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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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Agenda

Welcome
Karl Mahler, Head of Investor Relations

Roche Hematology Strategy
Tom Fuchs, Vice President, Hematology Franchise Head, Global Product Strategy

Key data presented at ASH 2019
Nancy Valente, M.D., Senior Vice President, Global Head of Hematology Development

Q&A
Welcome

Karl Mahler | Head of Investor Relations
Roche positioned to maintain market leadership in hematology
Building upon our leadership and experience with transformative medicines

Datamonitor: incidence rates includes the 7 major markets (US, Japan, France, Germany, Italy, Spain, UK); CLL=Chronic lymphoid leukemia; DLBCL=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

Continuing to redefine the standard of care in B-cell malignancies

Expanding into new hematologic diseases with transformative therapies

Non-malignant heme

Crovalimab

GAZYVA mosunetuzumab CD20-TCB

POLIVY mosunetuzumab CD20-TCB

Venclexta idasanutlin
Roche Hematology Strategy

Tom Fuchs | Vice President, Hematology Franchise Head, Global Product Strategy
** Broadest portfolio in hematology **

<table>
<thead>
<tr>
<th></th>
<th>mAb</th>
<th>Small Molecule</th>
<th>ADC</th>
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<td><img src="image" alt="VENCLEXTA" /></td>
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![Check symbol] = approved  
![Blue symbol] = Indications where Rituxan approved  
![Orange symbol] = New hematologic diseases

CLL=Chronic lymphoid leukemia; DLBCL=Diffuse large B-cell lymphoma; iNHL=Indolent Non-Hodgkin's lymphoma; AML=Acute myeloid leukemia; MM=Multiple myeloma; MDS=Myelodysplastic syndrome; CPI=checkpoint inhibitor; Venclexta in collaboration with AbbVie
Roche combination regimens are improving efficacy and tolerability

**CLL**

- Rituxan + chemo (chlorambucil)
- GAZYVA + chemo
- GAZYVA + Venclexta

**iNHL**

- Rituxan + chemo (CHOP, CVP, bendamustine)
- GAZYVA + chemo
- GAZYVA + CD20-TCB

**DLBCL**

- Rituxan + chemo (1L: CHOP) (R/R: bendamustine, gemcitabine)
- Rituxan + POLIVY + chemo
- Mosunetuzumab + POLIVY

**AML**

- Chemotherapy
  - (1L unfit: HMA, LDAC)
- Venclexta + chemo
- Venclexta + idasanutlin

---

**Indications where Rituxan approved**

**New hematologic diseases**

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CLL = Chronic lymphoid leukemia; DLBCL = Diffuse large B-cell lymphoma; iNHL = Indolent Non-Hodgkin's lymphoma; AML = Acute myeloid leukemia; HMA = hypomethylating agents; LDAC = low dose cytarabine; Venclexta in collaboration with AbbVie
Innovation and acceleration of our portfolio

Develop novel endpoints

Venclexta + Gazyva (CLL14)

• MRD-negativity predictive of longer term benefit across several CLL and NHL trials

Innovative trial design

Hemlibra (HAVEN2)

• Intrapatient comparison trial demonstrated by Hemlibra has become gold standard in Hemophilia A trials

Fast to market development

Venclexta + HMAs/LDAC (AML)

• Venclexta granted accelerated approval in 1L AML on Phlb/Il data
• Polivy launched of Ph 2 data (3 years ahead of projected timelines)

CLL=Chronic lymphoid leukemia; NHL=Non-Hodgkin's lymphoma; AML=Acute myeloid leukemia; MRD=minimal residual disease; HMA=hypomethylating agent; LDAC=low dose cytarabine; Venclexta in collaboration with AbbVie
High unmet need remains in DLBCL

**Challenges with CAR-T therapy**

- **Long timelines**: median 30-60 day wait, PD can occur\(^1\)
- **Toxicity**: risk of severe CRS, neurotoxicities
- **Cost**: high price, additional inpatient costs
- **Manufacturing**: 1-7% failure rate\(^2\)
- **Access**: administered only at specialist centers

**Roche portfolio in DLBCL**

- mosunetuzumab
- CD20-TCB

- Readily available “off the shelf”
- Well tolerated, with mAb dosing/PK properties
- Administered in outpatient facility

**CAR-T therapies are a unique modality available for a small proportion of patients; high unmet need remains across NHL**

**Roche molecules have the potential for use in early lines of therapy including in combination therapy**

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\(^1\) Kymriah SMPC, Yescarta SMPC, Paillassa ASH 2019  
\(^2\) Neelapu NEJM 2018; Schuster NEJM 2019

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CAR-T=chimeric antigen receptor T-cell; CRS=cytokine release syndrome; TCB = t-cell bispecific; DLBCL = diffuse large b-cell lymphoma; mAb = monoclonal antibody
Polivy: strong launch in R/R DLBCL

Polivy overview

- ADC designed for targeting toxic payload to cells expressing CD79b
- Approved in US in 3L+ DLBCL, positive CHMP opinion in 2L+ DLBCL

Polivy offers a differentiated profile

- **Strong efficacy**: Only agent in R/R DLBCL with OS benefit in randomized trial
- **Well tolerated**: combines with standard of care (BR) with no unique safety monitoring requirements
- **Off the shelf**: readily available; administered in any oncology facility (outpatient)
**Polivy: Ph 3 POLARIX trial in 1L DLBCL fully recruited**

**Ph3 POLARIX trial in 1L DLBCL fully recruited**

- 1L DLBCL (N=875) Untreated DLBCL
  - Age 18-80 years
  - IPI 2-5
  - ECOG PS 0-2

  1 EP: PFS

  375 mg/m2 Cycles 7 and 8

  Q2ID x 6 cycles

  Arm A

  Polatuzumab vedotin (1.8mg/kg) + R-CHP

  Arm B

  R-CHOP + placebo

  Rituxan

**Encouraging early data in 1L DLBCL**

<table>
<thead>
<tr>
<th></th>
<th>Polivy+CHP (Ph 1b/2)</th>
<th>Historical control (R-CHOP GOYA trial)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORR</td>
<td>89%</td>
<td>80%</td>
</tr>
<tr>
<td>CR</td>
<td>77%</td>
<td>34%</td>
</tr>
<tr>
<td>2-yr PFS</td>
<td>83%</td>
<td>71%</td>
</tr>
</tbody>
</table>

- Ph 1b data in 1L DLBCL compares favorably to historical controls despite older population and sicker patients

**1L DLBCL has ~4x more patients than R/R DLBCL**

DLBCL=Diffuse large B-cell lymphoma; R-CHOP=Rituxan-cyclophosphamide, doxorubicin, vincristine, prednisone
Mosunetuzumab and CD20-TCB

Anti-CD20/CD3 bispecific antibodies simultaneously bind T-cells and B-cells

- Two unique formats (1:1 and 2:1 binding)
- Fast, universal, off-the-shelf solution, with mAb dosing and PK properties
- Potential for use in combination in 1L given manageable CRS and neurotoxicity profiles

Both molecules currently being assessed in iNHL/aNHL as monotherapy and in combination

iNHL=indolent Non-Hodgkin's lymphoma; aNHL=aggressive Non-Hodgkin's lymphoma; CRS=cytokine release syndrome, mAb = monoclonal antibody; TCB = T-cell bispecific
Venclexta

*Developing in hematology markets with combined ~$30B market size*

<table>
<thead>
<tr>
<th>Disease</th>
<th>Highlight</th>
<th>Market Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLL</td>
<td>Fixed treatment duration, chemo free regimen</td>
<td>~$5b in 2019</td>
</tr>
<tr>
<td>AML</td>
<td>First new AML treatment in &gt;20 years</td>
<td>~$6B by 2024</td>
</tr>
<tr>
<td>MM</td>
<td>Encouraging results in ~20% of patients with t(11;14) translocation; Ph3 combination with dex initiated</td>
<td>~$18b in 2019</td>
</tr>
<tr>
<td>MDS</td>
<td>Encouraging early data in high unmet need population</td>
<td>~$2B by 2024</td>
</tr>
</tbody>
</table>

CLL=Chronic lymphoid leukemia; AML=Acute myeloid leukemia; MM=Multiple myeloma; MDS=Myelodysplastic syndrome; Venclexta in collaboration with AbbVie; dex = dexamethasone

Market size data: Evaluate Pharma
Hemophilia A

Hemlibra provides transformational advance for hemophilia market

Severity & treatment-based segmentation

- Mild: ~25%
- Moderate: ~20%
- Severe: ~50%
- Inhibitor: ~5%

On-demand 50%
Prophylaxis 50%
PWHA moderate/severe

Needs-based segmentation

- 75-80%
- 45%
- 20%
- 5%
- 5%
- 10%
- 15%

Inhibitors
Non-inhibitors with bleeds
Non-inhibitors without bleeds
Pediatric
Mild
Hemlibra target population

Total hemophilia A market growing to USD 13bn by 2024

PWHA=People with Hemophilia A; Source: Treated patients MORSE 2017 (prevalence), UKHCDO Annual Report 2016 and internal assumptions (treatment rate); 1 Source: Evaluate Pharma
Key data presented at ASH

Nancy Valente, M.D. | Senior Vice President, Global Head of Hematology Development
Mosunetuzumab: in aggressive NHL
Complete responses appear durable; dose-escalation is ongoing

Best change (%) in SPD from baseline in aNHL¹

Investigator-assessed best objective response¹
(pooled data from 2.8mg to 40.5mg cohorts)

<table>
<thead>
<tr>
<th></th>
<th>N*</th>
<th>ORR, n (%)</th>
<th>CR, n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggressive NHL</td>
<td>124</td>
<td>46 (37.1%)</td>
<td>24† (19.4%)</td>
</tr>
<tr>
<td>DLBCL/trFL after ≥ 2 lines</td>
<td>98</td>
<td>37 (37.8%)</td>
<td>20 (20.4%)</td>
</tr>
<tr>
<td>• Refractory to anti-CD20</td>
<td>88/98</td>
<td>32 (36.4%)</td>
<td>18 (20.5%)</td>
</tr>
<tr>
<td>• With prior auto SCT</td>
<td>32/98</td>
<td>17 (53.1%)</td>
<td>11 (34.3%)</td>
</tr>
</tbody>
</table>

• †17 CR pts (70.8%) remain in complete remission (up to 16 months off initial treatment)
• Dose-optimization ongoing; increased efficacy observed in patients with higher exposure to mosunetuzumab as measured by CD20 receptor occupancy (RO%)²

*Efficacy-evaluable pts: pts who were enrolled for at least 3 months, or had response data available at any time, or discontinued treatment for any cause
aNHL = aggressive NHL; DLBCL = diffuse large b-cell lymphoma; trFL = transformed follicular lymphoma; SCT = stem cell transplant; SPD = sum of the product of the diameters
Mosunetuzumab: in indolent NHL
Promising CR rate in 3L+ FL pts and in high-risk subsets

Investigator-assessed best objective response
(pooled data from 2.8mg to 13.5mg cohorts)

<table>
<thead>
<tr>
<th></th>
<th>(N^*)</th>
<th>(\text{ORR}, n ; (%))</th>
<th>(\text{CR}, n ; (%))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indolent NHL</td>
<td>67</td>
<td>42 (62.7%)</td>
<td>29(^\dagger) (43.3%)</td>
</tr>
<tr>
<td>FL after (\geq 2) lines</td>
<td>61</td>
<td>39 (63.9%)</td>
<td>27 (44.3%)</td>
</tr>
<tr>
<td>• Double refractory</td>
<td>43/61</td>
<td>28 (65.1%)</td>
<td>19 (44.2%)</td>
</tr>
<tr>
<td>• History of POD24</td>
<td>33/61</td>
<td>20 (60.6%)</td>
<td>14 (42.4%)</td>
</tr>
<tr>
<td>• PI3Ki refractory</td>
<td>9/61</td>
<td>8/9 (88.9%)</td>
<td>7/9 (77.8%)</td>
</tr>
</tbody>
</table>

\(^\dagger\)24 CR (82.8%) pts remain in complete remission (up to 26 months off initial treatment)

Safety (all patients iNHL/aNHL)

• 95% of AEs occurred in cycle 1; no cumulative or chronic toxicity
• Most CRS events were of mild-to-moderate severity with only three Gr \(\geq 3\) CRS events (1.1%)

*Efficacy-evaluable pts: pts who were enrolled for at least 3 months, or had response data available at any time, or discontinued treatment for any cause

Mosunetuzumab: pre and post CAR-T therapy

**Patients with prior CAR-T**

<table>
<thead>
<tr>
<th>Efficacy</th>
<th>$N^*$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR</td>
<td>4/18</td>
<td>22.2%</td>
</tr>
<tr>
<td>ORR</td>
<td>7/18</td>
<td>38.9%</td>
</tr>
</tbody>
</table>

**Case Report**

- 58-year old R/R patient with FL
- 8 prior lines of systemic treatment: refractory to CD20, and relapsed after CD-19 CAR-T therapy
- Patient has been off mosunetuzumab treatment for 8 months and remains in CR

**Targeting CD19 following mosunetuzumab**

**Case Report**

- 31 year-old patient with R/R FL and 3 prior lines of systemic therapy
- Rapidly progressing disease with urgent need for therapy

**Pre-mosun**

- Patient had response in all other lesions, but loss of CD20 in neck lesions (loss of CD20 is highly infrequent in NHL)

**Post-mosun (4-cycles)**

**CD19-CAR-T (day 102)**

*18 pts efficacy-evaluable (as of CCOD): pts who were enrolled for at least 3 months, or had response data available at any time, or discontinued treatment for any cause Shuster, S.J., et al, ASH 2019; CAR-T, chimeric antigen receptor-modified T cell; FL, follicular lymphoma; R/R, relapsed or refractory; CCOD: Aug 9, 2019.*
CD20-TCB + Gazyva demonstrates promising activity

- CD20-TCB can be combined with Gazyva and demonstrates highly promising clinical activity in heavily pre-treated patients
- Overall, ORR and CR rates by investigator assessment were 54% (15/28 pts) and 46% (13/28), respectively; CRs appear durable
- CRS occurred in 67.9% of patients; most CRS events were of mild-or-moderate severity with only two Gr ≥3 CRS events (7%)
- Neurological AEs were all mild-to-moderate (Gr 1-2)

Morschhauser, F., et al, ASH 2019; aNHL = aggressive Non-Hodgkin's Lymphoma; aNHL includes DLBCL, MCL, PMBCL, Richter’s transformation, transformed FL and transformed other.
• CD20-TCB plus Tecentriq has manageable safety in R/R B-NHL
• T-cell activation was observed in responding pts, which is consistent with the hypothesized MOA of this combination treatment
• A trend towards increased response rate was observed starting at CD20-TCB doses ≥1.8mg
• Dose escalation in this study is ongoing

Hutchings, M., et al, ASH 2019; }; DLBCL=Diffuse large B-cell lymphoma; aNHL=Aggressive Non-Hodgkin's lymphoma; FL=Follicular lymphoma; MOA=mechanism of action
Gazyva + Venclexta: follow-up from CLL14

- Ven + G achieved 3-yr PFS rate of 81.9% vs. 49.5% for G-clb
- PFS HR=0.31 (p<0.0001)

- Deep MRD negativity maintained following treatment
- 90% of MRD-ve patients remained in remission 2 yrs after treatment

- Fixed dose avoids long term side effects of chronic therapy
- Low discontinuation rate
- Generates cost savings to the healthcare system

Fischer, et al, ASH 2019; CLL=Chronic lymphoid leukemia; MRD-ve=minimal residual disease; negative; BTD=breakthrough therapy designation; RTOR=real time oncology review; clb = chlorambucil

Venclexta in collaboration with AbbVie
Venclexta + idasanutlin in R/R AML

Venclexta + idasanutlin demonstrated encouraging efficacy

- Ven + idasanutlin demonstrated encouraging safety and efficacy in elderly patients with R/R AML who were ineligible for chemotherapy
- An anti-leukemic response rate of 50% and cCR rate of 35% were seen at dose levels being considered for recommended Ph 2 dose (Ven 600mg + idasanutlin 150/200mg), which compares favorably with either single agent
- 38% patients with cCR achieved MRD negativity (10^{-3} cut-off)
- Further evaluation in expansion is planned following confirmation of recommended Ph 2 dose

Daver, N.G, et al, ASH 2019; cCR, composite complete response; CRp, complete response with incomplete platelet count recovery; PR, partial response; Note: 7 patients had missing baseline or post-baseline bone marrow blast count (not pictured in figure above); MLFS, morphologic leukemia-free state; Venclexta in collaboration with AbbVie
MDS occurs primarily in older patients, and remains a high unmet need (median OS ~2 years)\(^1\)

Venclexta + azacitidine demonstrated a manageable safety profile and encouraging efficacy:

- CR rate of 39% which compares favorably to historical standard of care (azacitidine monotherapy: 17%)\(^1\)
- RBC and platelet transfusion independence of 67% (azacitidine monotherapy: 45%)\(^1\)

Wei et al, ASH 2019; Excludes patients of arm C (Aza only); ORR includes CR+mCR+ PR; # of patients with PR=0; Data Cut-off: 21 Aug 2019
MDS=Myelodysplastic syndrome; IWG=International Working Group; Venclexta in collaboration with AbbVie; \(^1\) Fenaux P et al., Lancet Oncol, 2009
Doing now what patients need next