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:

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2. legislative and regulatory developments and economic conditions;
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6. increased government pricing pressures;
7. interruptions in production;
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10. loss of key executives or other employees; and
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Roche: Portfolio rejuvenation

Stefan Frings
Head of Medical Affairs Germany

London, November 2017
Performance up-date

Portfolio rejuvenation

Outlook
Q3 2017: Sales growth for the sixth consecutive year

All growth rates at Constant Exchange Rates (CER)
BTDs\(^1\) along therapeutic areas

Roche ahead of peers

Number of BTDs granted/approved by TA

1. BTD=Breakthrough Therapy Designation; 2. including Hemophilia

Roche and peers: 2012-16 NME approvals

Industry-leading approvals and strong sales potential

<table>
<thead>
<tr>
<th>Co.</th>
<th># of FDA Approvals ’12-16</th>
<th># of High Value Molecules</th>
<th>NMEs Approved²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roche</td>
<td>9</td>
<td>7</td>
<td>Perjeta, Tecentriq, Gazyva, Kadcyla, Cotellic, Alecensa, Esbriet, Erivedge, Venclexta³</td>
</tr>
<tr>
<td>Merck</td>
<td>8</td>
<td>3</td>
<td>Keytruda, Zepatier, Bridion, Zerbaxa, Belsomra, Sivextro, Zontivity, Zinplava</td>
</tr>
<tr>
<td>Novartis</td>
<td>7</td>
<td>3</td>
<td>Entresto, Cosentyx, Tafinlar⁴, Signifor, Zykdia, Odomzo, Farydak</td>
</tr>
<tr>
<td>Pfizer</td>
<td>7</td>
<td>2</td>
<td>Ibrance, Eucrisa, Xeljanz, Bosulif, Duavee, Inlyta, Elelyso</td>
</tr>
<tr>
<td>AZ</td>
<td>6</td>
<td>3</td>
<td>Tagrisso, Farxiga, Lynparza, Eklira Genuair, Movantik, Avycaz</td>
</tr>
<tr>
<td>J&amp;J</td>
<td>6</td>
<td>4</td>
<td>Darzalex, Imbruvica⁶, Invokana, Yondelis, Olysio, Sylvant</td>
</tr>
<tr>
<td>GSK</td>
<td>6</td>
<td>4</td>
<td>Tivicay, Breo Elipta, Nucala, Anoro Elipta, Tanzeum, ABthrax</td>
</tr>
<tr>
<td>Gilead</td>
<td>6</td>
<td>5</td>
<td>Genvoya, Harvoni, Eclusa, Stribild, Sovaldi, Zydelig</td>
</tr>
<tr>
<td>Lilly</td>
<td>6</td>
<td>3</td>
<td>Trulicity, Taltz, Cyramza, Lartruvo, Portrazza, Amyvid</td>
</tr>
<tr>
<td>Amgen</td>
<td>5</td>
<td>2</td>
<td>Repatha, Kyprolis, Imlygic, Blincyto, Corlanor</td>
</tr>
<tr>
<td>Sanofi</td>
<td>5</td>
<td>2</td>
<td>Aubagio, Praluent, Cerdelga, Adlyxin, Zaltrap</td>
</tr>
<tr>
<td>Takeda</td>
<td>5</td>
<td>3</td>
<td>Entvyio, Nilanro, Trintellix, Nesina, Iclusig</td>
</tr>
<tr>
<td>BMS</td>
<td>4</td>
<td>4</td>
<td>Opdivo, Eliquis, Empliciti, Daklinza</td>
</tr>
<tr>
<td>AbbVie</td>
<td>4</td>
<td>3</td>
<td>Imbruvica⁶, Venclexta³, Viekira Pak, Zinbryta</td>
</tr>
<tr>
<td>Bayer</td>
<td>3</td>
<td>1</td>
<td>Xofigo, Stivarga, Adempas</td>
</tr>
<tr>
<td>TOTAL</td>
<td>85⁷</td>
<td>49</td>
<td>(out of 174 total)</td>
</tr>
</tbody>
</table>

1. High value molecule have peak sales >1 USDbn or >500 USDm sales by 2020; 2. Bold NMEs are high value molecules. Listed by descending 2022 WW sale; 3. Venclexta sales split between Roche/AbbVie; 4. Tafinlar sales include Mekinist sales; 5. Sylvant sales forecast not available; 6. Imbruvica split with AbbVie; 7. Total NMEs count does not double count Venclexta or Imbruvica

Sources: FDA, EvaluatePharma sales forecast as of June 14 2017 for Takeda and Bayer, January 04 2017 for the other 13 companies
Launch of new medicines at a record high


- Zelboraf vemurafenib
- Perjeta pertuzumab
- Kadcyla trastuzumab emtansin
- Gazyva obinutuzumab
- Esbriet pirfenidone
- Cotellic lenvatinib
- Tecentriq atezolizumab
- Ocrevus ocrelizumab
- Emicizumab (filed)
HY 2017 performance

Portfolio rejuvenation

Outlook
YTD 2017: Sustainable Roche business case

Important milestones achieved

<table>
<thead>
<tr>
<th>New franchises and Therapeutic Areas</th>
<th>HER2 franchise</th>
<th>CD20/Hematology</th>
<th>Cancer Immunotherapy</th>
<th>Lung cancer</th>
<th>Hemophilia A</th>
<th>Neuroscience</th>
<th>Spinal Muscular Atrophy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace and extend</td>
<td>Perjeta in adjuvant BC (APHINITY)</td>
<td>Gazyva in 1L iNHL (GALLIUM)</td>
<td>Tecentriq</td>
<td>Alecensa in 1L ALK+ NSCLC</td>
<td>Emicizumab in inhibitors (HAVEN 1 and 2)</td>
<td>Ocrevus</td>
<td>SMN2 splicer (SUNFISH)</td>
</tr>
<tr>
<td></td>
<td><strong>US priority review</strong>, EU filed</td>
<td><strong>US priority review</strong>, EU approved</td>
<td>EU approved in bladder and lung</td>
<td><strong>US priority &amp; approved</strong>, positive CHMP opinion</td>
<td><strong>BTD, US priority review, EU accelerated assessment</strong></td>
<td></td>
<td><em><em>Ph 1b at WMS</em> – Pivotal Ph III initiated</em>*</td>
</tr>
<tr>
<td></td>
<td>Perjeta in adjuvant BC (APHINITY)</td>
<td>Gazyva in 1L iNHL (GALLIUM)</td>
<td>Venclexta in R/R CLL (MURANO)</td>
<td>Gazyva in 1L iNHL (GALLIUM)</td>
<td>Polatuzumab in R/R DLBCL (Ph II)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>US priority review</strong>, EU filed</td>
<td><strong>US priority review</strong>, EU approved</td>
<td>Ph 3 met primary endpoint</td>
<td><strong>US priority review</strong>, EU approved</td>
<td>BTD, EU PRIME designation</td>
<td></td>
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</tbody>
</table>
* WMS=World Muscle Society, October 2017; BTD=breakthrough therapy designation
**APHINITY: Perjeta+Herceptin in HER2+ eBC**

*Priority review by the FDA*

- Risk of recurrence or death reduced by 19% in all patients, 23% in node+ and 24% in HR- patients

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von Minckwitz *et al.*, ASCO 2017; eBC=early breast cancer (adjuvant setting); HR=hormone receptor; * Target population for Herceptin in adjuvant breast cancer (US & EU5); current Herceptin penetration ~95%; Source: Datamonitor and internal estimates
Late-stage hematology: Improving the standard of care and extending into new indications

Incidence rates (330,000 pts)

1 Datamonitor; incidence rates includes the 7 major markets (US, Japan, France, Germany, Italy, Spain, UK); CLL=chronic lymphoid leukemia; DLBCL (aNHL)=diffuse large B-cell lymphoma; iNHL=indolent non-hodgkin’s lymphoma; AML=acute myeloid leukemia; MM=multiple myeloma; MDS=myelodysplastic syndrome; ALL=acute lymphoblastic leukemia; Venclexta in collaboration with AbbVie; Gazyva in collaboration with Biogen; Polatuzumab vedotin in collaboration with Seattle Genetics
Differentiate CIT portfolio through Tecentriq + NME-based combos

Lead in Key Indications
Leapfrog competition and expand benefitting populations by combining with currently available therapies

Wave 1: Rapid launch
Fast-to-Market strategy in lung and bladder monotherapy

Wave 2: Lead in key indications
Expand benefitting populations by combining with currently available therapies

Wave 3: Transformative Leadership
Differentiate CIT portfolio through Tecentriq + NME-based combos

Tecentriq Wave 1: Fast to market with broad label

**Lung Cancer** survival benefit in:
- Low and high PD-L1 expression
- Squamous and non-squamous
- Approval granted in EU

**Bladder Cancer:**
- 1L and 2L Indication confirmed in US and approved in EU

**Current revenue split:**
- 65/35 (Bladder / lung)

CER=Constant Exchange Rates
**Wave 2: Cancer Immunotherapy**

*Aiming to set new standards of care*

<table>
<thead>
<tr>
<th><strong>Lung</strong></th>
<th>Most comprehensive lung cancer program addressing all common backbones</th>
<th>5 trials in non-squamous, squamous &amp; small cell lung cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GU</strong></td>
<td>Among the leaders in renal cancer</td>
<td>1L RCC</td>
</tr>
<tr>
<td><strong>Breast</strong></td>
<td>First-in-class in triple negative breast cancer</td>
<td>1L TNBC</td>
</tr>
<tr>
<td><strong>CRC</strong></td>
<td>First-in-class in colorectal cancer</td>
<td>2/3L CRC</td>
</tr>
</tbody>
</table>
Wave 3: Personalized cancer vaccine to mobilize immunity

- **Fully individualized vaccine** (mRNA-based approach)
- **On demand—production** (highly iterated and reproducible with low failure rate)
- Suitable for potentially all tumor indications, also with low incidences
- No negative thymic selection of high-affinity TCRs against **mutated epitopes**
- Induction of immune responses with **high tumor specificity**

PCV=Personalized cancer vaccine
Wave 3: Transformative Market Leadership
CEA-TCB+Tecentriq in mCRC

• Encouraging anti-tumor activity and manageable safety in heavily pretreated patients with MSS mCRC
• CEA-TCB is the first T-cell engaging therapy to show activity in solid tumors
• Pivotal development program to be initiated

Tabernero J, et al. ASCO 2017, abstract #3002; * Source: Datamonitor and internal estimates, US & EU5, equals target population; TCB=T cell bispecific; CRC=colorectal cancer; CIT=cancer immuno therapy
Emicizumab’s clinical development plan
HAVEN 3 results expected in Q4

2015
113 patients
HAVEN1
Non-interventional

2016
221 patients
HAVEN1

2017
62 patients
HAVEN2

2018
152 patients
HAVEN3

Q4
HAVEN4
H1 2018

Inhibitor adults/adolescents (≥12 years old), qw

Inhibitor children (0–11 years old), qw

Non-inhibitor adults/adolescents (≥12 years old), qw and q2w

Non-inhibitor/inhibitor adults/adolescents, q4w

HAVEN 3 results expected in Q4

Priority review
PDUFA date
February 23
Ocrevus with excellent launch in all treatment lines in RMS and PPMS, EU positive CHMP opinion

- Continued strong uptake in RMS and PPMS (60/40)
- Some bolus in PPMS
- Broad base of prescribers and high level of US insurance coverage

RMS=relapsing forms of multiple sclerosis; PPMS=primary progressive multiple sclerosis
HY 2017 performance

Portfolio rejuvenation

Outlook
Launch of new medicines at a record high
## 2017 outlook raised at HY

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group sales growth</strong></td>
<td>Mid-single digit</td>
</tr>
<tr>
<td><strong>Core EPS growth</strong></td>
<td>Broadly in line with sales growth</td>
</tr>
<tr>
<td><strong>Dividend outlook</strong></td>
<td>Further increase dividend in Swiss francs</td>
</tr>
</tbody>
</table>

1 At Constant Exchange Rates (CER)
Doing now what patients need next