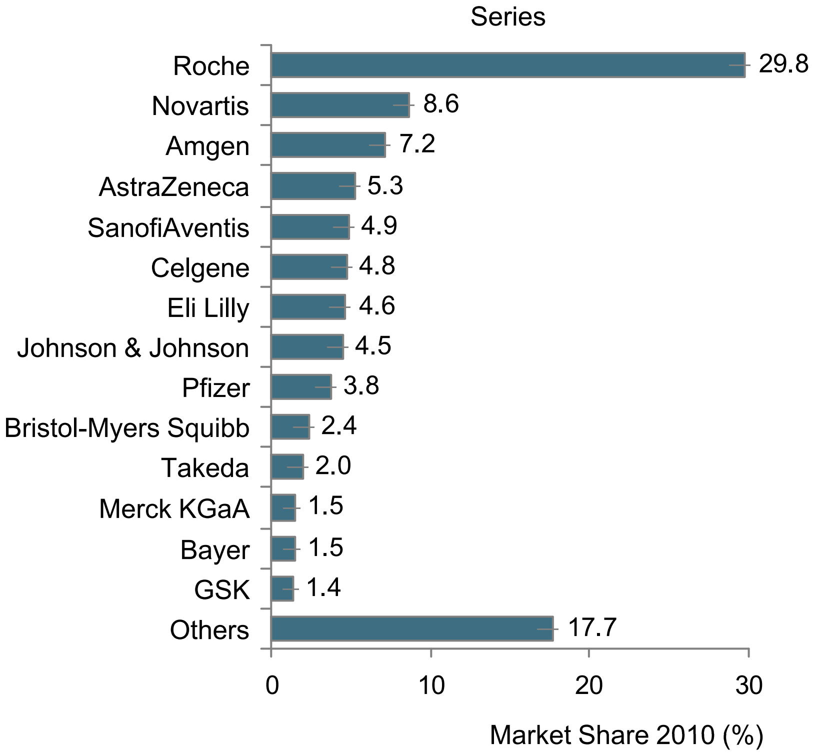
Illustrative example breast market outlook



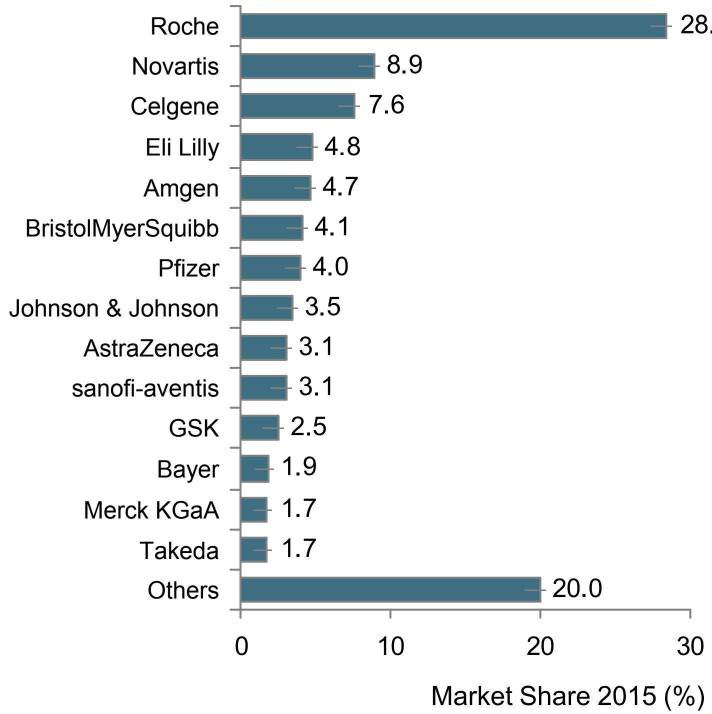
How does the future look like? (II)

Significant leadership changes likely…

2010 leadership



2015 anticipated



Significant shifts likely including:

- **Future consolidation among top 10?**
- **Massive hunt for start-ups - biotech M&A / BD&L**

Source: BCG Analysis; EvaluatePharma