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;
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: Portfolio rejuvenation

Alexander Hardy,
Head of Global Product Strategy, Roche Pharma

BoAML Global Healthcare Conference
London, September 2017
HY 2017 performance

Portfolio rejuvenation

Mitigating biosimilar impact

Outlook
### HY 2017: Pharma sales growth by products

**Strong Tecentriq & Ocrevus uptake and portfolio growth**

**CHFm, growth at CER**

<table>
<thead>
<tr>
<th>Product</th>
<th>US</th>
<th>Europe</th>
<th>Japan</th>
<th>Intl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tecentriq</td>
<td>&gt;500%</td>
<td>208</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ocrevus</td>
<td>-</td>
<td>189</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perjeta</td>
<td>+17%</td>
<td>46</td>
<td>65</td>
<td>41</td>
</tr>
<tr>
<td>MabThera</td>
<td>+3%</td>
<td>91</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>Xolair</td>
<td>+17%</td>
<td>124</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actemra</td>
<td>+13%</td>
<td>51</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>Herceptin</td>
<td>+3%</td>
<td>76</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Alecensa</td>
<td>+103%</td>
<td>47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avastin</td>
<td>-1%</td>
<td>-45</td>
<td>-42</td>
<td>60</td>
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<tr>
<td>Pegasys</td>
<td>-35%</td>
<td>-34</td>
<td></td>
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<tr>
<td>Tamiflu</td>
<td>-12%</td>
<td>-78</td>
<td></td>
<td>35</td>
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<tr>
<td>Tarceva</td>
<td>-17%</td>
<td>-50</td>
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</tbody>
</table>

At Constant Exchange Rates (avg full year 2016)
BTDs\(^1\) along therapeutic areas

**Roche ahead of peers**

Number of BTDs granted/approved by TA

<table>
<thead>
<tr>
<th>Number of BTDs</th>
<th>17</th>
<th>15</th>
<th>10</th>
<th>9</th>
<th>9</th>
<th>8</th>
<th>8</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>2</th>
<th>1</th>
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<td>Other</td>
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<tr>
<td>Ophthalmology</td>
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<td>Cardio-Met</td>
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<td>Neurosciences</td>
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<td>Immunology</td>
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<tr>
<td>Rare Inherited Disorders(^2)</td>
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<tr>
<td>Infectious Disease</td>
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<tr>
<td>Oncology</td>
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<td>7</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>4</td>
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<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

\(^1\) 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 Molecules¹</th>
<th>NMEs Approved²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roche</td>
<td>9</td>
<td>7</td>
<td>Perjeta, Tecentriq, Gazyva, Kadcyla, Cotelllic, 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, Zykadia, 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 Ellipta, Nucala, Anoro Ellipta, Tanzeum, ABthrax</td>
</tr>
<tr>
<td>Gilead</td>
<td>6</td>
<td>5</td>
<td>Genvoya, Harvoni, Epclusa, 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, Zimbryta</td>
</tr>
<tr>
<td>Bayer</td>
<td>3</td>
<td>1</td>
<td>Xofigo, Stivarga, Adempas</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>85</strong> (out of 174 total)</td>
<td><strong>49</strong></td>
<td></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
Erivedge
PERJETA
Kadcyla
GAZYVA
Esbriet
Cotellic
TECENTRIQ™
VENCLEXTA
ALECENSA™
OCREVUS®

Emicizumab (filed)
HY 2017 performance

Portfolio rejuvenation

Mitigating biosimilar impact

Outlook
Tecentriq/Cancer Immunotherapy (CIT)
Catching up and taking the lead

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
Ex: T-cell bispecific

2016-2017
2018-2019
2020+
Tecentriq Wave 1: Broad label supporting strong launch

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

**Bladder Cancer**:
- 1L and 2L Indication confirmed in US, positive CHMP opinion in EU

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

CER=Constant Exchange Rates
Wave 2: Lead in Key Indications
Focused and deep investments

<table>
<thead>
<tr>
<th>Lung</th>
<th>Most comprehensive NSCLC program in CIT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adressing most current backbone standards</td>
</tr>
<tr>
<td></td>
<td>Dedicated squamous and non-squamous 1L trials, potential for 1st in Class</td>
</tr>
<tr>
<td></td>
<td>Focus on early disease: adjuvant and neo-adj</td>
</tr>
<tr>
<td>GU</td>
<td>Potential for 1st in Class in 1L Renal Cancer</td>
</tr>
<tr>
<td></td>
<td>1L (W/Avastin) and adjuvant studies in RCC</td>
</tr>
<tr>
<td></td>
<td>1L and adjuvant programs in Bladder;</td>
</tr>
<tr>
<td>Breast / Gyn</td>
<td>Potential for 1st in Class in TNBC, differentiated in Ovarian</td>
</tr>
<tr>
<td></td>
<td>1st in 1L TNBC w/Abraxane, registrational PDMA study w/pac</td>
</tr>
<tr>
<td></td>
<td>1st in Adjuvant TNBC w/chemo</td>
</tr>
<tr>
<td></td>
<td>Differentiated in frontline Ovarian with Avastin</td>
</tr>
<tr>
<td>CRC</td>
<td>Potential for 1st in Class in CRC</td>
</tr>
<tr>
<td></td>
<td>1st in MSS CRC (3L w/Cotellic)</td>
</tr>
<tr>
<td></td>
<td>Pivotal trials planned with CEA-TCB+Tecentriq</td>
</tr>
<tr>
<td></td>
<td>Registrational PDMA Ph3s in MSI-H Adjuvant and 1L</td>
</tr>
</tbody>
</table>

Read outs: (Q4’17 to Q2’18)
- IMpower150(NonSq)
- IMpower130(NonSq)
- IMpower131 (Sq)
- IMpower132 (NonSq)
- IMpower133: (SCLC)
- IMmotion151 (RCC)
- Impassion130 (TNBC)
- IMblaze370 (CRC)
Ocrevus launch off to a good start
Gaining ground in RMS and PPMS

- Strong launch in RMS and PPMS partly driven by patient bolus
- Initial market research indicates inroads in all treatment lines in RMS
- EU launch preparations on track

1 Source: Evaluate Pharma Multiples Sclerosis report, July 2017, data from full year 2016. Note: Market shares based on value (sales); 2 ABCR's refers to Avonex®, Betaferon® / Betaseron®, Copaxone®, Rebi®, Extavia®, Plegridy®; RMS=relapsing forms of multiple sclerosis; PPMS=primary progressive multiple sclerosis
APHINITY: Perjeta+Herceptin in HER2+ eBC
Advancing care in a curative setting

- Risk of recurrence or death reduced by 19% in all patients, 23% in node+ and 24% in HR- patients
- Global filings ongoing
- SC co-formulation of Herceptin + Perjeta in development

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
HY 2017 performance

Portfolio rejuvenation

Mitigating biosimilar impact

Outlook
Germany: Ritixumab volume erosion in line with Remicade & Enbrel at same point post Bx launch

Remicade, Enbrel & MabThera Originator Vol. Share comparison*

Volume market share (SU)

Months from launch

Source: IMS monthly data, May 2017 for rituximab, April 2017 for inflix / etan
* time-aligned to first launch of each molecule by country
Biosimilars: Key strategic priorities

1. Sub cutaneous
   - Patent protection until around 2030
   - Patient convenience, beneficial for HC systems, and differentiated in tenders
   - Future combinations

2. Legal readiness
   - Ensure fair play
   - Legal action where necessary

3. Switching
   - No switch study results in oncology for biosimilars available
   - Patients first
HY 2017 performance

Portfolio rejuvenation

Mitigating biosimilar impact

Outlook
Strong pipeline mitigates biosimilar impact
Growth driven by next generation medicines

Sales

NME launches
*Venclexta, Alecensa, Cotellic, OCREVUS, Tecentriq, Emicizumab, Lampalizumab*

Pipeline and recent launches

Biosimilars
*MabThera, Herceptin, Avastin*

Marketed products

Conceptual
## 2017 outlook raised

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Group sales growth(^1)</strong></td>
<td>Mid-single digit</td>
</tr>
<tr>
<td><strong>Core EPS growth(^1)</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
Q2 2017: Group sales growth for the sixth consecutive year

All growth rates at Constant Exchange Rates (CER)
**IMvigor211: Tecentriq in prior platinum mUBC**

**Confirmed as important treatment option**

- Primary endpoint OS in the IC2/3 population (n=234) not met; delayed curve separation in mOS does not fully reflect the total benefit
- Meaningful improvement in median duration of response (21.7m vs 7.4m), long remissions
- OS results highly consistent with Phase II results (IMvigor210) confirming durability of response

Powles T, et al. EACR-AACR-SIC 2017; mUBC=metastatic urothelial bladder cancer; OS=overall survival; HR=hazard ratio; CHMP=committee for medicinal products for human use; NSCLC=non-small cell lung cancer
IMvigor211: Tecentriq in prior platinum mUBC
Confirmed as important treatment option

- Improved OS with Tecentriq vs taxanes (HR=0.73), but not versus vinflunine (HR=0.97)
- No new safety signals and more favorable safety profile for Tecentriq than for chemotherapy
- FDA confirmed label, Positive CHMP opinion (1L cisplatin ineligible mUBC; prior platinum mUBC)

Powles T, et al. EACR-AACR-SIC 2017; mUBC=metastatic urothelial bladder cancer; OS=overall survival; HR=hazard ratio; CHMP=committee for medicinal products for human use; NSCLC=non-small cell lung cancer
HAVEN 2 intra-individual comparison (pediatrics)

Emicizumab vs prior BPA prophylaxis

- Zero events for all 8 participants (P 1-8) receiving emicizumab (efficacy period 85–99 days)
- Substantial reductions in event rate with emicizumab prophylaxis vs prior BPA treatment

Young G, et al. ISTH 2017; ABR=annualized bleeding rate (calculated with negative binomial regression model); BPA=bypassing agent; NIS=non-interventional study; P=participant; BTD=breakthrough therapy designation
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
ALEX: Alecensa in 1L ALK+ NSCLC
Recommended as 1L choice in NCCN guidelines

- Compared to crizotinib, Alecensa significantly prolonged PFS, delayed time to CNS progression, improved intracranial ORR and DOR and had a more favorable safety profile
- NCCN guidelines recommend 1L use (as category 1 preferred option)
- 1L filing completed in the EU and submitted in US

Shaw A. et al, ASCO 2017; *Investigator assessment; Alecensa (alectinib) in collaboration with Chugai; ITT=intent to treat; CNS=central nervous system; HR=hazard ratio; PFS=progression free survival; ORR=overall response rate; DOR=duration of response; NCCN=National Comprehensive Cancer Network; BTD=breakthrough therapy designation
HAVEN 1 intra-individual comparison (adults)
Emicizumab vs prior BPA prophylaxis

- Event rate reduced by 79% with emicizumab prophylaxis vs prior BPA prophylaxis
- 70.8% of patients with zero events on emicizumab prophylaxis
- Filing in the US, EU and Japan completed

Oldenburg J, et al. ISTH 2017; ABR=annualized bleeding rate (calculated with negative binomial regression model); BPA=bypassing agent; NIS=non-interventional study; BTD=breakthrough therapy designation