Extending Legacy Of Leadership In Hematology

Brian Goff
President, Hematology
Our Strategic Priority: Deliver transformative and personalized therapies to improve the lives of patients with blood disorders.
Key takeaways

- Strengthening our hematology leadership for sustainable and profitable growth
- Building personalized care through patient-centric innovation
- Elevating access to treatment and standards of care globally
- Diversifying to transform care in adjacent blood disorders by leveraging our core expertise

Poised For 3% – 5% Sales CAGR Across Hematology Business Through 2020
Hemophilia is a congenital bleeding disorder caused by a deficiency or absence of FVIII or FIX.

- Most common complication is development of chronic arthropathy due to repeated bleeding into joints.
- Hemorrhages into skin, muscles, soft tissue and mucous membranes.
- Intracranial hemorrhage, a serious life-threatening complication, occurs in ~2% of patients.
- ~$10B market size (Hemophilia A & B and Inhibitors) growing to ~$13B by 2020 at CAGR of 4% – 6%.

Data Source: World Federation of Hemophilia; Baxalta internal analysis.

Challenges and opportunities

- Improvement in diagnosis and treatment, especially in developing countries
- Adequate diagnosis and care for patients with inhibitors:
  - 30% of Hemophilia A and 5% of Hemophilia B patients develop inhibitors to factor treatment
- Wider adoption of prophylaxis
- Optimization of outcomes through personalization of care
- Sustained high trough levels to enhance quality of life

Significant Opportunity To Raise Global Standard Of Care

Majority Of Hemophilia Patients Worldwide Lack Adequate Treatment

Data Source: World Federation of Hemophilia Annual Global Survey 2013; Baxalta internal analysis
Hematology: Delivering Sustainable Growth Of 3% – 5%

- Strengthening Hemophilia leadership through innovation
- Raising standard of care for patients with Inhibitors
- Expanding global access and improving treatment standards
- Accelerating game-changing therapies in blood disorders

Baxalta Hematology Revenue

CAGR 3% – 5%

$0  $2  $4  $6

$3.5B  $4  $4.3B

2015 Expectation*  Hemophilia A & B  Inhibitor Therapy  Blood Disorders  2020 Outlook

- BAX 855
- BAX 817
- OBIZUR
- RIXUBIS
- VONVENDI**
- BAX 555

New Products $1B+

*Actual rates

**VONVENDI = BAX 111
Therapy advancements have made zero annual bleeds a reality for some patients.
Market dynamics

- Competitive entries will double
- Growing austerity measures

A high bar with ADVATE-based therapy

- Direct factor replacement to address well-understood pathophysiology
- Proven safety and effectiveness
- Zero annual bleeds through prophylaxis
- Improving outcomes through personalization of care

Baxalta Hemophilia Revenue *

<table>
<thead>
<tr>
<th>Year</th>
<th>2015 Expectation **</th>
<th>Base FVIII &amp; FIX</th>
<th>BAX 855</th>
<th>2020 Outlook</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>~$2.7B</td>
<td></td>
<td></td>
<td>~$3.0B</td>
</tr>
</tbody>
</table>

*CAGR 1%–3%

**Reflects sales of FVIII and FIX therapies

**At actual rates
Proven Effectiveness in the Real World

Proven Safety in the Real World

Personalization with Reliable Pharmacokinetic (PK)-based dosing

1.66
Annual Bleed Rate (ABR) Real World\(^1\)

0.15%
incidence of de novo inhibitors in severe Previously Treated Patients (PTPs)\(^1\)

Patient Needs

- Freedom from pain
- To engage in activities of daily living
- A treatment that works for them and fits their lifestyle
- A treatment that is safe
- A cure

Our Solution

- Efficacy profile to achieve zero bleeds
- Reliable assays for optimum dose-tailoring
- Lifestyle-aligned personalization
- Well established long-term safety with low inhibitor risk
- Sustained multi-year elevated trough levels with innovation in gene therapy

Building On A Well-Understood Scientific Platform With Direct Factor Replacement
We Strive For A Bleed–Free World…
One Person At A Time

1. EVERY BLEED MATTERS
2. PROPHYLAXIS FOR ALL
3. PERSONALIZED FOR ONE
High Patient Variability Drives Need For Personalized Treatment

Patient factors

- PK Response to Clotting Factor

- Bleed Risk/Phenotype

- Patient Lifestyle/Physical Activity Levels

Treatment requirements

- Variability in patient PK parameters: Product half-life and dosing regimen to achieve optimum factor activity levels between infusions

- Bleed risk and joint health: Patient-specific baseline factor activity levels and time spent in ‘safe zone’

- Frequency and intensity of physical activity: Peak factor protection and time spent in ‘safe zone’ at time of physical activity

Right Product + Right Dosing Regimen = Personalized Outcomes
Higher Baseline FVIII Activity Level Is Associated With Fewer Annual Joint Bleeds

Baseline activity levels of over 10% were shown to be associated with significant decrease in annual joint bleeds

(N = 377)

Adapted from den Uijl, et al, 2011

Portfolio Strategy To Elevate Baseline FVIII Activity Level

Annual Number Of Joint Bleeds According To FVIII Activity

Hemophilia Severity

- Severe (<1%)
- Moderate (1% - 5%)
- Mild (5% - 40%)

% FVIII Activity (IU dL⁻¹)

Extended Half-Life
Gene Therapy

Base FVIII
Factor Replacement Therapies

Changing Treatment Paradigm With Gene Therapy

Adapted from den Uijl, et al, 2011

Building An ADVATE-Based Family Beginning With BAX 855

- High structural and functional consistency
- Extensively tested for safety and efficacy prior to clinical development
- Successful Phase III clinical trial
  - 1.4–1.5 fold increase in ADVATE’s half-life
  - 95% reduction in median ABR vs. on-demand
  - No patients developed inhibitors
- Accelerated product development and robust manufacturing positions Baxalta for competitive market entry
- U.S. BLA filed in Q4 2014; Japan Q2 2015
- U.S. pediatric and EU filing expected in 2016

BAX 855 Is Built On The Proven Safety And Efficacy Of ADVATE
• Polysialylation of full-length rFVIII with no mutation in the protein structure

• Prolong ADVATE half-life; potential for once-weekly or less frequent dosing

• Leveraging real world long-term safety and efficacy of ADVATE-based direct factor replacement

• Expect to initiate Phase I clinical trial end of 2015
Gene therapy programs in Hemophilia

- Acquired Asklepios BioPharmaceuticals (Chatham Therapeutics) Hemophilia Gene Therapy program in 2014
- BAX 888 (FVIII) and BAX 335 (FIX) induces the body to produce factor
- BAX 888 FVIII gene construct selection under evaluation
- Phase I/II trial in progress to assess safety and optimal dosing level of BAX 335
- 7 patients treated in three dosing cohorts; FIX activity level ~10% or above in two patients; no bleeding events or inhibitor development
- Additional data at ISTH in June 2015

Shifting The Paradigm In Hemophilia Care With Sustained High Factor Levels
Raising standard of care for patients with Inhibitors

Only 35% of patients with Inhibitors are on prophylaxis in developed countries

Raising standard of care for patients with Inhibitors

Data Source: Baxalta internal analysis
Addressing Key Unmet Needs For Fragile Patient Segment

<table>
<thead>
<tr>
<th>CHRONIC/LONG-TERM</th>
<th>Acute Bleed Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congenital Hemophilia with Inhibitors (~5,000 diagnosed patients) ¹</td>
<td>Development of anti-bodies that neutralize clotting factor</td>
</tr>
<tr>
<td>Acquired Hemophilia A (~10,500 patients/y) ²</td>
<td>Rare autoimmune disease</td>
</tr>
<tr>
<td></td>
<td>Unmet needs: delay in diagnosis and treatment, high patient mortality (20%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PIPELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAX 817 (rFVIIa)</td>
</tr>
<tr>
<td>Anti-TFPI</td>
</tr>
</tbody>
</table>

Key studies

- **FEIBA PROOF Study**: Prospective, randomized, open label study of FEIBA prophylaxis vs. on-demand therapy showed significant reduction in bleeds\(^1\)

- **FEIBA GO Study**: Long-term prophylaxis observational study to track outcomes; interim results expected in 2017

FEIBA prophylaxis

- Only bypass therapy indicated for prophylaxis
- Growth driven by increase in global prophylaxis; opportunity due to low (~35%) prophylaxis rate

Global FEIBA Revenue

- \(~10\%\; \text{CAGR}^*\)

\[\text{Differentiated Label With FEIBA Prophylaxis}\]

\(\text{Reduced median ABR for all bleeds by 72.5\% (P=0.0003)}\)

When compared with FEIBA on-demand treatment, FEIBA prophylaxis 85±15 U/kg given every other day


\(^*\)Constant Currency
OBIZUR meets a significant unmet need for patients

- Only therapy for AHA that allows for measurement of FVIII
- Elevates clinician confidence by providing faster response time, better safety and optimum dosing
- 100% of bleeds successfully treated since U.S. launch
- Regulatory review ongoing in EU, Colombia, and Canada
- Exploring additional indications

$250M Peak Sales Opportunity
70% of Hemophilia patients worldwide do not receive any or adequate treatment

Expanding access and improving global treatment standards

Data Source: World Federation of Hemophilia, Baxalta internal analysis
Majority Of Hemophilia Patients Do Not Have Access To Prophylaxis Treatment

**Hemophilia A**

- **Global Patients By Regimen & Severity**
- ~30% Of Patients On Prophylaxis Treatment

**Hemophilia B**

- **Global Patients By Regimen & Severity**
- ~15% Of Patients On Prophylaxis Treatment

Data Source: Baxalta internal analysis
Expanding Prophylaxis Opportunity In Developed Markets

% Prophylaxis Penetration Severe Hemophilia A Patients

- Germany: 98% Pediatric, 70% Adult
- U.S.: 90% Pediatric, 71% Adult
- France: 87% Pediatric, 51% Adult
- Japan: 84% Pediatric, 68% Adult

Data Source: Baxalta internal analysis
Achieving Higher Standard Of Care In Developing Countries

Treatment Rates

UK: 7.7 IU/Capita

Recombinant Conversion

UK: 90% Recombinant FVIII

>20 Billion IU Potential If UK Standard Of Care Is Achieved

Data Source: World Federation of Hemophilia Annual Global Survey 2013, China – 2012 MRB report; Baxalta Internal Analysis
Implementing Diverse And Localized Strategies In Developing Countries

### Strategic initiatives

<table>
<thead>
<tr>
<th>Country</th>
<th>Initiatives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RUSSIA</strong></td>
<td>• Local manufacturing agreement for Hemophilia therapies</td>
</tr>
<tr>
<td></td>
<td>• ADVATE launched in 2014; FEIBA included in national tender</td>
</tr>
<tr>
<td><strong>TURKEY</strong></td>
<td>• ADVATE launched in 2014: 400+ patients added since 2014</td>
</tr>
<tr>
<td><strong>BRAZIL</strong></td>
<td>• 20-year exclusive partnership with Hemobrás</td>
</tr>
<tr>
<td></td>
<td>• 4,000+ patients now have access to ADVATE</td>
</tr>
<tr>
<td><strong>CHINA</strong></td>
<td>• Improving affordability and access to ADVATE with patient access programs</td>
</tr>
<tr>
<td></td>
<td>• Local partnerships with city-based funding organizations</td>
</tr>
<tr>
<td><strong>INDIA</strong></td>
<td>• Awareness and education among stakeholders</td>
</tr>
<tr>
<td></td>
<td>• Secure Government funded access; improve infrastructure</td>
</tr>
</tbody>
</table>

Leveraging Global Presence And Strong Relationships In Local Markets To Raise Standards Of Care
Brazil: Long-Term Growth Strategy Through Hemobrás Partnership

Amauri has been on ADVATE prophylaxis since it was launched in Brazil.

Brazil Conversion To rFVIII

<table>
<thead>
<tr>
<th>Year</th>
<th>% rFVIII Patients</th>
<th>IU/Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>0%</td>
<td>1.68</td>
</tr>
<tr>
<td>2013</td>
<td>~25%</td>
<td>2.55</td>
</tr>
<tr>
<td>2014</td>
<td>40%+</td>
<td>2.79</td>
</tr>
<tr>
<td>2015E</td>
<td>50%+</td>
<td>2.95</td>
</tr>
<tr>
<td>2020E</td>
<td>65%</td>
<td>4.10</td>
</tr>
</tbody>
</table>
Accelerating game-changing therapies in other blood disorders

Bringing paradigm shift to current therapies
**Building Depth And Breadth To Compete In A $16B+ Market**

Data Source: World Federation of Hemophilia, CDC, NIH, EMA, answeringttp.org, Baxalta internal analysis

---

### Current therapy areas in Hemophilia

<table>
<thead>
<tr>
<th>Disease</th>
<th>Population</th>
<th>Current Therapy Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemophilia A</td>
<td>~400,000</td>
<td></td>
</tr>
<tr>
<td>Hemophilia B</td>
<td>~80,000</td>
<td></td>
</tr>
<tr>
<td>Hemophilia with inhibitors</td>
<td>~20,000–40,000</td>
<td></td>
</tr>
</tbody>
</table>

### Future growth in Blood Disorders

<table>
<thead>
<tr>
<th>Disease</th>
<th>Population</th>
<th>Future Growth Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>von Willebrand Disease</td>
<td>~70 M (~700K require treatment)</td>
<td></td>
</tr>
<tr>
<td>Hereditary TTP*</td>
<td>~3,000–4,000</td>
<td></td>
</tr>
<tr>
<td>Sickle Cell Disease</td>
<td>~200,000 (U.S. and EU)</td>
<td></td>
</tr>
</tbody>
</table>

### Segment Size in 2020

- **Hemophilia A:** ~$13B
- **Hemophilia B:** ~$13B
- **Hemophilia with inhibitors:** ~$13B
- **von Willebrand Disease:** ~$13B
- **Hereditary TTP:** ~$13B
- **Sickle Cell Disease:** ~$13B

### Under-penetrated Segment Potential

- **Hemophilia A:** ~$3.0B
- **Hemophilia B:** ~$3.0B
- **Hemophilia with inhibitors:** ~$3.0B
- **von Willebrand Disease:** ~$3.0B
- **Hereditary TTP:** ~$3.0B
- **Sickle Cell Disease:** ~$3.0B

---

*Thrombotic Thrombocytopenic Purpura*
### VONVENDI (BAX 111): The First Recombinant Pure von Willebrand Factor

**Disease Description**
- Most common inherited bleeding disorder; prevalence of symptomatic disease: 1 in 10,000\(^1\)
- Low prophylaxis (~20%) in Severe Type 3
- Currently treated with desmopressin and/or combination pdFVIII/vWF

**Product Attributes and Targeted Indications**
- First highly purified recombinant vWF
- Can be used with or without FVIII therapy for added flexibility
- Advanced manufacturing to preserve the vWF profile including ultra-large multimers

**Studies and Timelines**
- Phase III met its primary efficacy endpoint
- U.S. BLA submission Q4 2014
- Surgery study initiated Q4 2014

**Potential**
- ~$1.0B peak sales opportunity
- Significantly under-developed segment
- Exploring additional indications

---

# BAX 930: First Disease-Specific Treatment For hTTP

## BAX 930 For Hereditary Thrombotic Thrombocytopenic Purpura (TTP)

<table>
<thead>
<tr>
<th>Disease Description</th>
<th>Product Attributes and Targeted Indications</th>
<th>Studies and Timelines</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Life-threatening coagulation disorder affecting 3,000 – 4,000 patients globally</td>
<td>• First recombinant factor replacement therapy with rADAMTS13</td>
<td>• Preclinical IND-enabling studies completed</td>
<td>• ~$1.0B including additional indications</td>
</tr>
<tr>
<td>• Currently treated with infusions of fresh frozen plasma (FFP)</td>
<td>• For on-demand treatment of TTP episodes and prophylactic treatment of hereditary TTP</td>
<td>• Phase I initiated in 2014</td>
<td>• New therapy options expected to outgrow the market</td>
</tr>
</tbody>
</table>
BAX 555: A Potential New Treatment Option For Patients With Sickle Cell Disease

<table>
<thead>
<tr>
<th>Disease Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>• World’s most common blood disorder with ~200,000 patients diagnosed in U.S./Europe</td>
</tr>
<tr>
<td>• Currently only one approved drug — low adoption rates and requires frequent monitoring</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• First-in-class, oral, small molecule compound</td>
</tr>
<tr>
<td>• Early studies indicate the compound may reduce the sickling of red blood cells</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Studies and Timelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Phase I studies completed</td>
</tr>
<tr>
<td>• First cohort of Phase II study initiated in 2014</td>
</tr>
<tr>
<td>• Received FDA Orphan designation; eligible in EU</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ~$1.0B</td>
</tr>
<tr>
<td>• New therapy options expected to expand market potential</td>
</tr>
</tbody>
</table>
Extending Legacy Of Leadership In Hematology

Key takeaways

- Strengthening our hematology leadership for sustainable and profitable growth

- Building personalized care through patient-centric innovation

- Elevating access to treatment and standards of care globally

- Diversifying to transform care in adjacent blood disorders by leveraging our core expertise

Poised For 3% – 5% Sales CAGR Across Hematology Business Through 2020