



***“Opzioni terapeutiche consolidate in emofilia acquisita”***

**rFVIIa in emofilia acquisita: quando un controllo ottimale e sicuro dell'emostasi diventa fondamentale**

**Marco Marietta**

# Relazioni con soggetti portatori di interessi commerciali in campo sanitario

Ai sensi dell'art. 3.3 sul Conflitto di Interessi, pag. 17 del Regolamento Applicativo dell'Accordo Stato-Regione del 5 novembre 2009, io sottoscritto **Dott. Marco Marietta** dichiaro che negli ultimi due anni ho avuto i seguenti rapporti ricevendo compensi individuali con soggetti portatori di interessi commerciali in campo sanitario:

- **Partecipazione ad Advisory Board per Novo-Nordisk**
- **Consulenze / Relazioni a congressi per Kedrion, Orphan, Novo-Nordisk**



*Da dove veniamo? Che siamo? Dove andiamo?*

*Paul Gauguin, 1897*



*Da dove veniamo? Che siamo? Dove andiamo?*

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EUROPEAN MEDICINES AGENCY  
SCIENCE MEDICINES HEALTH

EMA/109367/2016  
EMA/H/C/000074

### **EPAR summary for the public**

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**NovoSeven**  
eptacog alfa

### **Other information about NovoSeven**

The European Commission granted a **marketing authorisation** valid throughout the European Union for NovoSeven on **23 February 1996.**

# EACH registry

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- Registro multicentrico, prospettico, osservazionale
- 117 centri in 13 paesi (Austria, Finlandia, Francia, Germania, Grecia, Italia, Olanda, Portogallo, Regno Unito, Spagna, Svezia, Svizzera, Ungheria)
- **Arruolamento: 1/2003 – 12/2008**
- End-point maggiori: controllo delle emorragie e eradicazione dell'inibitore
- Pazienti trattati in accordo alla pratica clinica locale
- Sponsorizzato da Novo Nordisk, Danimarca

## Demographic and clinical data in acquired hemophilia A: results from the European Acquired Haemophilia Registry (EACH2)

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F. PELLEGRINI,<sup>††</sup> L. TENGBORN,<sup>‡‡</sup> and H. LÉVESQUE,<sup>§§</sup> ON BEHALF OF THE EACH2 REGISTRY  
CONTRIBUTORS<sup>1</sup>

## Pregnancy-associated acquired haemophilia A: results from the European Acquired Haemophilia (EACH2) registry

**BJOG 2012;119:1529–1537.**

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L Nemes,<sup>h,\*</sup> P Collins,<sup>i,\*</sup> on behalf of the EACH2 registry contributors<sup>†</sup>

# blood

2012 120: 39-46  
Prepublished online May 22, 2012;  
doi:10.1182/blood-2012-02-408930

## **Management of bleeding in acquired hemophilia A: results from the European Acquired Haemophilia (EACH2) Registry**

Francesco Baudo, Peter Collins, Angela Huth-Kühne, Hervé Lévesque, Pascual Marco, László Nemes, Fabio Pellegrini, Lilian Tengborn and Paul Knoebl

# blood

2012 120: 47-55  
Prepublished online April 18, 2012;  
doi:10.1182/blood-2012-02-409185

## **Immunosuppression for acquired hemophilia A: results from the European Acquired Haemophilia Registry (EACH2)**

Peter Collins, Francesco Baudo, Paul Knoebl, Hervé Lévesque, László Nemes, Fabio Pellegrini, Pascual Marco, Lilian Tengborn and Angela Huth-Kühne



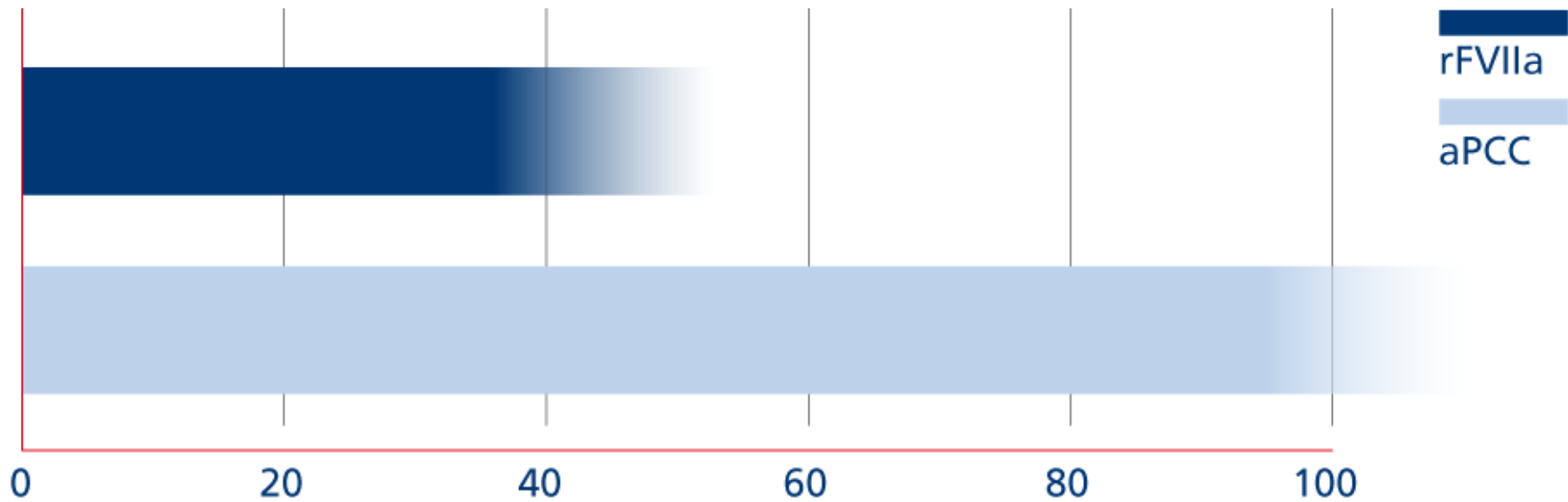
# blood

2012 120: 39-46

Prepublished online May 22, 2012;  
doi:10.1182/blood-2012-02-408930

**Table 1. Unmatched sample baseline characteristics according to treatment of the first bleeding episode (bypassing agent vs FVIII or DDAVP and rFVIIa vs aPCC)**

| Variable                                  | Bypassing agent,<br>median (IQR) | FVIII or DDAVP,<br>median (IQR) | <i>P</i> * | rFVIIa,<br>median (IQR) | aPCC,<br>median (IQR) | <i>P</i> † |
|---|----------------------------------|---------------------------------|------------|-------------------------|-----------------------|------------|
| Patients, n                               | 219                              | 69                              |            | 159                     | 60                    |            |
| Age, y                                    | 73.0 (15.0-92.0)                 | 73.0 (13.0-104.0)               | .94        | 73.0 (15.0-91.0)        | 76.5 (24.0-92.0)      | .02        |
| <b>Sex, n (%)</b>                         |                                  |                                 | .07        |                         |                       | .06        |
| Female                                    | 109 (49.7)                       | 26 (37.7)                       |            | 73 (45.9)               | 36 (60.0)             |            |
| Male                                      | 110 (50.8)                       | 43 (62.3)                       |            | 86 (54.1)               | 24 (40.0)             |            |
| Weight, kg                                | 69.0 (40.0-130.0)                | 69.0 (40.0-113.0)               | .92        | 69.0 (40.0-130.0)       | 69.2 (44.0-107.0)     | .70        |
| FVIII level, IU/dL                        | 1.0 (0.0-40.0)                   | 3.0 (0.0-34.0)                  | .03        | 2.0 (0.0-32.0)          | 1.0 (0.0-40.0)        | .13        |
| Hb, g/dL                                  | 8.6 (3.0-15.2)                   | 8.8 (3.3-14.4)                  | .57        | 8.6 (3.0-15.2)          | 8.4 (4.6-14.8)        | .90        |
| Inhibitor titer, BU/mL                    | 15.4 (0.1-2765.0)                | 8.0 (0.3-200.0)                 | .0003      | 15.0 (1.0-2765.0)       | 17.0 (0.1-1700.0)     | .99        |
| Therapy delay, days                       | 0.01 (0.0-0.5)                   | 0.01 (0.00-0.11)                | .34        | 0.01 (0.00-0.27)        | 0.01 (0.00-0.54)      | .76        |
| Ancillary antifibrinolytic therapy, n (%) | 30 (13.7)                        | 20 (29.0)‡                      | .0035      | 27 (17.0)               | 3 (5.0)               | .0215      |
| <b>Cause of bleeding, n (%)</b>           |                                  |                                 | .715       |                         |                       | .08        |
| Unknown                                   | 1                                | 0                               |            | 1                       | 0                     |            |
| Traumatic                                 | 46 (21.1)                        | 16 (23.2)                       |            | 38 (24.1)               | 8 (13.3)              |            |
| Spontaneous                               | 172 (78.9)                       | 53 (76.8)                       |            | 120 (75.9)              | 52 (86.7)             |            |
| <b>Bleeding site, n (%)</b>               |                                  |                                 | .04        |                         |                       | .12        |
| CNS                                       | 5 (2.3)                          | 0 (0.0)                         |            | 5 (3.1)                 | 0 (0.0)               |            |
| Deep muscle                               | 139 (63.4)                       | 32 (46.4)                       |            | 94 (59.1)               | 45 (75.0)             |            |
| Hemarthrosis                              | 6 (2.7)                          | 3 (4.3)                         |            | 5 (3.1)                 | 1 (1.7)               |            |
| Mucosa                                    | 34 (15.6)                        | 21 (30.5)                       |            | 30 (18.8)               | 4 (6.6)               |            |
| Skin                                      | 34 (15.6)                        | 13 (18.8)                       |            | 24 (15.2)               | 10 (16.7)             |            |
| Multiple sites                            | 1 (0.4)                          | 0 (0.0)                         |            | 1 (0.7)                 | 0 (0.0)               |            |
| <b>Severity of bleeding, n (%)</b>        |                                  |                                 | .031       |                         |                       | .31        |
| Unknown                                   | 1                                | 0                               |            | 1                       | 0                     |            |
| Severe                                    | 193 (88.5)                       | 54 (78.2)                       |            | 142 (89.8)              | 51 (85.0)             |            |
| Nonsevere                                 | 25 (11.5)                        | 15 (21.8)                       |            | 16 (10.1)               | 9 (15.0)              |            |



**Time to bleeding control (hrs)**

## Management of bleeding in acquired hemophilia A: results from the European Acquired Haemophilia (EACH2) Registry

Francesco Baudo, Peter Collins, Angela Huth-Kühne, Hervé Lévesque, Pascual Marco, László

Table 2. Matched sample baseline characteristics according to treatment of the first bleeding episode (bypassing agent vs FVIII or DDAVP and rFVIIa vs aPCC)

| Variable                           | Bypassing agent,<br>median (IQR) | FVIII or DDAVP,<br>median (IQR) | <i>P</i> * | rFVIIa,†<br>median (IQR) | aPCC,<br>median (IQR) | <i>P</i> * |
|------------------------------------|----------------------------------|---------------------------------|------------|--------------------------|-----------------------|------------|
| Patients, n                        | 60                               | 60                              |            | 57                       | 57                    |            |
| Age, y                             | 74.0 (24.0-91.0)                 | 72.5 (13.0-104.0)               | .95        | 72.00 (39.00-91.00)      | 77.00 (24.00-92.00)   | .41        |
| <b>Sex, n (%)</b>                  |                                  |                                 | .69        |                          |                       | .41        |
| Female                             | 25 (41.7)                        | 23 (38.3)                       |            | 37 (64.91)               | 33 (57.89)            |            |
| Male                               | 35 (58.3)                        | 37 (61.7)                       |            | 20 (35.09)               | 24 (42.11)            |            |
| Weight, kg                         | 70.0 (40.0-107.0)                | 68.0 (40.0-113.0)               | .49        | 70.00 (40.00-120.00)     | 70.00 (44.00-107.00)  | .66        |
| FVIII level, IU/dL                 | 2.0 (0.0-40.0)                   | 3.0 (0.0-34.0)                  | .61        | 1.25 (0.00-32.00)        | 1.00 (0.00-40.00)     | .41        |
| Hb, g/dL                           | 8.4 (3.0-14.2)                   | 8.8 (3.3-14.4)                  | .41        | 8.50 (3.00-14.00)        | 8.40 (4.60-14.80)     | .84        |
| Inhibitor titer, BU/mL             | 9.3 (1.0-2765.0)                 | 8.0 (0.3-200.0)                 | .52        | 16.00 (1.00-2765.00)     | 17.00 (0.10-1700.00)  | .52        |
| Therapy delay, d                   | 0.01 (0.0-0.13)                  | 0.01 (0.0-0.11)                 | .46        | 0.01 (0.00-0.09)         | 0.01 (0.00-0.54)      | .64        |
| <b>Cause of bleeding, n (%)</b>    |                                  |                                 | .51        |                          |                       | .62        |
| Traumatic                          | 16 (26.7)                        | 13 (21.7)                       |            | 10 (17.54)               | 8 (14.04)             |            |
| Spontaneous                        | 44 (73.3)                        | 47 (78.3)                       |            | 47 (82.46)               | 49 (85.96)            |            |
| <b>Bleeding site, n (%)</b>        |                                  |                                 | .99        |                          |                       | .55        |
| Deep                               | 30 (50.0)                        | 30 (50.0)                       |            | 44 (77.19)               | 44 (77.19)            |            |
| Hemarthrosis                       | 3 (5.0)                          | 2 (3.3)                         |            | 0 (0.00)                 | 1 (1.75)              |            |
| Mucosa                             | 15 (25.0)                        | 16 (26.7)                       |            | 5 (8.77)                 | 4 (7.02)              |            |
| Skin                               | 12 (20.0)                        | 12 (20.0)                       |            | 8 (14.04)                | 8 (14.04)             |            |
| <b>Severity of bleeding, n (%)</b> |                                  |                                 | .63        |                          |                       | .56        |
| Severe                             | 47 (78.3)                        | 49 (81.7)                       |            | 49 (85.96)               | 51 (89.47)            |            |
| Nonsevere                          | 13 (21.6)                        | 11 (18.3)                       |            | 8 (14.04)                | 6 (10.53)             |            |

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|                                    | <b>rFVIIa</b>    | <b>aPCC</b>     | <b>FVIII/DDAVP</b> |
|------------------------------------|------------------|-----------------|--------------------|
|                                    | <b>Pts = 174</b> | <b>Pts = 63</b> | <b>Pts = 70</b>    |
| <b>Thromboembolic events n (%)</b> | <b>5 (2.9)</b>   | <b>3 (4.8)</b>  | <b>0</b>           |



*Da dove veniamo? Che siamo? Dove andiamo?*

*Paul Gauguin, 1897*

## **Acquired inhibitors of clotting factors: AICE recommendations for diagnosis and management**

Massimo Franchini<sup>1</sup>, Giancarlo Castaman<sup>2</sup>, Antonio Coppola<sup>3</sup>, Cristina Santoro<sup>4</sup>, Ezio Zanon<sup>5</sup>, Giovanni Di Minno<sup>3,6</sup>, Massimo Morfini<sup>7</sup>, Elena Santagostino<sup>8</sup>, Angiola Rocino<sup>9</sup>, on behalf of the AICE Working Group\*

- Not all patients manifest clinically relevant bleeding when an acquired inhibitor develops/is diagnosed. In such cases treatment with haemostatic agents may not be required and the patients may be managed conservatively adopting a "wait and watch" approach (**Grade 2C recommendation**).
- In patients with AHA and clinically significant bleeding, bypassing agents (APCC or rFVIIa) are the first-line treatment (**Grade 1B recommendation**).



| Site of bleeding | n          | Number of doses |              | Duration of therapy (days) |            |              |
|------------------|------------|-----------------|--------------|----------------------------|------------|--------------|
|                  |            | median          | IQR          | median                     | mean       | IQR          |
| Intramuscular    | 110        | 5               | 3 - 13       | 2                          | 3.4        | 1 - 4        |
| Subcutaneous     | 33         | 3               | 3 - 7        | 1                          | 2.3        | 1 - 2        |
| Intra-articular  | 27         | 3               | 2 - 12       | 1                          | 3.3        | 1 - 3        |
| Genitourinary    | 11         | 8               | 3 - 24       | 2                          | 4.2        | 2 - 6        |
| Gastrointestinal | 9          | 4               | 3.5 - 15     | 2                          | 2.7        | 1 - 3        |
| Intracranial     | 4          | 4.5             | 2 - 34.5     | 2                          | 4.3        | 2 - 6.5      |
| Oral             | 3          | 4               | 3.5 - 20.5   | 2.5                        | 3          | 1.5 - 4.5    |
| Intraperitoneal  | 2          | 19.5            | 3 - 36       | 4                          | 4          | 2 - 6        |
| <b>Total</b>     | <b>280</b> | <b>3</b>        | <b>2 - 9</b> | <b>2</b>                   | <b>2.9</b> | <b>1 - 3</b> |



## ORIGINAL ARTICLE

# Treatment of acute bleeding in acquired haemophilia A with recombinant activated factor VII: analysis of 10-year

**Table 4.** Odds ratios (OR) for the response rate (300 bleeding episodes).

|  |           | OR  | 95% CI    | P value |
|--|-----------|-----|-----------|---------|
| Initial dose ( $\mu\text{g kg}^{-1}$ ) | $\geq 90$ | 2.3 | (1.4–3.9) | 0.001   |
|  | $< 90$    |     |           |         |
| Dosing interval (h)                    | $\leq 3$  | 1.5 | (0.9–2.6) | 0.136   |
|  | $> 3$     |     |           |         |

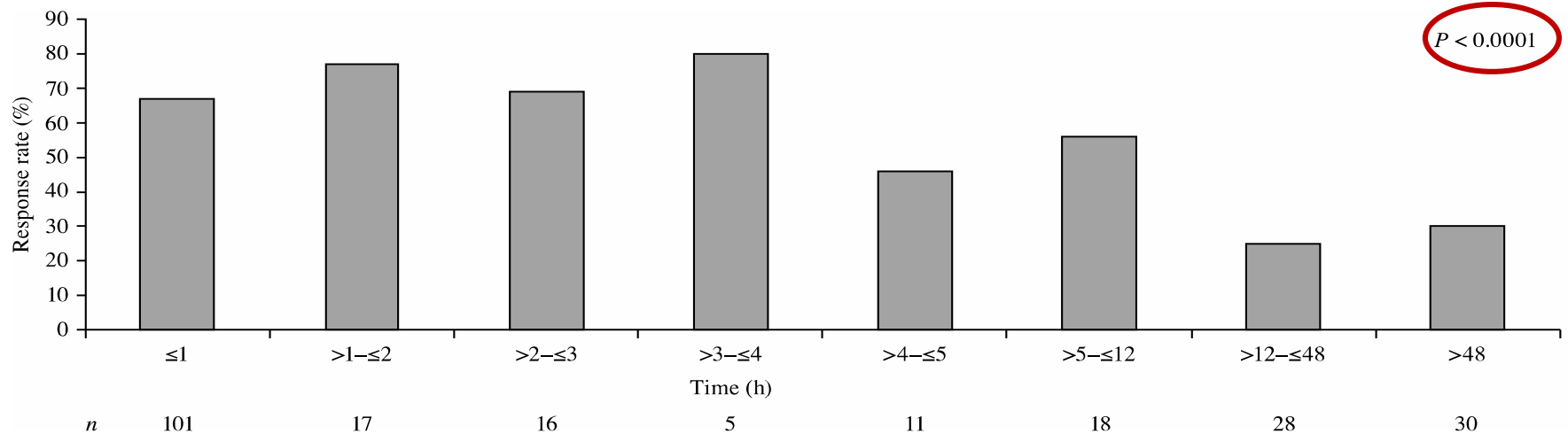
Response rate = (markedly effective + effective)/total. Bleeding episodes with insufficient dosage information are not included in this analysis.

CI, confidence interval.





## Response rate according to the time from the onset of bleeding to the first dose of rFVIIa.



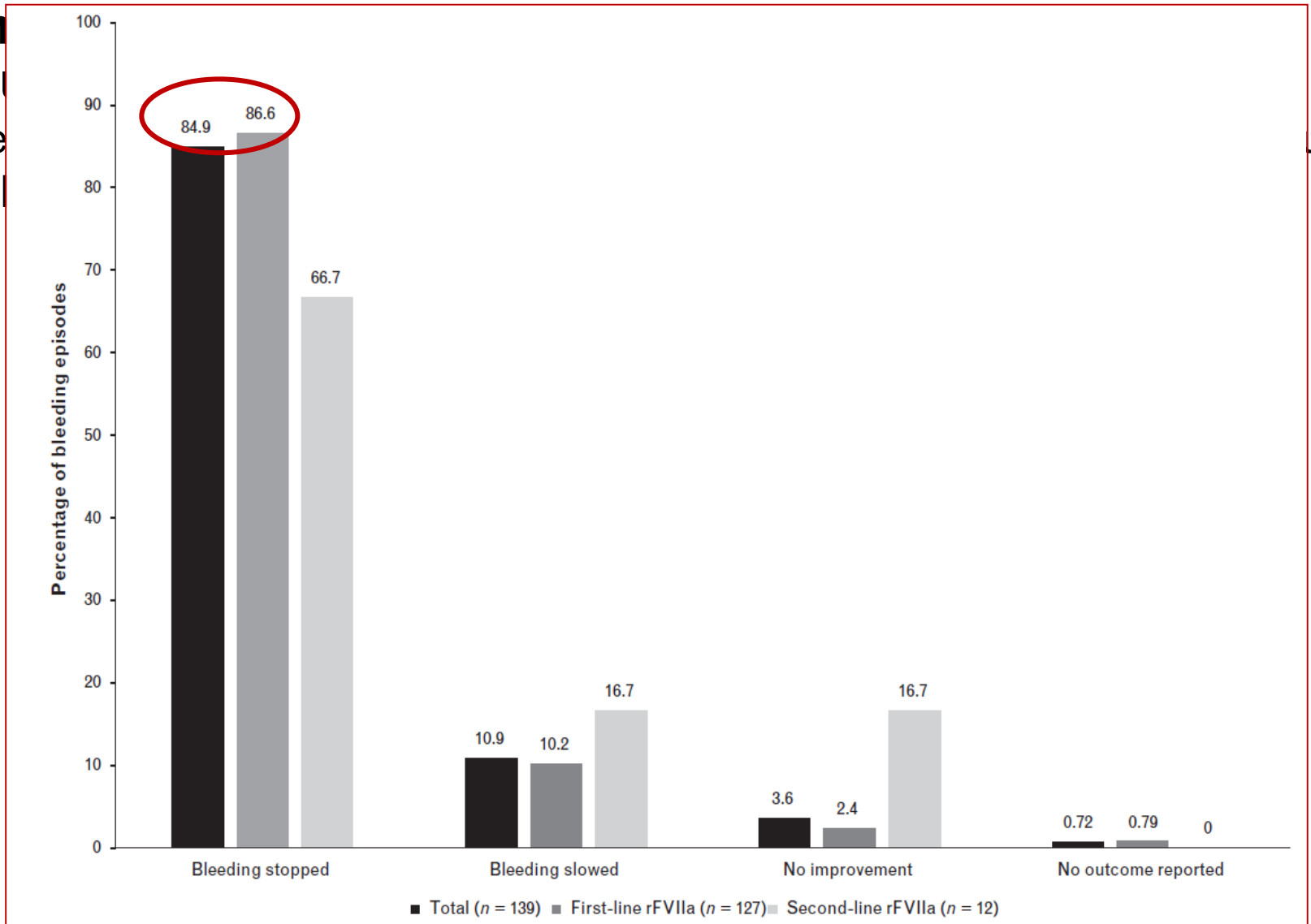


## Serious adverse events (SAE)

| Case# | Pt y/sex | Underlying disease   | SAE   |
|-------|----------|--|---|
| 1     | 87, F    | Cholelithiasis<br>Chronic rheumatoid arthritis               | Pre-DIC (plt ↓ to 424 to 331)<br>Acute cholecystitis  |
| 2     | 81, M    | Lithotomy for<br>choledocholithiasis<br>Aspiration pneumonia | Sepsis<br>DIC ( <b>16 days after rFVIIa</b> )   |
| 3     | 70, M    | Pontine haemorrhage due to<br>AHA<br>Aspiration pneumonia    | Hydrocephalus<br>Intestinal ischemia<br>Intestinal necrosis ( <b>6 days after<br/>rFVIIa</b> )  |
| 4     | 76, M    | Prostate cancer  | Hypotension ( <b>4 days after<br/>rFVIIa</b> )  |
| 5     | 75, M    | Pemphigus<br>Pneumonia                                       | Hepatic dysfunction ( <b>24 days<br/>after rFVIIa</b> )<br>Acute renal failure ( <b>on the day<br/>of the 6<sup>th</sup> dose of rFVIIa</b> ) |

# Use of recombinant activated factor VII for acute bleeding episodes in acquired hemophilia: final analysis from the Hemophilia Alice and I

ut<sup>d</sup>



# Use of recombinant activated factor VII for acute bleeding episodes in acquired hemophilia: final analysis from the Hemostasis and Thrombosis Research Society Registry acquired hemophilia study

Alice D. Ma<sup>a</sup>, Craig M. Kessler<sup>b</sup>, Hamid A.B. Al-Mondhiry<sup>c</sup>, Robert Z. Gut<sup>d</sup> and David L. Cooper<sup>d</sup>

Blood Coagulation and Fibrinolysis 2016, 27:753–760

Table 2 Median (interquartile range) values for rFVIIa dosing and exposure in treatment of bleeding episodes

|  | First-line rFVIIa  | Second-line rFVIIa   |
|--|--------------------|----------------------|
| Number of episodes                                 | 127                | 12                   |
| Initial dose ( $\mu\text{g}/\text{kg}$ )           | 90 (87.1–100.0)    | 90 (90.0–97.0)       |
| Dose per infusion ( $\mu\text{g}/\text{kg}$ )      | 90 (87.6–98.7)     | 90 (90.0–97.0)       |
| Total dose per episode ( $\mu\text{g}/\text{kg}$ ) | 300 (118.7–1345.3) | 576.9 (275.3–3430.0) |
| Number of injections (doses)                       | 3 (1.0–13.5)       | 7 (3.5–25.0)         |
| rFVIIa treatment duration (days)                   | 1 (0–2.5)          | 1.5 (0.8–4.1)        |
| Total treatment duration (days)                    | 1 (0–4.0)          | 7.5 (0.8–13.5)       |

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Alice D. Ma<sup>a</sup>, Craig M. Kessler<sup>b</sup>, Hamid A.B. Al-Mondhiry<sup>c</sup>, Robert Z. Gut<sup>d</sup> and David L. Cooper<sup>d</sup>

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| Thromboembolic events |          |  |   |
|-----------------------|----------|--|---|
| Case#                 | Pt y/sex | Underlying disease   | SAE   |
| 1                     | 31, F    | <i>AHA post-partum, initially treated with FFP (3-day period), 24 units of pRBCs (unknown period), and platelets (?) without improvement. Then the patient began treatment with rFVIIa and the bleeding episode was <u>resolved after 72 h</u>. Despite resolution of the bleeding episode, rFVIIa treatment regimen was continued for an additional 7 days.</i> | The patient developed an acute cerebrovascular accident. NMR revealed multiple small infarcts bilaterally in the frontal lobes. The neurologist reported that it was most likely related to eclampsia and vasculitis given the patient's medical history. |

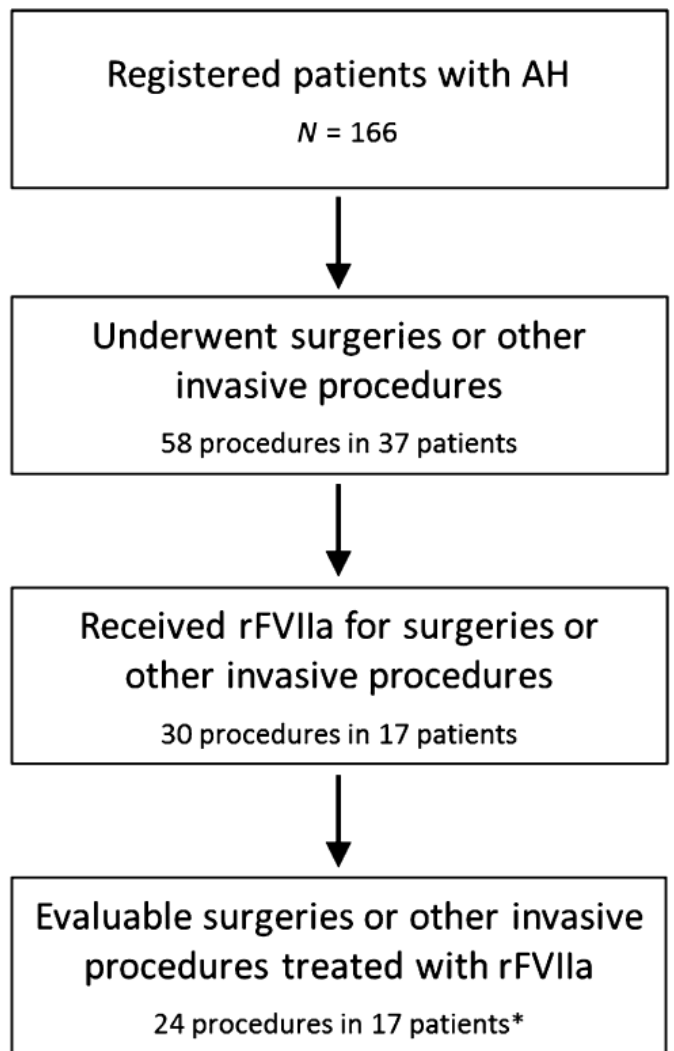


Table 3. rFVIIa treatment.

| Dosing parameter (per procedure) | Preoperative median (range), n = 11 | Postoperative median (range), n = 13 | Total treatment median (range), n = 24 |
|----------------------------------|-------------------------------------|--------------------------------------|--|
| Initial dose (µg per kg)         | 90.0 (44–187)                       | 106.0 (56–270)                       | 96.1 (44–270)                          |
| Average infused dose (µg per kg) | 90.0 (44–155)                       | 93.0 (43–200)                        | 91.5 (43–200)                          |
| Total dose (µg per kg)           | 120.0 (44–4802)                     | 1770 (96–6229)                       | 399.0 (44–6229)                        |
| Number of injections rFVIIa      | 1.0 (1–31)                          | 15.0 (1–77)                          | 4.0 (1–77)                             |
| treatment duration (days)        | 0 (0–9)                             | 4.5 (0–19)                           | 0 (0–19)                               |
| Total treatment duration (days)  | 0 (0–9)                             | 5.0 (0–41)                           | 2 (0–41)                               |

\*Excludes six procedures performed in 2 patients during ongoing postsurgical rFVIIa treatment.



- ✓ *In 20 of 22 (91%) rFVIIa-treated surgical and other invasive procedures with a reported haemostatic outcome, investigator assessments were judged as excellent/good or no other haemostatic agents were administered*
- ✓ *17 rFVIIa-treated procedures were rated excellent/good and three additional procedures were rated fair/partially effective or poor/ineffective, although no other medications were required for haemostasis*
- ✓ *No AEs, including thromboembolic events or CVAD related thromboses, were reported in relation to rFVIIa treatment in surgical or other invasive procedures in patients with AH.*



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*Paul Gauguin, 1897*



**Acquired inhibitors of clotting factors:  
AICE recommendations for diagnosis and management**

Massimo Franchini<sup>1</sup>, Giancarlo Castaman<sup>2</sup>, Antonio Coppola<sup>3</sup>, Cristina Santoro<sup>4</sup>, Ezio Zanon<sup>5</sup>, Giovanni Di Minno<sup>3,6</sup>, Massimo Morfini<sup>7</sup>, Elena Santagostino<sup>8</sup>, Angiola Rocino<sup>9</sup>, on behalf of the AICE Working Group\*

?

- If the initial bypassing agent is **ineffective**, the switch to treatment with the alternative agent should be considered at an early stage (**Grade 2C recommendation**).



## ORIGINAL ARTICLE

# Treatment of acute bleeding in acquired haemophilia A with recombinant activated factor VII: analysis of 10-year Japanese postmarketing surveillance data

*For each bleeding episode, the investigators rated treatment as:*

- ✓ markedly effective (a haemostatic effect was observed <8 h after administration of the first dose of rFVIIa),*
- ✓ effective (a haemostatic effect was observed after 8–12 h),*
- ✓ moderate (a haemostatic effect was observed after >12 h) or*
- ✓ ineffective (no haemostatic effect was observed or bleeding worsened).*

*Haemostatic response was defined as the proportion of patients with either a markedly effective or effective response.*

# Use of recombinant activated factor VII for acute bleeding episodes in acquired hemophilia: final analysis from the Hemostasis and Thrombosis Research Society Registry acquired hemophilia study

Alice D. Ma<sup>a</sup>, Craig M. Kessler<sup>b</sup>, Hamid A.B. Al-Mondhiry<sup>c</sup>, Robert Z. Gut<sup>d</sup> and David L. Cooper<sup>d</sup>

Blood Coagulation and Fibrinolysis 2016, 27:753–760

*Treatment response was classified by investigators into the following categories:*

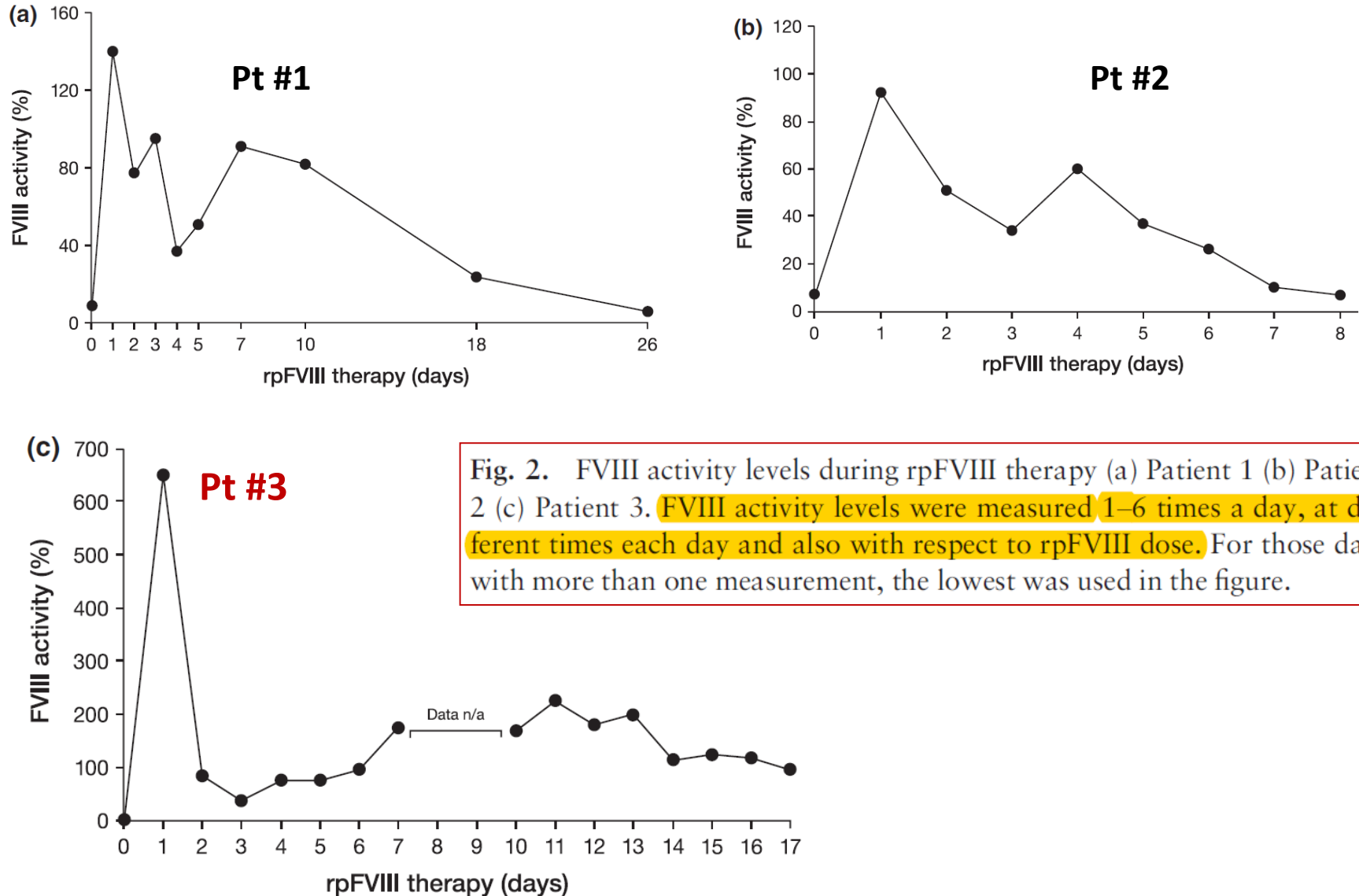
- ✓ *bleeding stopped,*
- ✓ *bleeding slowed, but not stopped (with additional subclassifications of ‘no additional medications given after rFVIIa,’ ‘additional blood products given after rFVIIa, with bleeding stopped,’ and ‘additional hemostatic agents given, with bleeding stopped’),*
- ✓ *no improvement (with additional subclassifications)*
- ✓ *inadequate rFVIIa trial*



## ORIGINAL ARTICLE

Table 1. Patient and disease characteristics.

|  | Patient 1                               | Patient 2                                 | Patient 3  | Patient 4   | Patient 5  | Patient 6                           | Patient 7                                |
|--|---|---|--|---|--|-------------------------------------|--|
| Sex  | Male                                    | Female                                    | Male   | Male  | Female   | Male                                | Male                                     |
| Age, years   | 90                                      | 24  | 78   | 83  | 56   | 83                                  | 64                                       |
| Initial presentation (location)                    | ED                                      | Academic hospital                         | Community hospital   | Nursing home  | PCP  | ED                                  | ED                                       |
| Time from presentation to haematology consultation | 14 days                                 | 6 days                                    | 10 days*   | 6 weeks   | 17 days  | 15 days                             | 5 days                                   |
| Conditions potentially associated with AHA         | None identified                         | Abdominal sepsis and ertapenem exposure   | Carcinoid tumour   | None identified   | Osteomyelitis  | Prostate cancer                     | None identified                          |
| Major comorbidities                                | HTN, renal insufficiency                | N/A                                       | HTN, prostate cancer   | HTN, prostate cancer, CKD stage III                     | Alcoholism, Charcot feet, morbid obesity, history of DVT | Dementia, prostate cancer           | Diabetes, COPD, HTN, renal insufficiency |
| Time to cessation of bleeding                      | 48 h                                    | 24 h                                      | Bleeding did not stop  | N/A*  | 24 h   | A few hours                         | 4 days                                   |
| Other efficacy assessments                         | pRBC requirements, haematuria           | Abdominal pain, transfusion requirements  | CT   | CT  | Pain reduction   | Cessation of haematuria             | Arterial duplex                          |
| Adverse events                                     | None                                    | None                                      | None   | None  | None   | None                                | None                                     |
| Outcome  | Death not related to AHA after 168 days | Bleeding stopped and inhibitor eradicated | Death related to AHA in hospital from continued bleeding and sepsis with inhibitor present | Death related to AHA in hospital with inhibitor present | Survived with inhibitor eradication                      | Survived with inhibitor eradication | Bleeding resolved                        |





## ORIGINAL ARTICLE

# Recombinant porcine sequence factor VIII (rpFVIII) for acquired haemophilia A: practical clinical experience of its use in seven patients

M. D. TARANTINO,\* A. CUKER,† B. HARDESTY,‡ J. C. ROBERTS\* and M. SHOLZBERG§

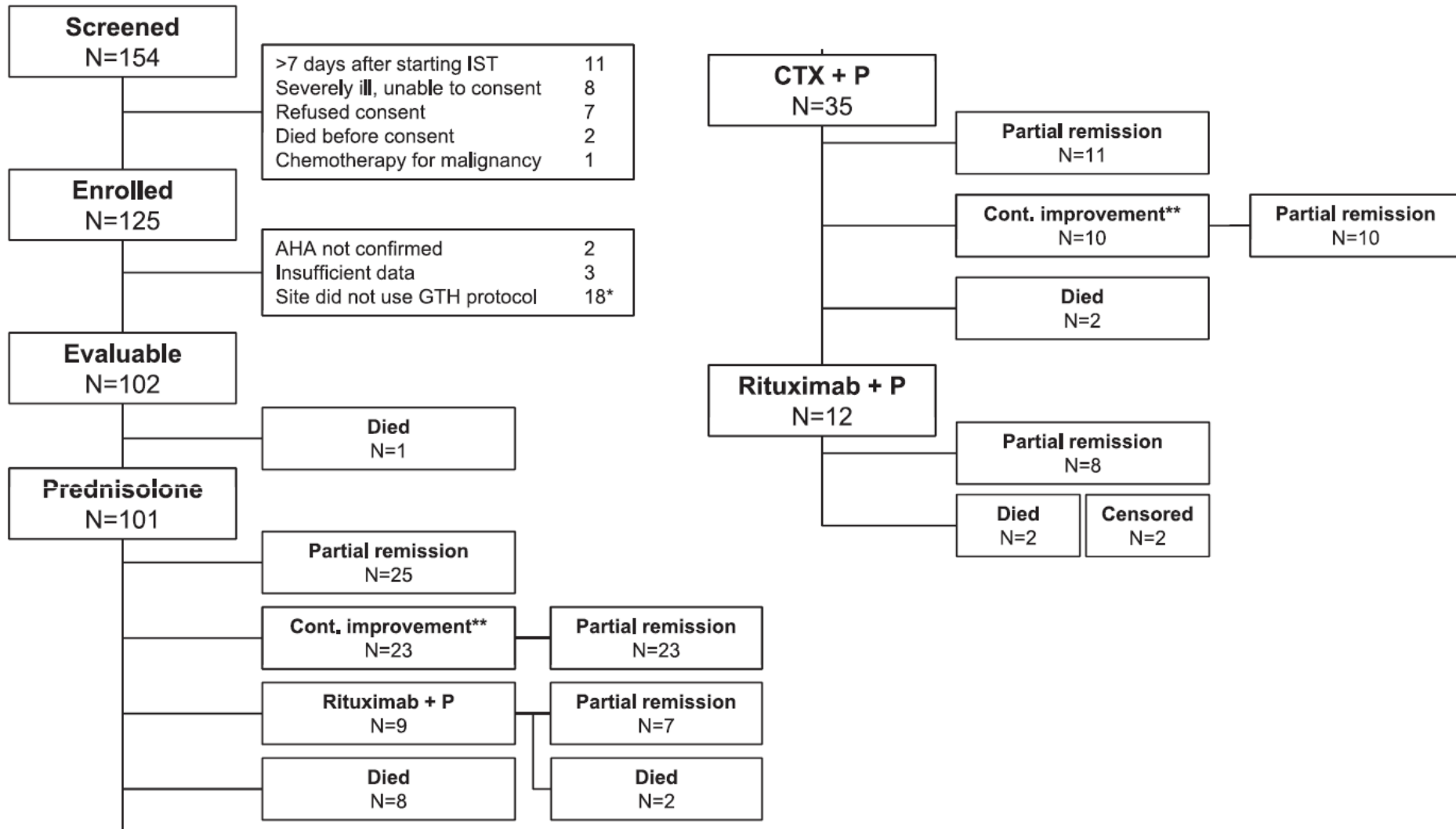
Table 3. Detailed summary of rpFVIII exposure.

| Patient | Dose to stop bleeding<br>U kg <sup>-1</sup> (U) | Dose to prevent<br>re-bleed U kg <sup>-1</sup> (U) | Total dose<br>U kg <sup>-1</sup> (U) | Median dose<br>U kg <sup>-1</sup> (range) | Median<br>infusions/day (range) | Total<br>infusions | Total<br>exposure days |
|---------|---|--|--------------------------------------|---|---------------------------------|--------------------|------------------------|
| 1       | 290 (20 880)                                    | 1790 (128 880)                                     | 2080 (149 760)                       | 50 (40–100)                               | 2 (0.5–3)                       | 43                 | 26                     |
| 2       | 100 (4500)                                      | 2000 (90 000)                                      | 2100 (94 500)                        | 100 (100–200)                             | 2 (1–3)                         | 15                 | 8                      |
| 3*      |   |  | 1500 (162 000)                       | 30 (30–100)                               | 2 (1–4)                         | 42                 | 17                     |
| 4*      |   |  | 427 (35 526)                         | 71 (47–96)                                | 3 (1–3)                         | 6                  | 3                      |
| 5       | 250 (31 500)                                    | 1200 (151 200)                                     | 1450 (182 700)                       | 50 (50–100)                               | 1 (1–2)                         | 28                 | 24                     |
| 6       | 200 (17 628)                                    | 200 (17 628)                                       | 400 (35 256)                         | 50 (50–200)                               | 1 (1–2)                         | 5                  | 4                      |
| 7       | 100 (9702)                                      | 550 (53 362)                                       | 650 (63 064)                         | 100 (50–100)                              | 1 (1)                           | 7                  | 14                     |
| Mean    |   |  | 1230 (103 258)                       |   |                                 | 21                 | 14                     |
| Median  |   |  | 1450 (94 500)                        |   |                                 | 15                 | 14                     |

\*Bleeding did not completely stop.

# Prognostic factors for remission of and survival in acquired hemophilia A (AHA): results from the GTH-AH 01/2010 study

Andreas Tiede,<sup>1</sup> Robert Klamroth,<sup>2</sup> Rüdiger E. Scharf,<sup>3</sup> Ralf U. Trappe,<sup>4,5</sup> Katharina Holstein,<sup>6</sup> Angela Huth-Kühne,<sup>7</sup>



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**Table 4. Predictors of remission and survival: multivariate analysis**

| Baseline variable                       | PR                 | CR                 | OS                 |
|---|--------------------|--------------------|--------------------|
| FVIII activity<br><1 IU/dL              | 0.52 (0.33-0.81)** | 0.49 (0.29-0.85)*  | 2.40 (1.10-5.22)*  |
| Inhibitor<br>concentration<br>>20 BU/mL | 0.77 (0.49-1.21)   | 0.75 (0.43-1.29)   | 1.20 (0.54-2.67)   |
| Female gender                           | 1.22 (0.77-1.91)   | 1.30 (0.76-2.24)   | 0.58 (0.26-1.31)   |
| Age >74 y                               | 0.94 (0.58-1.50)   | 0.76 (0.43-1.32)   | 1.76 (0.82-3.78)   |
| <b>Underlying disorder</b>              |                    |                    |                    |
| Autoimmunity                            | 1.32 (0.77-2.28)   | 0.88 (0.45-1.72)   | 1.02 (0.36-2.84)   |
| Malignancy                              | 0.58 (0.28-1.21)   | 0.62 (0.27-1.44)   | 2.91 (1.12-7.52)*  |
| Pregnancy                               | 0.61 (0.23-1.65)   | 0.74 (0.27-2.04)   | —                  |
| WHO-PS >2                               | 0.76 (0.48-1.21)   | 0.39 (0.21-0.72)** | 3.38 (1.55-7.37)** |

Data are presented as adjusted HR (CI).

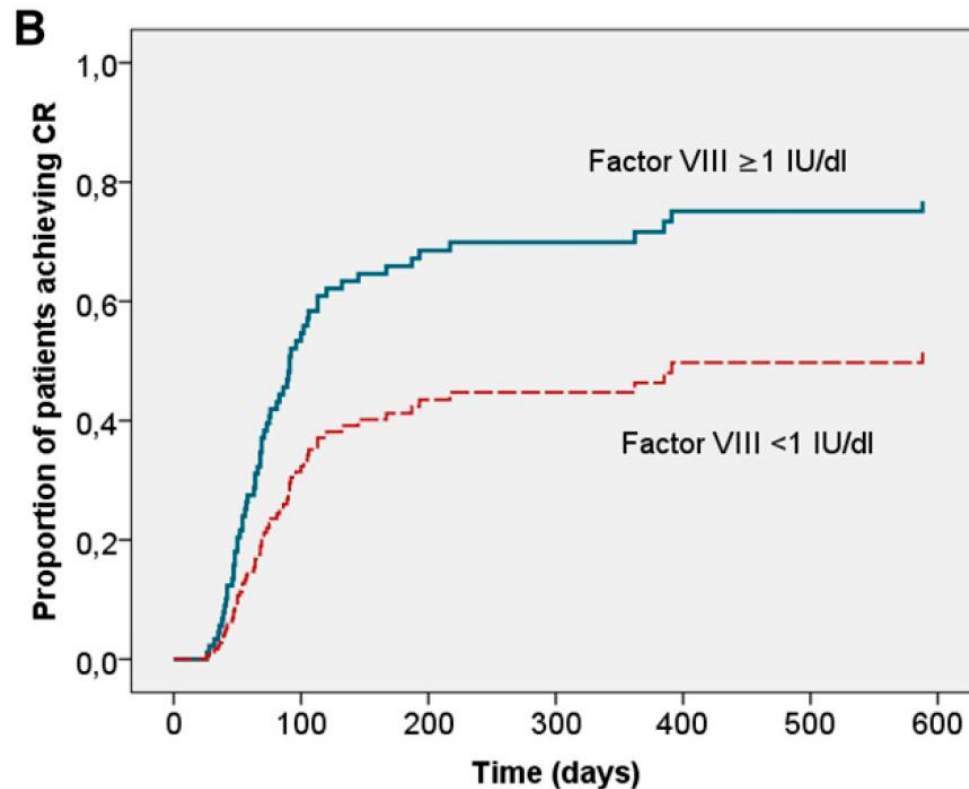
\* $P < .05$ .

\*\* $P < .01$ .



# Prognostic factors for remission of and survival in acquired hemophilia A (AHA): results from the GTH-AH 01/2010 study

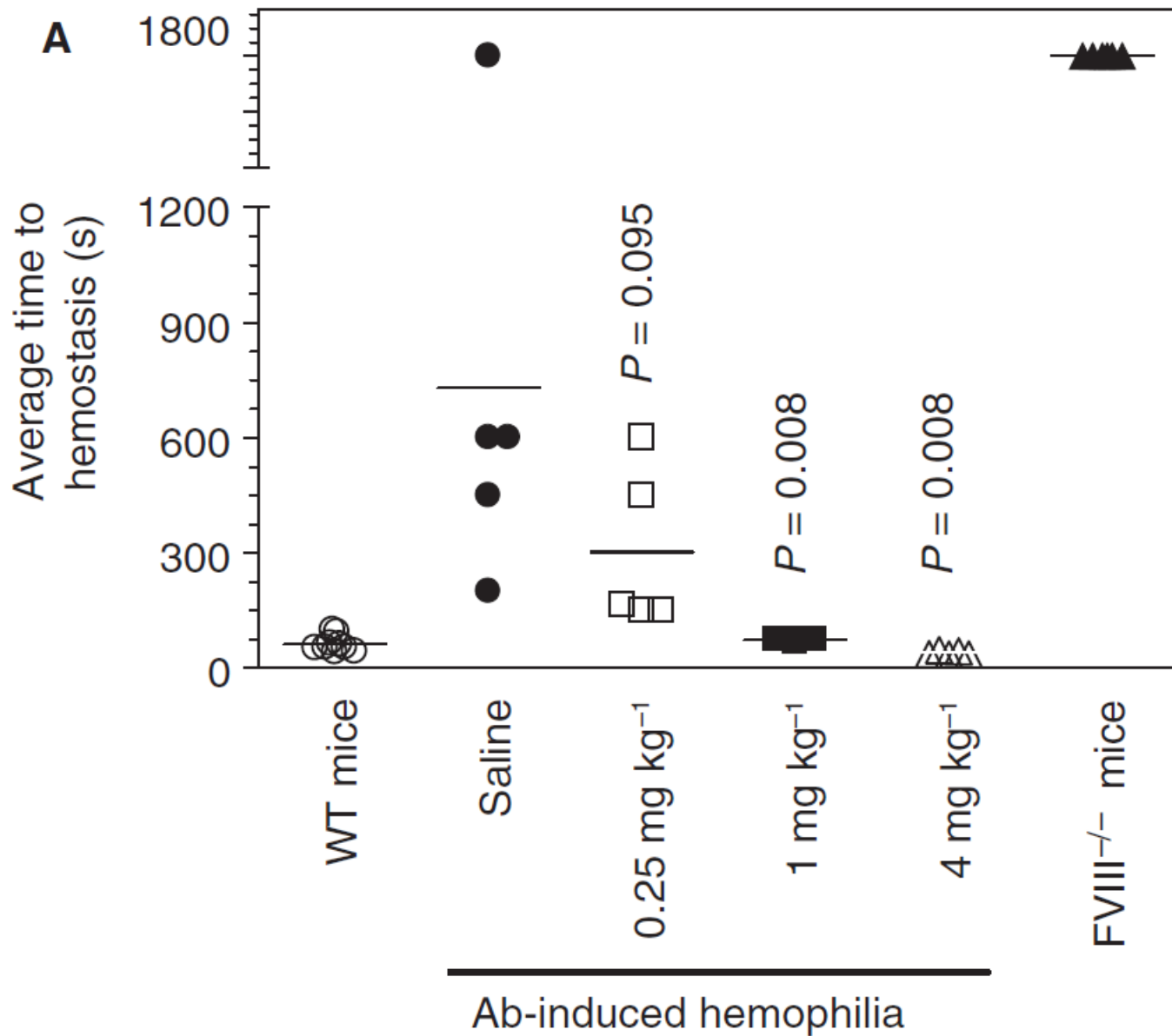
Andreas Tiede,<sup>1</sup> Robert Klamroth,<sup>2</sup> Rüdiger E. Scharf,<sup>3</sup> Ralf U. Trappe,<sup>4,5</sup> Katharina Holstein,<sup>6</sup> Angela Huth-Kühne,<sup>7</sup>



*The challenge for future studies will be to develop IST regimens that reduce the burden of side effects, potentially by **tailoring their intensity** to prognostic baseline characteristics established in the current study.*

Pharm  
restor  
antibo

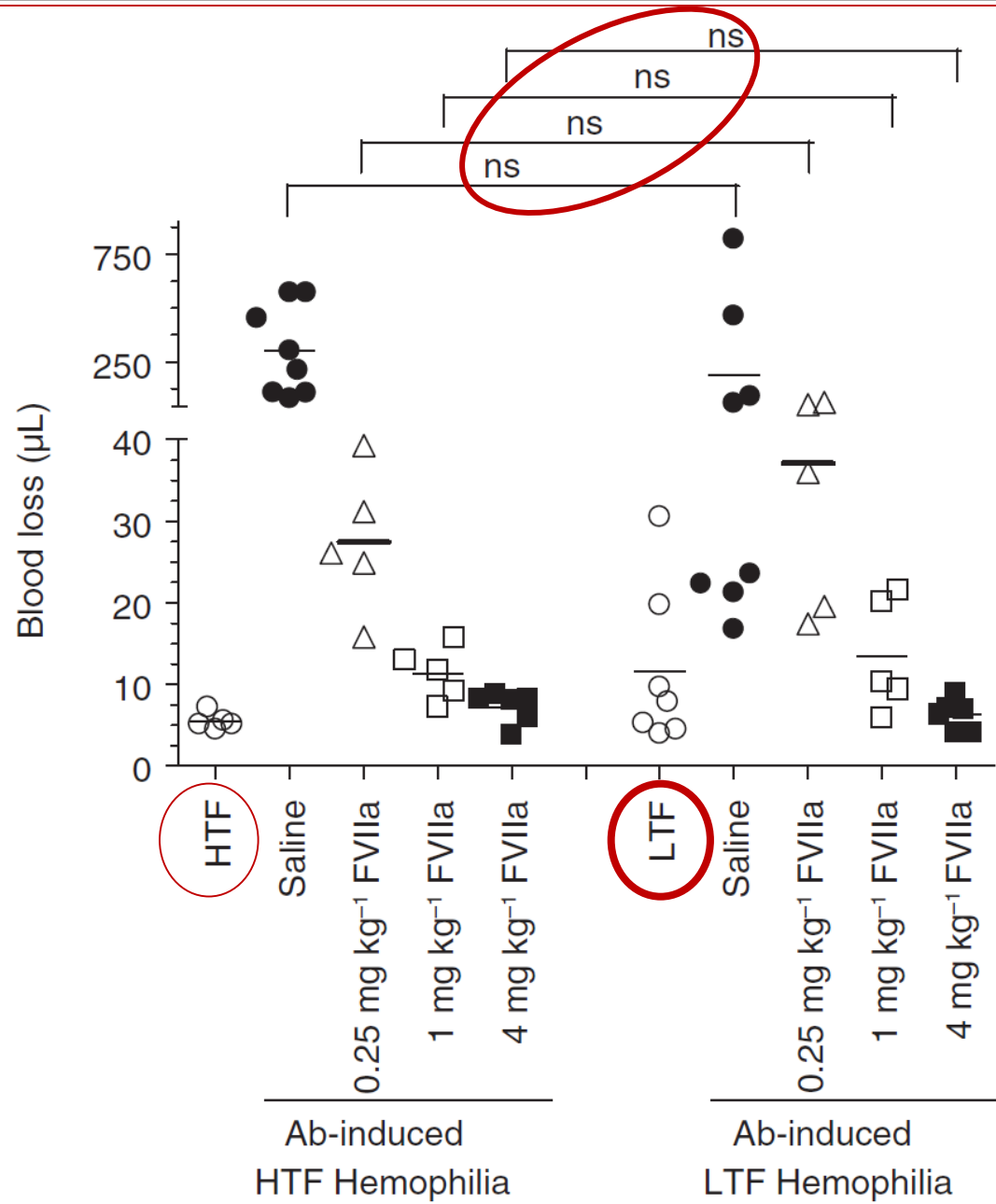
S. KESHA



# Pharmacology restore hemostasis antibody-induced

S. KESHAHA, J. SUN

B



FVIIa

**F O R E V E R Y O U N G**  
**B O B D Y L A N**



# BOB DYLAN



# MY BACK PAGES

*Ah, but I was so much older then  
I'm younger than that now.*

659767 2

9



399765 976721

BOB DYLAN

MY BACK PAGES

COLUMBIA

1. MY BACK PAGES: BOB DYLAN
2. KNOCKIN' ON HEAVEN'S DOOR: EVERYONE
3. MY BACK PAGES: BOB DYLAN

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