This presentation contains certain forward-looking statements. These forward-looking statements may be identified by words such as ‘believes’, ‘expects’, ‘anticipates’, ‘projects’, ‘intends’, ‘should’, ‘seeks’, ‘estimates’, ‘future’ or similar expressions or by discussion of, among other things, strategy, goals, plans or intentions. Various factors may cause actual results to differ materially in the future from those reflected in forward-looking statements contained in this presentation, among others:

1. pricing and product initiatives of competitors;
2. legislative and regulatory developments and economic conditions;
3. delay or inability in obtaining regulatory approvals or bringing products to market;
4. fluctuations in currency exchange rates and general financial market conditions;
5. uncertainties in the discovery, development or marketing of new products or new uses of existing products, including without limitation negative results of clinical trials or research projects, unexpected side-effects of pipeline or marketed products;
6. increased government pricing pressures;
7. interruptions in production;
8. loss of or inability to obtain adequate protection for intellectual property rights;
9. litigation;
10. loss of key executives or other employees; and
11. adverse publicity and news coverage.

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Roche Diagnostics PHC Investor Day

Agenda

14.30-14.35 Welcome
   Karl Mahler, Head of Investor Relations

14.35-15.05 Introduction & Roche Diagnostics Business Overview
   Daniel O’Day, COO Roche Diagnostics

15.05-15.25 Roche Professional Diagnostics
   Colin Brown, Head Roche Professional Diagnostics

15.25-15.45 Roche Molecular Diagnostics
   Paul Brown, Head Roche Molecular Diagnostics

15.45-16.00 Q&A

16.00-16.30 Coffee Break & Exhibition Stands

16.30-16.50 Roche Tissue Diagnostics
   Eric Walk, Chief Medical Officer Roche Tissue Diagnostics

16.50-17.10 Roche Pharma & Diagnostics Collaborations
   Garret Hampton, Senior Director Oncology Biomarker Development gRED

17.10-17.30 Emerging Markets
   Roland Diggelmann, Regional Head Asia Pacific

17.30-17.45 Value of Diagnostics to Roche Group
   Alan Hippe, CFO Roche Group

17.45-18.00 Q&A

18.30- 21.00 Drinks & Dinner
Roche Diagnostics
Driving medical value and enabling Personalised Healthcare

Daniel O’Day, COO Roche Diagnostics
Overview IVD Market

Our Business Model and Strategy

Personalised Healthcare
Market Overview: In vitro Diagnostics
Large & growing market, increasing in importance

World-wide IVD Sales by Segment

<table>
<thead>
<tr>
<th>Segment</th>
<th>2010</th>
<th>2015E</th>
<th>USD bn</th>
<th>Total</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular</td>
<td>3</td>
<td>5</td>
<td>57</td>
<td>5</td>
<td>5%</td>
</tr>
<tr>
<td>Tissue</td>
<td>2</td>
<td>3</td>
<td>44</td>
<td>3</td>
<td>11%</td>
</tr>
<tr>
<td>Professional</td>
<td>29</td>
<td>36</td>
<td>57</td>
<td>5</td>
<td>5%</td>
</tr>
<tr>
<td>Diabetes Monitoring</td>
<td>9</td>
<td>10</td>
<td>29</td>
<td>3</td>
<td>3%</td>
</tr>
</tbody>
</table>

Market trends

- Labs remain willing to invest to address costs and improve efficiency
- Payers support solutions that deliver health economic and medical value
- New drug approvals increasingly linked to Companion Diagnostics
- Emerging markets adopting “western” standards of care

Source: Roche Analysis, Company reports
Excludes Life Sciences & insulin pumps
Market Overview: Market share
Roche is the clear IVD market leader

Roche's strengths
- Total solution offering
  - Breadth of technologies
  - IT and workflow connectivity
- Completeness of menu
- Strong commercial presence
  - Operates in >130 countries

Source: Roche Analysis, Company reports
Excludes Life Sciences & insulin pumps
## Diagnostics Division HY 2011

**Leading in sales growth and margin**

### Sales

<table>
<thead>
<tr>
<th></th>
<th>2010 CHF m</th>
<th>2011 CHF m</th>
<th>change in % CHF local</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Diagnostics</td>
<td>2,449</td>
<td>2,347</td>
<td>-4 +9</td>
</tr>
<tr>
<td>Diabetes Care</td>
<td>1,489</td>
<td>1,329</td>
<td>-11 +1</td>
</tr>
<tr>
<td>Molecular Diagnostics</td>
<td>604</td>
<td>544</td>
<td>-10 +2</td>
</tr>
<tr>
<td>Applied Science</td>
<td>449</td>
<td>377</td>
<td>-16 +4</td>
</tr>
<tr>
<td>Tissue Diagnostics</td>
<td>259</td>
<td>259</td>
<td>0 +16</td>
</tr>
<tr>
<td><strong>Diagnostics Division</strong></td>
<td><strong>5,250</strong></td>
<td><strong>4,856</strong></td>
<td><strong>-8 +5</strong></td>
</tr>
</tbody>
</table>

### Operating profit

<table>
<thead>
<tr>
<th></th>
<th>2011 CHF m</th>
<th>% Sales</th>
<th>% change (in LC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>4,856</td>
<td>100.0</td>
<td><strong>+5</strong></td>
</tr>
<tr>
<td>Royalties &amp; other op inc</td>
<td>50</td>
<td>1.0</td>
<td><strong>-41</strong></td>
</tr>
<tr>
<td>Cost of sales</td>
<td>-2,052</td>
<td>-42.3</td>
<td><strong>+2</strong></td>
</tr>
<tr>
<td>M &amp; D</td>
<td>-1,174</td>
<td>-24.1</td>
<td><strong>+7</strong></td>
</tr>
<tr>
<td>R &amp; D</td>
<td>-431</td>
<td>-8.9</td>
<td><strong>+11</strong></td>
</tr>
<tr>
<td>G &amp; A</td>
<td>-186</td>
<td>-3.8</td>
<td><strong>+2</strong></td>
</tr>
<tr>
<td><strong>Core operating profit</strong></td>
<td><strong>1,063</strong></td>
<td><strong>21.9</strong></td>
<td><strong>+5</strong></td>
</tr>
</tbody>
</table>
Overview IVD Market

Our Business Model and Strategy

Personalised Health Care
Our Strategy: Portfolio overview
Broad customer base and product offering built around an industry-leading lab diagnostics business

<table>
<thead>
<tr>
<th>Life Science</th>
<th>In Vitro Diagnostics</th>
</tr>
</thead>
<tbody>
<tr>
<td>App. Science</td>
<td>Molecular Dx</td>
</tr>
<tr>
<td></td>
<td>Tissue Dx</td>
</tr>
<tr>
<td></td>
<td>Professional Dx</td>
</tr>
<tr>
<td></td>
<td>Diabetes Care</td>
</tr>
</tbody>
</table>

- Academia & Pharma: Molecular lab
  - Blood screen.
- Pathology lab
- Central lab
- ER / ICU
- Doc. office

8% of sales

64% of sales

28% of sales
Our Strategy: Diagnostics business model
Place instruments to generate recurring revenues through reagent usage (razor - razor blades)
Our Strategy: Overview
Differentiation through innovation in testing efficiency and medical value

Drivers of competitive differentiation

- Provide lab solutions
- Offer complete menus

2020
Our Strategy: Lab solutions

Address throughput, workflow integration and lab information management to expand installed base.

Competitive Value of Testing Efficiency

<table>
<thead>
<tr>
<th>Time</th>
<th>Lab Information Management</th>
<th>Workflow Integration</th>
<th>Automation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of competitive differentiation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Roche Strategy

- Enable result aggregation and reporting through LIS*
- Fully integrate sample preparation
- Consolidate core lab technologies
- Offer modular platforms with varying throughputs
- “One-size-fits-all” reagents

* Lab Information Systems
Our Strategy: Complete menu

Providing complete test menus drives additional reagent pull-through

- Orange = HCV test sales
- Blue = Infectious disease menu sales

Launch HCV test
Our Strategy: Overview
Differentiation through innovation in testing efficiency and medical value

Drivers of competitive differentiation

Medical Value

Testing Efficiency

- Focus on unmet needs
- Get access & create IP
- Deliver clinical evidence
Our Strategy: Focus on unmet needs
Prioritize those areas with highest unmet medical need

Selected Examples
Our Strategy: Get access & create IP
Owning IP or having exclusive access creates maximum value for Roche

**Considerations**

- Roche IP and/or exclusive access to IP provides maximum competitive advantage
  - First mover advantage to protect investments
  - Full control of market development
  - Unique menu drives instrument placements
- Systematic, proactive scouting process
  - Secure high value assays, e.g. PIK3, EGFR, PIGF
Our Strategy: Deliver clinical evidence
Demonstrating clinical utility and health economic benefit creates higher value for Roche

Medical value IVD test

- IVD system and assay development
- Clinical Trials
- Health Economics
- KOLs guidelines
- Regulatory approval
- Reimbursement & Medical marketing

Standard IVD test

- IVD system and assay development
- Regulatory approval

Price per test
## Value of breadth and depth of technologies

### Delivering medical value for melanoma patients

<table>
<thead>
<tr>
<th><strong>Dermatological Exam</strong></th>
<th><strong>H&amp;E Staining</strong></th>
<th><strong>IHC Antibodies</strong></th>
<th><strong>Mutational Analysis</strong></th>
<th><strong>Monitoring treatment</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical removal of suspicious skin lesion</td>
<td>Highlights cellular detail for preliminary diagnosis</td>
<td>Visualise expression of protein markers to confirm diagnosis</td>
<td>Amplifies and detects BRAF mutation, if present, for treatment decision (Zelboraf)</td>
<td>To detect any recurrences or disease progression early using <strong>cobas</strong> Elecsys S 100 assay</td>
</tr>
</tbody>
</table>
Overview IVD Market

Our Business Model and Strategy

Personalised Health Care
PHC: Competitive advantage of having Diagnostics and Pharma in the Group
PHC: Leveraging Pharma & Diagnostics
Collaborating throughout discovery to market

Pharmaceuticals

Research

Unrestricted know-how and IP exchange

Development

More efficient development

Commercialisation

Faster adoption of PHC solutions (medicine and test)

Research assay

Technically validated IVD assay

Clinically validated IVD assay

Diagnostics
PHC: Roche internal collaborations

Significant increase due to focused PHC strategy

- Upper = Companion Dx Projects
- Lower = R&D Collaborations

2005: 0
2006: 1
2007: 2
2008: 66
2009: 94
2010: 169

Key Events:
- Genentech Privatisation: 22
- Ventana Acquisition: 7
Roche Pharma: a leading pipeline
12 NMEs in late-stage development

New molecular entities (NMEs)
- Virology
- CNS
- Metabolic
- Inflammation
- Oncology

2007
- ocrelizumab
- Actemra

2008
- taspoglutide
- dalcetrapib

2009
- ocrelizumab
- dalcetrapib
- ocrelizumab
- pertuzumab
- pertuzumab
- MetMAb (CLL, NHL)

2010
- HCV pol inh
- ocrelizumab MS
- Glycine reuptake inh
- aleglitazar
- taspoglutide
- dalcetrapib
- lebrikizumab
- MetMAb
- BRAF inhibitor
- T-DM1
- GA101 (CLL)
- GA101 (CLL, NHL)
- Hedgehog inh
- Hedgehog inh

PHC approach
- √

1 LIP decision made, phase III start pending
Personalised Healthcare becoming a reality

Six late-stage compounds require a companion diagnostics test

- **T-DM1**
  - Metastatic breast cancer
  - (HER-2 expression level)

- **Pertuzumab**
  - Metastatic breast cancer
  - (HER-2 expression level)

- **RG 7128¹**
  - Hepatitis C
  - (HCV viral load, genotype)

- **MetMAb¹**
  - Non-small cell lung cancer
  - (MET status)

- **Lebrikizumab¹**
  - Asthma
  - (periostin level)

- **Zelboraf**
  - Metastatic melanoma
  - (BRAF V600E mutation)

¹ LIP decision made, phase III start pending
# Summary

**Well positioned to continue to outgrow the market**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
</table>
| **1** | **Strengthen market leadership in growing IVD market**  
Leveraging global installed base and delivering new key products |
| **2** | **Provide testing efficiency and demonstrate medical value**  
Complete menu offering with many high value assays |
| **3** | **Roche Diagnostics enabling Personalised Healthcare**  
Large companion diagnostics pipeline driving value for the Group |
Roche Professional Diagnostics

Colin Brown, Head of Roche Professional Diagnostics
Overview Roche Professional Diagnostics

Testing Efficiency

Future Diagnostics Solutions
Overview: Roche Professional Diagnostics
Market leader in a growing market

- Leading position in all fast-growing segments of >30bn USD Professional Diagnostics market
- Unique technology advantage with significant synergies between segments
- Additional growth potential due to regional and technological expansion, and advances in clinical science

Source: Roche Analysis, Company reports
Overview: Roche Professional Diagnostics

Roche gained global #1 position in Q1 2011

**Market Share (Professional Dx)**

- Roche
- Siemens
- Abbott
- Beckman Coulter
- J&J
- BioMerieux
- Alere

**Market Size**

- **Total**
  - Point of care
  - Clinical chemistry
  - Immunoassays (hetero)
  - Other

- **USD bn**
  - 2010: 30
  - 2015E: 38

Source: Roche Analysis, Company reports
Overview: Roche Professional Diagnostics
Roche offers one of the broadest product portfolios

<table>
<thead>
<tr>
<th></th>
<th>Roche</th>
<th>Siemens</th>
<th>Abbott</th>
<th>Beckman</th>
<th>Coulter</th>
<th>Ortho Clinical</th>
<th>Alere</th>
<th>Biomerieux</th>
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<td>Clinical Chemistry</td>
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<tr>
<td>Immunoassays</td>
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<tr>
<td>Haematology</td>
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<td>Coagulation</td>
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<tr>
<td>Urinalysis</td>
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<tr>
<td>Point of Care</td>
<td>🌀</td>
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<td>🌀</td>
<td>🌀</td>
<td>🌀</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automation</td>
<td>🌀</td>
<td>🌀</td>
<td>🌀</td>
<td>🌀</td>
<td>🌀</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Portfolio Breadth
Narrow → Broad

31
Overview: Roche covers the full spectrum
From central labs to home testing

<table>
<thead>
<tr>
<th>Commercial lab</th>
<th>Hospital</th>
<th>Physician office</th>
<th>Rapid clinic</th>
<th>Home</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hospital lab</td>
<td>ICU</td>
<td>OR</td>
<td>ER</td>
</tr>
</tbody>
</table>

Centralised
High throughput
Expert user

Decentralised
Low throughput
Non-expert user
Overview: Immunoassays
Largest growth driver in Roche Professional Diagnostics

Roche Immunoassay sales

CHF bn

2001 2010

CAGR 13%*

+17%*

10 consecutive years of double digit growth
Expanding menu with addition of high value assays, such as HE4, NT-proBNP and Vitamin D total

1 billion tests per year!

Elecsys tests in 2010

<table>
<thead>
<tr>
<th>Total tests</th>
<th>Tests per day</th>
<th>Tests per hour</th>
<th>Tests per minute</th>
<th>Tests per second</th>
</tr>
</thead>
<tbody>
<tr>
<td>945,000,000</td>
<td>2,589,041</td>
<td>107,877</td>
<td>1,798</td>
<td>30</td>
</tr>
</tbody>
</table>

* Local growth rates
Overview: Point of Care Solutions
Delivered to patients when instant results are needed

- PoC diagnostics used outside of central laboratories directly at the patient's location
- Provides faster results with easy to run tests, leads to time savings and higher compliance due to optimised and immediate therapy
Overview Roche Professional Diagnostics

Testing Efficiency

Future Diagnostics Solutions
Our Strategy: Overview
Differentiation through innovation in testing efficiency and medical value

Drivers of competitive differentiation

Testing Efficiency

Medical Value

• Provide lab solutions
• Offer complete menus
Testing Efficiency: Roche cobas solutions
Strong in all elements of the relevant portfolio

- Post-analytics
- Integrated Pre-analytics
- Winning Analytics Solutions
- Comprehensive Testing Menu
- Seamless IT Solutions
Co-inventing the future of our customer’s business
Leveraging breadth of offering, combined with consulting services
Complete Menu: Roche has the broadest immunoassay menu on a single platform.
Complete Menu: On large installed base
Over 40,000 SWA instruments installed, across 130 countries

SWA = Serum Work Area (clinical chemistry and immunoassay testing on a single platform)
Introduction to Roche Professional Diagnostics

Testing Efficiency

Future Diagnostics Solutions
Our Strategy: Overview
Differentiation through innovation in testing efficiency and medical value

- Focus on unmet needs
- Get access & create IP
- Deliver clinical evidence
Expanding personalised healthcare menu
Improving ovarian cancer detection with addition of new biomarker HE4

- Symptoms are vague and unspecific
- Early detection improves survival rates significantly

- HE4 test:
  - Increases accuracy of early prediction of ovarian cancer when combined with CA125 test
  - Aids in monitoring recurrence or progressive disease
  - Only available from Roche and Abbott

Sensitivity: benign vs. ovarian cancer at 95% specificity

- CA125 + HE4: 89%
- HE4: 73%
- CA125: 43%

1. Moore, R.G. et al., Gynecologic Oncology 2008
2. Moore, R.G. et al., Gynecologic Oncology 2009
Elecsys Vitamin D total assay
Completes Roche’s bone marker offering

### Most complete bone marker offering

<table>
<thead>
<tr>
<th>Bone Markers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ß-CrossLaps</td>
<td></td>
</tr>
<tr>
<td>P1NP</td>
<td></td>
</tr>
<tr>
<td>N-MID Osteocalcin</td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
</tr>
<tr>
<td>Vitamin D total</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hormone Assays</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PTH (1-84) / PTH, intact / PTH. intact STAT</td>
<td></td>
</tr>
<tr>
<td>Estradiol</td>
<td></td>
</tr>
<tr>
<td>Testosterone</td>
<td></td>
</tr>
<tr>
<td>DHEA-S</td>
<td></td>
</tr>
<tr>
<td>SHBG</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bone minerals</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium</td>
<td></td>
</tr>
<tr>
<td>Phosphate</td>
<td></td>
</tr>
</tbody>
</table>

- Vitamin D deficiency and insufficiency afflicts about 1bn people
- Major role in bone metabolism disorders. Also important for cancer, cardiovascular diseases, and autoimmune diseases
- Vitamin D total assay:
  - Fully automated assay measuring both vitamin D2 and D3
  - High precision across whole measuring range, especially at lower end
  - Leads to optimised workflow in labs
Summary

Well positioned to continue to grow market share

1. **Focus on complete solution offering**
   Automation and workflow solutions to meet customer needs

2. **Maintaining market leadership and sustained growth**
   Large global installed base driving increased demand for tests

3. **Expanding menu with novel diagnostics**
   Competitive menu and full pipeline of high value assays
Roche Molecular Diagnostics

Paul Brown, Head of Roche Molecular Diagnostics
Overview Roche Molecular Diagnostics

Focus for 2011 and Beyond

Summary
Overview: Roche Molecular Diagnostics
Clear market leader in a fast growing market

Market Share (Molecular Dx)

Market size

USD bn

<table>
<thead>
<tr>
<th>2010</th>
<th>2015E</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

CAGR +9%

Total
- Oncology
- Genetics
- Microbiology
- STDs
- Blood screening
- Virology

Source: Roche Analysis, Company reports
**Overview: Roche Molecular Diagnostics**

Active in all segments with broadest product offering

<table>
<thead>
<tr>
<th>Portfolio Breadth</th>
<th>Narrow</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Broad</th>
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<tbody>
<tr>
<td>HPV</td>
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<td>CT/NG</td>
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<tr>
<td>Microbiology</td>
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</table>
## Continued investment to strengthen and protect leading position

<table>
<thead>
<tr>
<th>Market Drivers</th>
<th>Roche’s offering</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Virology</strong></td>
<td>New antiviral therapies driving testing</td>
</tr>
<tr>
<td></td>
<td>Comprehensive virology test menu</td>
</tr>
<tr>
<td><strong>Blood Screening</strong></td>
<td>Emerging markets</td>
</tr>
<tr>
<td></td>
<td>Adoption of multiplex testing and automation</td>
</tr>
<tr>
<td></td>
<td>Most complete menu with MPX v 2.0 Duplex B19/ HAV</td>
</tr>
<tr>
<td><strong>Women's Health</strong></td>
<td>Increasing importance of HPV and CT/NG testing</td>
</tr>
<tr>
<td></td>
<td>cobas 4800  HPV and CT/NG Tests</td>
</tr>
<tr>
<td><strong>Genomics &amp; Oncology</strong></td>
<td>Personalised Healthcare</td>
</tr>
<tr>
<td></td>
<td>Rapidly evolving clinical practice</td>
</tr>
<tr>
<td></td>
<td>Broad portfolio</td>
</tr>
<tr>
<td></td>
<td>Pharma partner of choice</td>
</tr>
<tr>
<td><strong>Microbiology</strong></td>
<td>Healthcare acquired infections (HAI), such as MRSA, particularly in USA</td>
</tr>
<tr>
<td></td>
<td>MRSA Test launched in US C. difficile test in development</td>
</tr>
</tbody>
</table>
Overview Roche Molecular Diagnostics

Focus for 2011 and Beyond

Summary
Our Strategy: Overview
Differentiation through innovation in testing efficiency and medical value

Drivers of competitive differentiation

Testing Efficiency

Medical Value

- Provide lab solutions
- Offer complete menus

2020
Glimpse at the future
Changing the way testing is done
Changing the way testing is done

Abbott m2000  Gen-Probe Tigris  NewGen 300  NewGen 1000
Our Strategy: Overview

Differentiation through innovation in testing efficiency and medical value

- Focus on unmet needs
- Get access & create IP
- Deliver clinical evidence
Roche HPV Test setting new standard
HPV genotype 16/18 testing identifies women at highest risk for cervical cancer

Individual HPV-16/18 genotyping
1 in 10 women who had normal pap & tested positive for HPV-16 and/or 18 had pre-cancer

New physician-focused go-to-market approach in the US
- Dedicated medical sales force targeting OB/GYNs
- Lab sales force focused on establishing cobas 4800 installed base
- Medical marketing of ATHENA trial results

Driving cobas HPV Test adoption

Three results per test
- 12 HR HPV pool
- HPV Genotype 16
- HPV Genotype 18
- Control

Fully automated platform

FDA APPROVED
Building a cervical cancer portfolio

Complementary solutions for cervical cancer testing

**cobas HPV test**
detects HPV DNA plus genotypes 16 & 18 in cytology preparations

detects p16 & Ki-67 protein expression in cytology preparations

detects HPV DNA plus genotypes 16 & 18 in cytology preparations

**CINtec Plus** is approved as CE-IVD in Europe.

**CINtec Histology** is approved as CE-IVD in Europe and Class 1 in US.

detects p16 protein expression in tissue biopsies

**Risk identification of disease**

**Disease detection and characterisation**

**screening** → **triage** → **cervical lesions/cancer**

*mtm Acquisition*

CINtec Plus is approved as CE-IVD in Europe. CINtec Histology is approved as CE-IVD in Europe and Class 1 in US.
Accelerating adoption of HPV testing driving growth

Today’s market is primarily the US

- US guidelines recommend HPV testing for ASC-US triage\(^1\) and adjunct screening\(^2\) indications
- Roche test approved for ASC-US triage, adjunct screening and HPV 16/18 genotyping
- Plan to use 3-yr ATHENA data for primary screening indication
- Using ATHENA data to expand testing guidelines in Europe & RoW, and to encourage reimbursement

\(^1\) ASC-US = HPV test performed after +ve or indeterminate PAP;  
Source: company reports, Roche analysis

\(^2\) Adjunct screening = HPV test done conjunction with PAP
# Companion Diagnostics: Improving therapy selection

## Biomarker programs targeting most oncology pathways

<table>
<thead>
<tr>
<th>Biomarker</th>
<th>Initial applications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BRAF V600</strong></td>
<td>Select metastatic melanoma patients for Zelboraf (vemurafenib) therapy</td>
</tr>
<tr>
<td><strong>KRAS</strong></td>
<td>Identify colorectal cancer patients appropriate for anti-EGFR monoclonal antibody therapies</td>
</tr>
<tr>
<td><strong>EGFR</strong></td>
<td>Identify NSCLC patients appropriate for earlier TKI therapy</td>
</tr>
<tr>
<td><strong>PI3KCA</strong></td>
<td>Investigate mutations in PI3KCA gene and link to response to PI3K &amp; mTOR Inhibitors; Breast, colorectal &amp; other indications</td>
</tr>
<tr>
<td><strong>p53</strong></td>
<td>Identify patients with P53 mutations which may benefit from MDM2 antagonist therapy; Sarcoma, ovarian &amp; other indications</td>
</tr>
</tbody>
</table>

TKI = tyrosine kinase inhibitor
cobas BRAF V600 Mutation Test
Only validated test enabling accurate patient selection

1. **Accuracy:**
   Clinically Validated CoDx
   - BRIM efficacy proven with cobas BRAF V600 Test only

2. **Sanger Sequencing Denies Therapy**
   - 11% Sanger invalids
   - 8% False negatives

3. **IVD: Consistently Reliable Result in <8 hrs**
   - Automated & reproducible
   - Large installed base – quick adoption
Pharma and Diagnostics integration key to success
Working together in all aspects of launch readiness

Coordinated pivotal clinical trials
Integrated PHC reimbursement dossier
Joint launch readiness & commercialisation plan

Zelboraf - 5 years from IND to Launch
Summary

Positioned to capitalise on changing molecular market

1. **Build on leadership position in core business**
   - Penetrate emerging markets and US blood screening market
   - Strengthen leading position in Virology

2. **Penetrate rapidly growing segments**
   - HPV genotype 16/18 test (US & RoW)
   - Launch oncology portfolio (US & RoW): BRAF, KRAS and EGFR
   - Launch CT/NG test in US

3. **Platform Roadmap**
   - Platform consolidation and menu expansion
Roche Tissue Diagnostics/ Ventana Medical Systems

Eric Walk, Chief Medical Officer, Roche Tissue Diagnostics
Overview Roche Tissue Diagnostics

Focus for 2011 and Beyond

Summary
Overview: Roche Tissue Diagnostics
Global Leadership in tissue-based diagnostics

- Founded in 1985 by Thomas Grogan, M.D.
- Products registered in 63 countries, with systems installed in over 3,000 labs around the world
- Revenue over half a billion, with annual growth above 17%
- 228 worldwide patents granted, 200 patents pending
- Anatomic pathology and oncology focus
Overview: Roche Tissue Diagnostics
Leveraging IHC leadership to capture ISH market

<table>
<thead>
<tr>
<th>Market Share (IHC)</th>
<th>Market Share (ISH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roche</td>
<td>Abbott</td>
</tr>
<tr>
<td>Dako</td>
<td>Dako</td>
</tr>
<tr>
<td>Leica</td>
<td>Roche</td>
</tr>
<tr>
<td>Other</td>
<td>Other</td>
</tr>
</tbody>
</table>

**Total Revenue**
- **IHC**
  - Total Revenue = $800 m
- **ISH**
  - Total Revenue = $250 m

**Market Size Advanced Staining**
- **USD bn**
  - Total
    - Instr/Service: 1.8
    - CAGR: +12%
  - 2010
    - IHC: 1
  - 2015E
    - ISH: Total

IHC = immunohistochemistry, ISH = in situ hybrisation
Source: Roche Internal estimates; Market numbers exclude TDx and AS Research; Abbott includes tissue and cellular ISH
### Overview: Roche Tissue Diagnostics

#### Product Portfolio

<table>
<thead>
<tr>
<th>Work Cell Description</th>
<th>Pre-Analytical</th>
<th>Primary Staining</th>
<th>Advanced Staining</th>
<th>Imaging/Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tissue Preparation</strong></td>
<td><strong>H&amp;E Stain</strong></td>
<td><strong>SS</strong></td>
<td><strong>Image Analysis</strong></td>
<td></td>
</tr>
<tr>
<td>▪ Tracking</td>
<td>▪ Binary Diagnosis</td>
<td>▪ Detection of molecular target</td>
<td>▪ Quantitative analyses</td>
<td></td>
</tr>
<tr>
<td>▪ Grossing</td>
<td>▪ Tissue</td>
<td>▪ Diagnosis</td>
<td>▪ Report generation</td>
<td></td>
</tr>
<tr>
<td>▪ Fixation</td>
<td>▪ Morphology</td>
<td>▪ Predictive/Prognostic</td>
<td>▪ Tele-pathology</td>
<td></td>
</tr>
<tr>
<td>▪ Processing</td>
<td></td>
<td></td>
<td>▪ Archiving</td>
<td></td>
</tr>
</tbody>
</table>

**Platforms**

- **VANTAGE**
- **SYMPHONY**
- **NexES Special Stainer**
- **BenchMark ULTRA**
- **Digital Pathology**

**Workflow and Connectivity**

SS = Special Stains, IHC = immunohistochemistry, ISH = *in situ* hybridisation
Traditional pathology diagnostic approach
Morphology-based classification of disease

Anatomy/Morphology-Based Disease Classification

Cancer
- Sub-type
- Grade
- Margins

Non-Cancer
- Normal
- Physiologic
- Inflammatory
Personalised healthcare transforming pathology
Pathologists interpretation of companion diagnostics
= ‘Prescription for Targeted Therapy’
INFORM HER2 Dual ISH assay

The only FDA approved fully automated HER2 ISH assay

No more searching for answers in the dark.

A smarter solution reveals itself.

INFORM HER2 Dual ISH assay
The only FDA approved fully automated HER2 ISH assay
Click here to learn more
INFORM HER2 Dual ISH assay
Fully automated alternative to HER2 FISH assays

Leading and changing the market
• Achieved leading position in EU just 12 months post-launch
• Large BenchMark installed base in US

Delivers patient value
• Showed 96% concordance to FISH, with majority discordant cases correctly identified by Dual ISH*

Fits into anatomic pathology lab workflow
• Rapid time to result (12 hr vs. 36 hr)
• No darkroom or fluorescent microscope required

Improves visualisation for the pathologist
• View entire tissue sample to identify heterogeneity
• HER2 gene status shown in context of tumour morphology

* Publication in progress
Overview Roche Tissue Diagnostics

Focus for 2011 and Beyond

Summary
Our Strategy: Overview
Differentiation through innovation in testing efficiency and medical value

- Focus on unmet needs
- Get access & create IP
- Deliver clinical evidence
Sources of innovative medical value tests
Companion Dx and Prognostic assay incubators generate product opportunities for development portfolio

Assay Concepts

Ideation
Prototype Assay
Clinical Validation

IVD Development

Pharma
Acquisitions
Collaborations

Risk Strat Low Risk
Risk Strat Pre Neoplastic
hENT1
MUC1

3p & 5p ERG CE-IVD FISH
565/655 QO CE-IVD
ERG mAb Class I

Cross Lung Breast Prostate CRC Heme Bladder
MetMAb + Tarceva
Pharma and Diagnostics collaboration in Phase III

All patients: OS², HR³=0.8

<table>
<thead>
<tr>
<th></th>
<th>Placebo + erlotinib</th>
<th>MetMAb + erlotinib</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median (mo)</td>
<td>7.4</td>
<td>8.9</td>
</tr>
<tr>
<td>HR</td>
<td>0.80</td>
<td>0.34</td>
</tr>
<tr>
<td>p-value</td>
<td>0.34</td>
<td>0.002</td>
</tr>
<tr>
<td>No. of events</td>
<td>41</td>
<td>34</td>
</tr>
</tbody>
</table>

Met diagnostic+ patients: OS², HR³=0.37

<table>
<thead>
<tr>
<th></th>
<th>Placebo + erlotinib</th>
<th>MetMAb + erlotinib</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median (mo)</td>
<td>3.8</td>
<td>12.6</td>
</tr>
<tr>
<td>HR</td>
<td>0.33</td>
<td>0.002</td>
</tr>
<tr>
<td>p-value</td>
<td>0.33</td>
<td>0.002</td>
</tr>
<tr>
<td>No. of events</td>
<td>26</td>
<td>16</td>
</tr>
</tbody>
</table>

**MetMAb and Tarceva**

Met Dx+ mNSCLC¹ patients lived more than three times as long compared to placebo and Tarceva

¹ metastatic non-small cell lung cancer
² overall survival
³ hazard ratio

Roche cMET assay
Key inclusion criteria for phase III is MET status as determined by CONFIRM anti-total cMET
Companion Diagnostic with Clovis Oncology

IHC assay to identify pancreatic cancer patients with low hENT1 expression

• In development as companion diagnostic for CO-101, lipid conjugated gemcitabine

• Patients with low/no vs. high hENT1 have significantly shorter survival after gemcitabine therapy (4m vs. 13m*)

• Due to lack of dependence on hENT1 for intracellular transport CO-101 is hypothesized to be clinically active in hENT1 low patients

• Phase 3 trial enrolling; data expected Q4 ‘12

* Clin Cancer Res. 2004 Oct 15;10(20):6956-61
Prostate risk stratification assay
ERG status defines prognostic subgroups in prostate cancer to assist with treatment decisions

Rearrangement status may determine clinical outcome

Overall survival from Prostate cancer*

<table>
<thead>
<tr>
<th>Years of follow-up</th>
<th>% survival from prostate cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>75</td>
</tr>
<tr>
<td>3</td>
<td>50</td>
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<td>4</td>
<td>25</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>0.5</td>
</tr>
<tr>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

- Normal
- 5' Deletion
- 5' Deletion/3' Duplication

Patient tumor needle biopsy
Prostate cancer diagnosis via H&E

- SYMPHONY
- BenchMark ULTRA

Imaged Slide Review for Pathologist

- Normal
- 3' Insertion
- 5' Deletion
- 5' Deletion and 3' Duplication

Multiplex assay detecting ERG, PTEN, and nuclear morphology
Includes analysis algorithm

* Attard et al., Oncogene (2008) 27, 253-263
ERG=Ets Related Gene
mtm products

p16-based IVD* histology and cytology tests

**CINtec® HISTOLOGY**

**p16**

Biomarker Stain on Cervical Histology

**CINtec® PLUS CYTOLOGY**

**p16/Ki67**

Dual Biomarkers on Cervical Cytology

- mtm PMA Submitted
- EU trial done; US trial pending

*Current status is Class I exempt / CE-IVD*
Building a cervical cancer portfolio
Complementary solutions for cervical cancer testing

cobas HPV test
detects HPV DNA plus genotypes 16 & 18 in cytology preparations

detects p16 protein expression in tissue biopsies

detects p16 & Ki-67 protein expression in cytology preparations

detects HPV DNA plus genotypes 16 & 18 in cytology preparations

CINtec Plus is approved as CE-IVD in Europe. CINtec Histology is approved as CE-IVD in Europe and Class 1 in US.
## Summary

Well positioned for continued innovation in anatomic pathology and oncology

1. Secure and extend position as market leader in anatomic pathology

2. Continue investments to develop high medical value assays (e.g. prostate risk stratification)

3. Support the transformation of the field of pathology with personalised healthcare tools (e.g. MetMAb IHC)
Co-development of new drug candidates and diagnostics at Genentech Research and Early Development (gRED)

Garret M. Hampton, Oncology Biomarker Development, gRED
Genentech research and early development

Companion diagnostic rationale and strategy

Lebrikizumab (asthma) and MetMAb (lung cancer)

Summary
Genentech Research and Early Development

Genentech Research & Early Development (gRED) aspires to make fundamental scientific discoveries and to develop these discoveries into first and best in class therapeutics that provide unique benefit to patients.

Genentech founded: 1976

Integrated with Roche: 2009
- gRED is established as independent unit within the Roche Group

gRED Business Divisions:
- Research, Early Development, Portfolio Management and Operations, gPartnering

Therapeutic Areas:
- Oncology, Immunology, Metabolism, Neuroscience, Infectious Disease

gRED Employees: ~ 2,000
- Genentech named on Fortune’s “100 Best Companies to Work For” – thirteen consecutive year on the list

Pipeline*:
- 39 NMEs in Phase 1 / Phase 2

* As of May 2011
# 39 molecules in gRED Early Development

<table>
<thead>
<tr>
<th>Early Development</th>
<th>Phase 1</th>
<th>Phase 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>NME 1</td>
<td>Anti HER3 / EGFR</td>
<td>Navitoclax Bcl-2 inh</td>
</tr>
<tr>
<td>NME 2</td>
<td>PI3K/MTOR (GDC-0980)</td>
<td>Anti-EGFL7</td>
</tr>
<tr>
<td>NME 3</td>
<td>PI3K (GDC-0941)</td>
<td>Anti M1 Prime</td>
</tr>
<tr>
<td>NME 4</td>
<td>PI3K (GDC-0032)</td>
<td>Rontalizumab α-IFNα</td>
</tr>
<tr>
<td>NME 5</td>
<td>MEK (GDC-0973)</td>
<td>Anti-LT Alpha</td>
</tr>
<tr>
<td>NME 6</td>
<td>MEK (GDC-0623)</td>
<td>Anti-Factor D</td>
</tr>
<tr>
<td>NME 7</td>
<td>Anti-FGFR3</td>
<td>Anti-Abeta</td>
</tr>
<tr>
<td>NME 8</td>
<td>AKT (GDC-0068)</td>
<td>Anti-oxLDL</td>
</tr>
</tbody>
</table>
| NME 9             | IAP (GDC-0917) | |}

- **Oncology**
- **Immunology**
- **Neuroscience + Ophthalmology**
- **Metabolism**
- **Infectious Diseases**

**Phase 1**
- PI3K/MTOR (GDC-0980)
- PI3K (GDC-0941)
- PI3K (GDC-0032)
- MEK (GDC-0973)
- MEK (GDC-0623)
- Anti-FGFR3
- AKT (GDC-0068)
- IAP (GDC-0917)
- Bcl-2 inh (GDC-0199)
- Anti-CD22 ADC
- NME 1 ADC
- NME 2 ADC
- NME 3 ADC
- NME 4 ADC
- NME 5 Tumor Immunotherapy
- NME 6
- rhuMab Beta7

**Phase 2**
- Navitoclax Bcl-2 inh
- Anti-EGFL7
- Anti M1 Prime
- Rontalizumab α-IFNα
- Anti-LT Alpha
- Anti-Factor D
- Anti-Abeta
- Anti-oxLDL

**Table Color Coding**
- Oncology
- Immunology
- Neuroscience + Ophthalmology
- Metabolism
- Infectious Diseases
75% of gRED molecules are being developed with a Companion Diagnostic

<table>
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<td></td>
<td>PI3K (GDC-0941)</td>
<td>Anti M1 Prime</td>
</tr>
<tr>
<td></td>
<td>PI3K (GDC-0932)</td>
<td>Rontalizumab a-IFNα</td>
</tr>
<tr>
<td></td>
<td>MEK (GDC-0973)</td>
<td>Anti-LT Alpha</td>
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<td>Bcl-2 inh (GDC-0199)</td>
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<td>(GDC-0349)</td>
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<tr>
<td></td>
<td>Anti-CD22 ADC</td>
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<td>NME 1 ADC</td>
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<td>NME 2 ADC</td>
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<td></td>
<td>NME 3 ADC</td>
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</tr>
<tr>
<td></td>
<td>NME 4 ADC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NME 5 Tumor Immunotherapy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NME 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>rhuMab Beta7</td>
<td></td>
</tr>
</tbody>
</table>

Filled boxes = NMEs with a CDx
Genentech research and early development

Companion diagnostic rationale and strategy

Lebrikizumab (asthma) and MetMAb (lung cancer)

Summary
Why do we need Companion Diagnostics for our therapeutic products?

- Most therapies have been developed based on disease, not on underlying molecular causes
- Majority of drug trials fail due to lack of efficacy
- Development of targeted therapies requires testing in targeted populations matched to a drug’s mechanism of action

* TNBC = Triple Negative Breast Cancer  
** ER/PR = Estrogen Receptor/Progesterone Receptor
Why is Genentech / Roche uniquely positioned to lead in PHC?

- Combination of world-class science & drug development with world’s largest Diagnostics Company
- Organisation aligned around PHC
- Unrestricted early engagement
  - Share biomarker portfolios and strategy at early stage
  - Evaluate Intellectual Property, technical feasibility
- Leverage technologies and regulatory expertise across five business areas that encompass most relevant CDx platforms
Integration of development of Molecule and Diagnostics at gRED / Roche

Drug Development

Research → Early Dev → Phase 1 → Phase 2 → Phase 3

Biomarker Discovery and Clinical Integration

Hypothesis generation → Technical feasibility & initial testing → Test diagnostic hypothesis → Test Dx in pivotal trials

Companion Diagnostics Development

CDx IVD development to launch

Unrestricted engagement enables co-development of prototype IVD assays at earliest stage of clinical testing

Personalised Healthcare for Patients
Genentech research and early development

Companion diagnostic rationale and strategy

Lebrikizumab (asthma) and MetMAb (lung cancer)

Summary
Asthma: Identification of asthma patients likely to benefit from anti-IL-13 (Lebrikizumab) therapy

**IL13 induced genes in lung epithelial brushings**

- Responsive to α-IL-13?
- Non-responsive to α-IL-13?

**Blood periostin levels in asthmatics**

- Peripheral blood periostin may serve as a non-invasive surrogate for IL-13 related asthma
- A predictive diagnostic marker (periostin) may predict improved clinical responses to Lebrikizumab

Internal data
Asthma: Relative change in FEV1 from baseline in asthma patients treated with Lebrikizumab

**Relative Mean FEV1 change at week 12**

<table>
<thead>
<tr>
<th>Total ITT population</th>
<th>Periostin High</th>
<th>Periostin Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placebo</td>
<td>4.3%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Lebrikizumab</td>
<td>9.8%</td>
<td>14.0%</td>
</tr>
<tr>
<td>Difference</td>
<td>5.5% (p=0.02)</td>
<td>8.2% (p=0.03)</td>
</tr>
</tbody>
</table>

Corren et al. NEJM, 2011
NSCLC: cMet oncogene is a therapeutic target in non-small cell lung cancer

- Met is amplified, mutated, overexpressed in many tumours, including NSCLC. Associated with a worse prognosis in NSCLC

- Met activation is implicated in resistance to Tarceva in patients with EGFR mutations

- MetMAb is a one-armed antibody designed to prevent HGF-mediated stimulation of pathway

- Showed preclinical activity across multiple tumor models, and increased efficacy in combination with Tarceva

HGF = Hepatocyte growth factor
NSCLC: Significant survival benefit in Dx\(^+\) 2/3 line NSCLC treated with MetMAb + Tarceva

- Trial sized to evaluate safety, efficacy in all-comers & those with high levels of Met expression
- Mandatory tissue collection enabled evaluation of diagnostic
Growth factor receptor signaling

The heartland of cancer

- PI3K & MAPK pathways are the most frequently altered pathways in cancer
- CDx assays for key genes/proteins are enabling clinical development
**gRED molecules in development with companion diagnostics**

<table>
<thead>
<tr>
<th>Compound</th>
<th>Potential Companion Diagnostics</th>
<th>Assay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lebrikizumab (RG3637)</td>
<td>Periostin</td>
<td>ELISA</td>
</tr>
<tr>
<td>MetMAb (RG3638)</td>
<td>c-MET receptor expression</td>
<td>IHC</td>
</tr>
<tr>
<td>Navitoclax (RG7423)</td>
<td>Bcl-XL, MCL1</td>
<td>IHC</td>
</tr>
<tr>
<td>PI3K Inh (RG7321, RG7604) and PI3K/mTOR Inh (RG7422)</td>
<td>PI3KCA mutations</td>
<td>PCR (mutations), CNA</td>
</tr>
<tr>
<td>Anti-FGFR3 (RG7444)</td>
<td>FGFR3 expression</td>
<td>IHC/FACS</td>
</tr>
<tr>
<td>AKT Inhibitor (RG7440)</td>
<td>PTEN loss, PIK3CA mutation</td>
<td>IHC/PCR</td>
</tr>
<tr>
<td>MEK Inhibitor (RG7420, RG7421)</td>
<td>KRAS, BRAF, NRAS mutation</td>
<td>PCR</td>
</tr>
</tbody>
</table>

PCR=polymerase chain reaction, IHC=immunohistochemistry
CNA=copy number assay

List for illustrative purposes only and not comprehensive
Value of PHC-based drug development

• **Drug Development**
  - Early proof-of-concept *in the appropriate patient population*
    - De-risk subsequent development
  - Faster time to market
    - Zelboraf took 5 yrs from Phase 1 to approval

• **Patients**
  - Safer and more effective therapies

• **Payers**
  - More cost-effective healthcare
Genentech research and early development

Companion diagnostic rationale and strategy

Lebrikizumab (asthma) and MetMAb (lung cancer)

Summary
# Summary

**PHC is maximising value for the Roche Group**

| 1 | Maximising patient value by co-development of medicines with accurate diagnostics  
Roche Group’s corporate goals align the organisation around PHC |
|---|---|
| 2 | Combination of world-class science, drug and diagnostics development  
Led to Herceptin, Tarceva, Zelboraf and many more in the pipeline |
| 3 | Roche Diagnostics enabling Personalised Healthcare  
Guiding to important proof-of-concept studies in defined subsets of patients with major unmet medical needs |
Roche Diagnostics and Emerging Markets

Roland Diggelmann, Regional Head APAC
Overview Emerging Markets

China

Summary
Overview: Roche Diagnostics regional sales

Emerging markets providing double-digit growth

sales HY 2011

- North America: 24%
- Latin America: 7%
- Asia Pacific: 13%
- Japan: 5%
- EMEA*: 51%

local sales growth

- Diagnostics Division: 5%
- North America: 5%
- EMEA*: 1%
- Latin America: 13%
- Asia Pacific: 17%
- Japan: 8%

1 Europe, Middle East and Africa
Overview: Asia Pacific regional structure

Strong contributor to Roche Diagnostics’ sales growth

- 14 Country affiliates
- 2,200 employees
- Over 1400 sales, service and applications specialists
- Structured around customer needs

Regional Office
Singapore

• Australia
• New Zealand
• South Korea
• Thailand
• SR 1: India; agencies (BD, LK & NP)
• SR 2: Malaysia, Singapore, Indonesia, Vietnam, Pakistan & Philippines
• SR 3: China, Hong Kong & Taiwan
Overview: Strong fundamentals
Healthcare key for domestic consumption & economic growth

APAC Public healthcare spending

<table>
<thead>
<tr>
<th>Country</th>
<th>USD bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philippines</td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td></td>
</tr>
<tr>
<td>Hong Kong</td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td></td>
</tr>
<tr>
<td>Taiwan</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td></td>
</tr>
<tr>
<td>South Korea</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td></td>
</tr>
</tbody>
</table>

Market trends

- Demographics (population, aging, lifestyle)
- Emerging market dynamics
- Under-serviced healthcare
- Under-utilised Diagnostics

Positive growth outlook

- Governments investing in healthcare
- Population is more affluent
- Diagnostics early in investment cycle
Overview: Roche market leader in APAC
China and India driving growth

Asia Pacific market by competitors

<table>
<thead>
<tr>
<th>Competitor</th>
<th>Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roche</td>
<td>23%</td>
</tr>
<tr>
<td>Others</td>
<td>23%</td>
</tr>
<tr>
<td>Hitachi</td>
<td>2%</td>
</tr>
<tr>
<td>BD</td>
<td>3%</td>
</tr>
<tr>
<td>J&amp;J</td>
<td>4%</td>
</tr>
<tr>
<td>Sysmex</td>
<td>5%</td>
</tr>
<tr>
<td>Biomerieux</td>
<td>4%</td>
</tr>
<tr>
<td>Beckman/Danaher</td>
<td>11%</td>
</tr>
<tr>
<td>Siemens</td>
<td>12%</td>
</tr>
</tbody>
</table>

IVD Market Growth in APAC (CHF)

- Rest of APAC: +7%
- India: +13%
- China: +18%

2010: 3.4 bn
2015E: 6.2 bn

Source: Clearstate research and Roche estimates
Strategic focus in Asia Pacific
Widen the gap & continue Differentiation

**Instrument Placement Strategy**
- largest number of instruments with flexible offering to meet diverse customer base needs

**Reagent flow through**
- broadest test menu with many high value assays, especially in immunology

**Focus on Service & Consulting as key differentiator**
- support customer efficiency and workflow & lab IT management

**Direct presence through affiliates**
- proximity to customers with local solutions
Overview Emerging Markets

China

Summary
China: Largest & fastest growing emerging market

**Strong demographics providing growth**

- **Rapidly aging population**
  - Increasing IVD tests consumption
- **Urbanisation and rising affluence**
  - Growing health awareness & increasing demand for more accurate testing
- **Healthcare reform**
  - USD 120 bn to be invested over 3 yrs to develop primary healthcare
  - Government national insurance plan to cover +90% of the population
  - Extended access of IVD testing

- 1.3 bn people
- 23 provinces
- 5 autonomous regions
- 2 special autonomous regions
- 4 municipalities
China
High entry hurdles - Complex business environment

• SFDA- complex regulatory requirements
• Heterogeneous reimbursement structure
  - 23 provinces and autonomous regions
• Distributors’ market
• Hospital Tier & City Tier systems
• Price sensitive market
  - multi national companies and local competitors
• Low IP protection
Roche Diagnostics in China
IVD market leader in a fast growing country

China market by competitors

Roche with 30% market share in Immunochemistry

Source: Clearstate research and Roche estimates
# Roche Diagnostics in China

## Market Characteristics

<table>
<thead>
<tr>
<th>Life Science</th>
<th>In Vitro Diagnostics</th>
<th>Diabetes Care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>App. Science</strong></td>
<td><strong>Molecular Dx</strong></td>
<td><strong>Professional Dx</strong></td>
</tr>
<tr>
<td>Customers</td>
<td>Customers</td>
<td>Customers</td>
</tr>
<tr>
<td>Academia, Research Institutions, IVD, Industrial, CDC</td>
<td>Blood Banks</td>
<td>Mainly hospital labs Commercial private labs still in infancy</td>
</tr>
<tr>
<td>Trend</td>
<td>Trend</td>
<td>Trend</td>
</tr>
<tr>
<td>• Growing segment in proteomic and sequencing, pharma industry</td>
<td>• Molecular testing implementation</td>
<td>• Growing patient numbers, esp. immunology and infect. Diseases</td>
</tr>
<tr>
<td></td>
<td>• Potentially +15 m donations a year</td>
<td>• Opportunity in IT and Lab Automation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Roche Diagnostics’ current positioning
Global strategy implemented locally

- Early comer advantage with a unique sales model leading to sustained instrument placements
- Focus on Immunochemistry
- Best-in-class Service
- Investments in LabIT / Workflow
- Broad Access: Serving 60+ cities

Outgrowing market nearly two fold with a CAGR of 32%
Roche Diagnostics China: Outlook
Above market growth and continued share gain

Strategy Outlook

- Leverage largest instrument base – reagent flow-through
- Position as the integrated solution provider
- Capture NAT testing market share in blood banks
- Expand into tier 2 hospitals & tier 3-4 cities, and partnerships with commercial labs
Roche Diagnostics’ hospitals tier strategy
Almost 23,000 hospitals

<table>
<thead>
<tr>
<th>Hospital Tier</th>
<th>Public Hospitals</th>
<th>Military Hospitals</th>
<th>Commercial Labs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier III (large)</td>
<td>1,375</td>
<td>180</td>
<td>6</td>
</tr>
<tr>
<td>Tier II (medium)</td>
<td>7,341</td>
<td>260</td>
<td></td>
</tr>
<tr>
<td>Tier I (small)</td>
<td>13,822</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(22,538) (440)

Roche’s current served market
Expansion strategy
Summary

Opportunity to grow and transform markets

1. **Strong Fundamentals**
   Sustainable sales and profitability growth

2. **Maintaining leading position**
   Differentiation through testing efficiency and medical value

3. **Retaining instrument placement strategy and reagent flow**
   Regional differentiation through Service and Lab IT / Workflow
Roche
The importance of Diagnostics for the Roche Group

Alan Hippe, CFO Roche Group
Our Group strategy is based on innovation and personalised health care (PHC)

Opportunities
- Medical
- Economic
- Scientific

Focus

Fitting treatments to patients
Diagnostics and Pharma have distinct business models with different success factors

**Medically differentiated medicines**
- Scientific/clinical expertise
- Innovation network
- Value-based pricing

**Testing Efficiency and Medical Value**
- Large installed base and broad menu
- Clinical expertise and biomarker IP\(^1\)
- Workflow/IT

\(^1\) Intellectual Property
Competitive advantage of having Diagnostics and Pharma in the Group

- in **R&D**: Develop superior PHC solutions, faster/cheaper
- in **Commercial**: Drive faster adoption of PHC solutions
Personalised Healthcare and Diagnostics
Benefits all stakeholders, including the industry

Today

Benefit from patient stratification

Future

- Reduced Patient pool
- Price increase/stability
- Increased market share
- Lower development costs
- Faster penetration
- Time to market
**Roche: Staying focused on Prescription and Diagnostics**

<table>
<thead>
<tr>
<th></th>
<th>Rx⁷</th>
<th>OTC</th>
<th>Vaccines</th>
<th>Animal Health</th>
<th>Generics</th>
<th>Bio-similars</th>
<th>Dx</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Novartis</td>
<td>60%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60%</td>
<td>Ophthalmology</td>
</tr>
<tr>
<td>Merck &amp; Co</td>
<td>90%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pfizer</td>
<td>87%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GSK</td>
<td>82%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>82%</td>
<td></td>
</tr>
<tr>
<td>Sanofi Aventis</td>
<td>79%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>79%</td>
<td></td>
</tr>
<tr>
<td>Bayer</td>
<td>31%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>31%</td>
<td>Crop/Material Science</td>
</tr>
<tr>
<td>Abbott</td>
<td>57%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57%</td>
<td>Medical devices</td>
</tr>
<tr>
<td>J&amp;J</td>
<td>36%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>36%</td>
<td>Medical devices</td>
</tr>
<tr>
<td>Eli Lilly</td>
<td>94%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>94%</td>
<td>Branded Gx Intention</td>
</tr>
<tr>
<td>AstraZeneca</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td>Branded Gx Intention</td>
</tr>
<tr>
<td>Roche</td>
<td>78%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>78%</td>
<td></td>
</tr>
<tr>
<td>Amgen</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>BMS</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

¹ As of 2010 sales
Source: FCMG; Company Annual Reports

- Green = Active Business Unit
- Dark green = Recent Transaction (post 2006)
- Blue = Recent Transaction New Business Area (post 2006)
Roche: Focus on selected business/disease areas
Aim to play in the lead

<table>
<thead>
<tr>
<th></th>
<th>Oncology</th>
<th>Inflammation/Autoimmune</th>
<th>Hepatitis</th>
<th>Macular/Retinal diseases</th>
<th>Biologics</th>
<th>Diagnostics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roche</td>
<td>1</td>
<td>7</td>
<td>1</td>
<td>2*</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Novartis</td>
<td>2</td>
<td>5</td>
<td>6</td>
<td>1*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abbott</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Sanofi</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Pfizer</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Merck</td>
<td>10</td>
<td>8</td>
<td>3</td>
<td>3</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>JNJ</td>
<td>8</td>
<td>3</td>
<td></td>
<td></td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>AstraZeneca</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amgen</td>
<td></td>
<td></td>
<td>4</td>
<td></td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Sources: IMS MIDAS in PADDs; For Diagnostic: Industry Analyst Report; *Lucentis sold by Roche in US, by Novartis in RoW
Roche Diagnostics: A leading business

Number 1 in IVD…

Leading growth

Over 160 PHC projects

Core operating profit and margin

All based on 2010 data
Roche Diagnostics: Growing faster than the market

Source: Roche analysis, company reports
Roche Diagnostics: Solid contribution to the Group’s operating cash flow

Operating free cash flow*

CHF bn

2008  2009  2010

0.6  1.2  1.6

* all data at reported fx rates
The Diagnostics business contribution to Roche’s market value. Is it fairly reflected?

**Diversified IVD companies**

<table>
<thead>
<tr>
<th>Company</th>
<th>EV/Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO-RAD LABS-A</td>
<td>1.3</td>
</tr>
<tr>
<td>BIOMERIEUX</td>
<td>2.1</td>
</tr>
<tr>
<td>ALERE INC</td>
<td>2.1</td>
</tr>
<tr>
<td>BECTON DICKINSON</td>
<td>2.3</td>
</tr>
<tr>
<td>QIAGEN NV</td>
<td>2.9</td>
</tr>
<tr>
<td>DIASORIN SPA</td>
<td>3.6</td>
</tr>
<tr>
<td>GEN-PROBE</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Average EV/Sales = 2.7

**Transactions above $1bn in IVD industry**

<table>
<thead>
<tr>
<th>Company</th>
<th>EV/Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beckmen Coulter</td>
<td>1.9</td>
</tr>
<tr>
<td>Bayer Dx</td>
<td>2.9</td>
</tr>
<tr>
<td>Applied Biosystems</td>
<td>3.0</td>
</tr>
<tr>
<td>Dx Products</td>
<td>3.6</td>
</tr>
<tr>
<td>Dade Behring</td>
<td>3.9</td>
</tr>
<tr>
<td>Milipore</td>
<td>3.9</td>
</tr>
<tr>
<td>Dako</td>
<td>4.3</td>
</tr>
<tr>
<td>Biosite</td>
<td>4.8</td>
</tr>
<tr>
<td>Sebia</td>
<td>6.7</td>
</tr>
<tr>
<td>Digene</td>
<td>6.9</td>
</tr>
<tr>
<td>Phadia</td>
<td>7.2</td>
</tr>
<tr>
<td>Cytyc</td>
<td>9.7</td>
</tr>
<tr>
<td>Ventana</td>
<td>11.1</td>
</tr>
</tbody>
</table>

Average EV/Sales = 5.4

* based on 2010 sales of CHF 10.4 bn
**Roche Diagnostics: Strengthening Roche’s investment case**

1. Solid growth, profit and cash contribution
2. Lower risk business
3. Adds diversification to the Group
4. Active in the highest growth segments (and future growth segments)
5. Supports Pharma productivity through PHC
Roche Group: Increased outlook for 2011
Good first half due to strong business performance

| Sales growth (in LC)               | Group & Pharma (excl. Tamiflu): low single-digit
|                                  | Diagnostics: significantly above market |
| Genentech synergies              | 2011+ : CHF 1.0 bn*                     |
| Operational Excellence savings   | 2011 : CHF 1.8 bn                       |
|                                  | 2012+ : CHF 2.4 bn                     |
| Core EPS growth target (in LC)    | Increased to around 10%                |
| Dividend outlook                 | Grow in-line with Core EPS; maintain at least last year’s dividend in CHF |

Barring unforeseen events; LC=Local Currency; * vs. 2010: CHF 0.8 bn
We Innovate Healthcare