BHS meeting
RBC committee

October 27, 2016

Agenda

- SCD registry : follow-up (A. Ferster)
- EuroBloodNet : follow-up (B. Gulbis)
- Telemedicine: follow-up (B. Gulbis)
- Ektacytometry: clinical experience (E. Lazarova)
- Empirical antibiotic therapy in sickle cell patients (MA Azerad)
- Clinical Case (A. Ferster)
- Sickle cell meeting, March 9 2017 (A. Ferster)
- Thalassaemia:
  - Patients' associations (Thalassaemia)? See BHS Patient Committee (first meeting 7/09).
  - Inclusion of beta-thalassaemic patients (Celgene Clinical Trial)
- Next BHS GAM

EuroBloodNet

Country	nº HCP
Belgium	5
Bulgaria	2
Cyprus	1
Czech Republic	1
Germany	4
Spain	1
France	12
Ireland	1
Italy	21
Lithuania	1
The Netherlands	6
Poland	1
Portugal	3
Sweden	1
United Kingdom	6
Members	**66**

EuroBloodNet in Belgium

2016/606	Centre Hospitalier Universitaire de Liège	HP	Belgium	
2016/607	Cliniques universitaires de Bruxelles - Hôpital Erasme	HP	Belgium	
2016/608	Cliniques universitaires Saint-Luc - Haemophilia Clinc	HP	Belgium	YES
2016/609	Institut Jules Bordet	HP	Belgium	
2016/610	UZ Leuven	HP	Belgium	YES

EuroBloodNet

European Reference Network in Rare Hematological Diseases

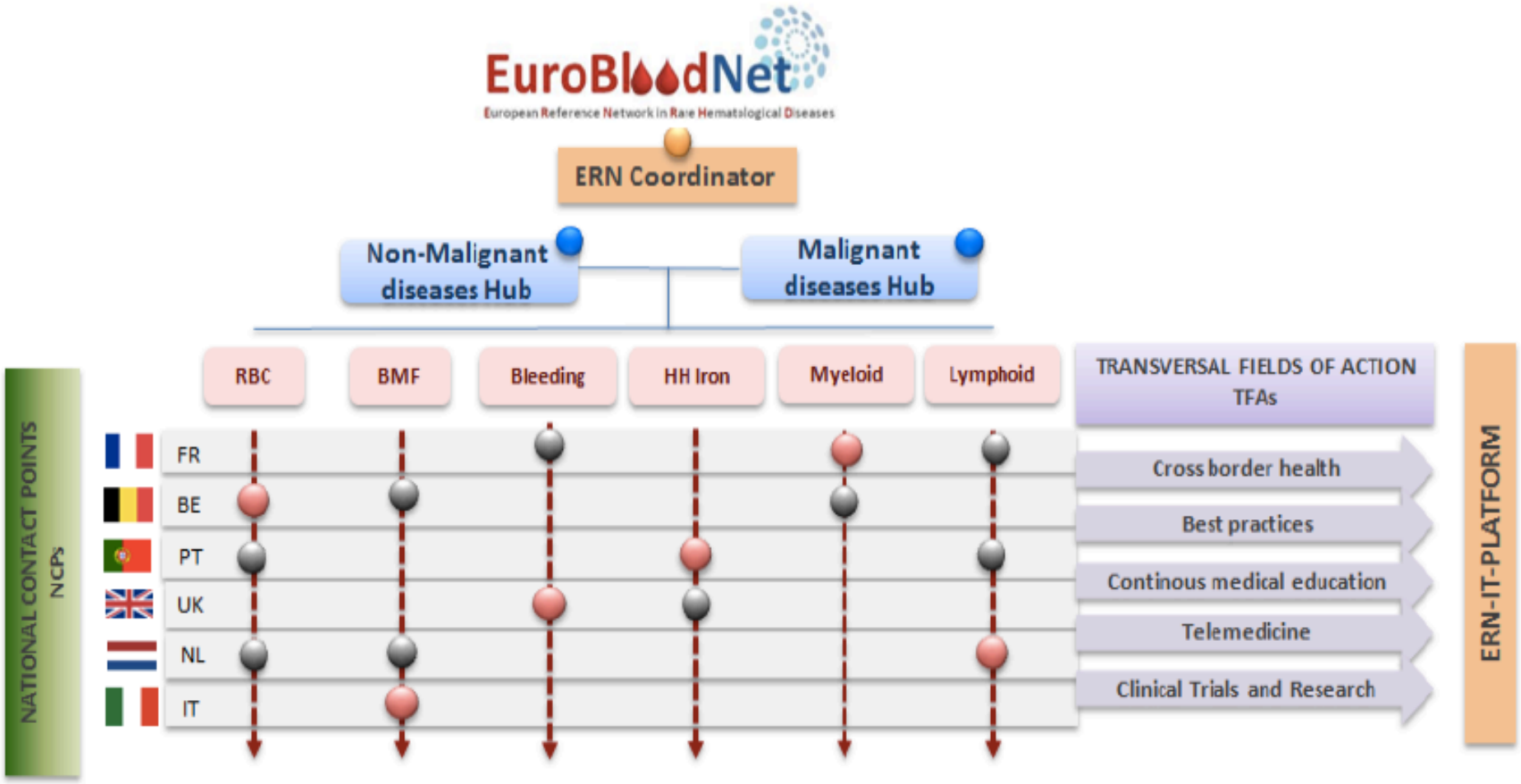
Oncological diseases Hub
Coordinated by Prof Fenaux
(Hôpital St Louis, Paris)

- Myeloid malignancies
- Lymphoid malignancies

Non- oncological diseases Hub
Coordinated by Prof Gulbis
(Hôpital Erasme, Brussels)

- Rare Red blood cell (RBC) defects
- Bone marrow failure (BMF) and hematopoietic disorders
- Rare bleeding-coagulation disorders and related diseases
- Haemochromatosis and hereditary iron metabolism disorders

- **EuroBloodNet coordination** is rotational in equal periods of time between the 2 oncological and non-oncological hubs
  - **Prof Pierre Fenaux** was appointed to coordinate the oncological diseases hub and EuroBloodNet for submission of the proposal and to coordinate the first 30 months of EuroBloodNet running time
  - **Prof Béatrice Gulbis** (ERASME, Belgium), member of the Executive committee of ENERCA since 2002 was appointed to be the coordinator of EuroBloodNet for the second 30 months of EuroBloodNet running time, and the coordinator of the non-oncological diseases hub
- **This scheme has been endorsed by EHA and patients organizations**


EuroBloodNet
European Reference Network in Rare Hematological Diseases
ERN Coordinator
Non-Malignant diseases Hub
Malignant diseases Hub
RBC
BMF
Bleeding
HH Iron
Myeloid
Lymphoid
TRANSVERSAL FIELDS OF ACTION
TFAs
NATIONAL CONTACT POINTS
NCPs
FR
BE
PT
UK
NL
IT
Cross border health
Best practices
Continous medical education
Telemedicine
Clinical Trials and Research
ERN-IT-PLATFORM

Telemedicine

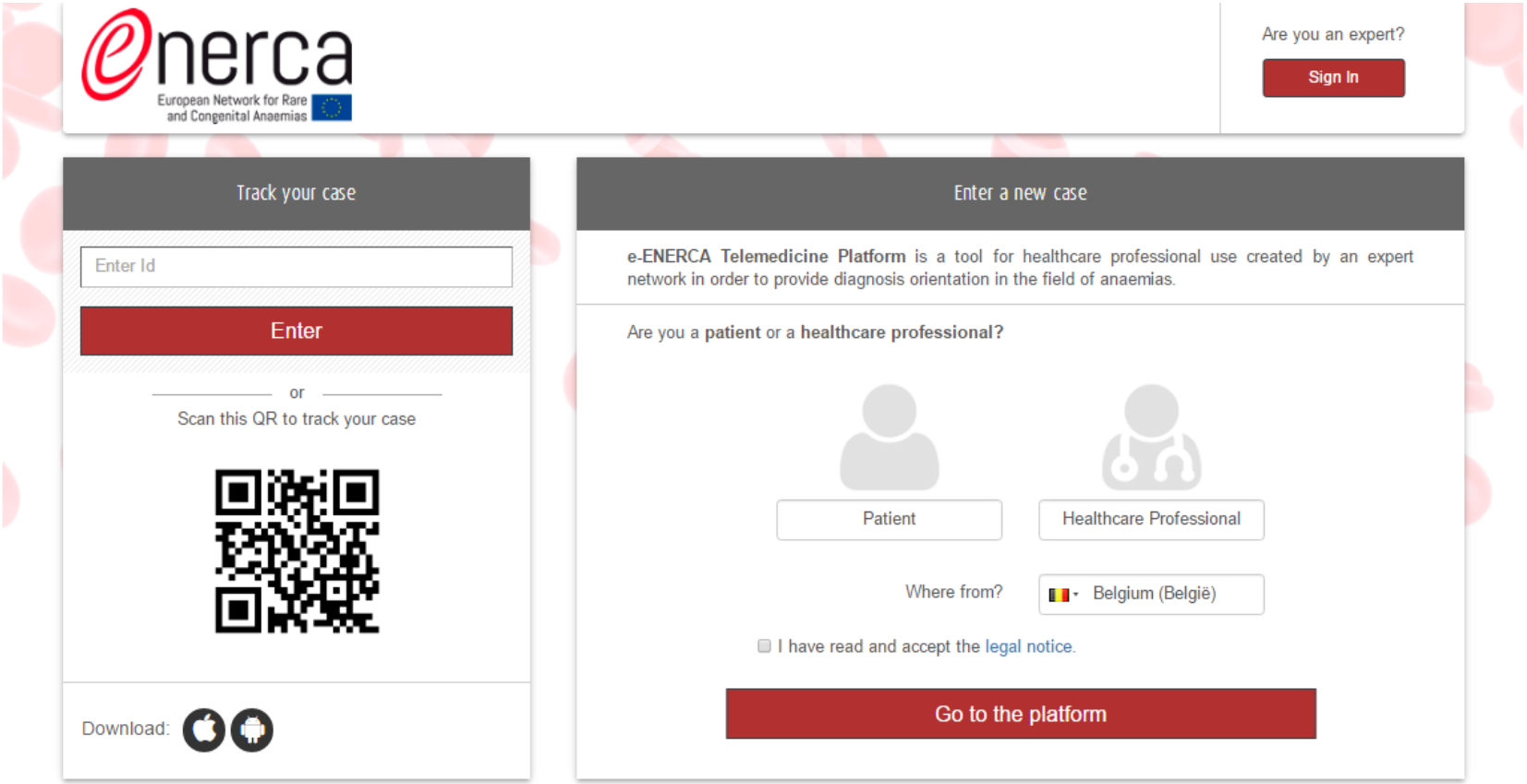
Access to the platform

via the website ENERCA www.enerca.org

For professionals, telemedicine platform

Telemedicine

Identification



Telemedicine

Print a repo

Case code

0f2d18f2-6522-982

- With this code you can check your case -

If you want to be notified by us, scan this QR with the Quarking App.

This QR provides anonymity in this website.

Access your cases scanning the case access Qr.

Download App:

Diagnostic

- **Expected diagnosis:** thalassaemia and Iron defisciency
- **Diagnostic orientation:** Membrane disorders and/or enzymes defects and/or Hb variants, iron deficiency not excluded, but rare microcytic anaemias are not excluded.
  This doesn't exclude the presence of another RBC pathology.
  If clinical or other biological data is in favour of a haemoglobinopathy, separation of the haemoglobin fractions should be performed.

Disclaimer: All rare and congenital "RBC" disorders are not considered in the diagnostic trees

Patient Data

- **Patient age:** 18 years
- **Gender:** F
- **Age at first clinical manifestation:** Unknown
- **Occupation:** administrator
- **RBC transfusion the last three months:** Yes
- **Blood transfusion dependent:** No
  Due to interferences, RBC transfusion makes difficult or impossible blood data interpretation. If available, enter data performed just before RBC transfusion. If unfortunately those data are not available, please enter those in your possession.
- **Blood transfusion previously:** Yes
- **Transfusion program (regular):** No

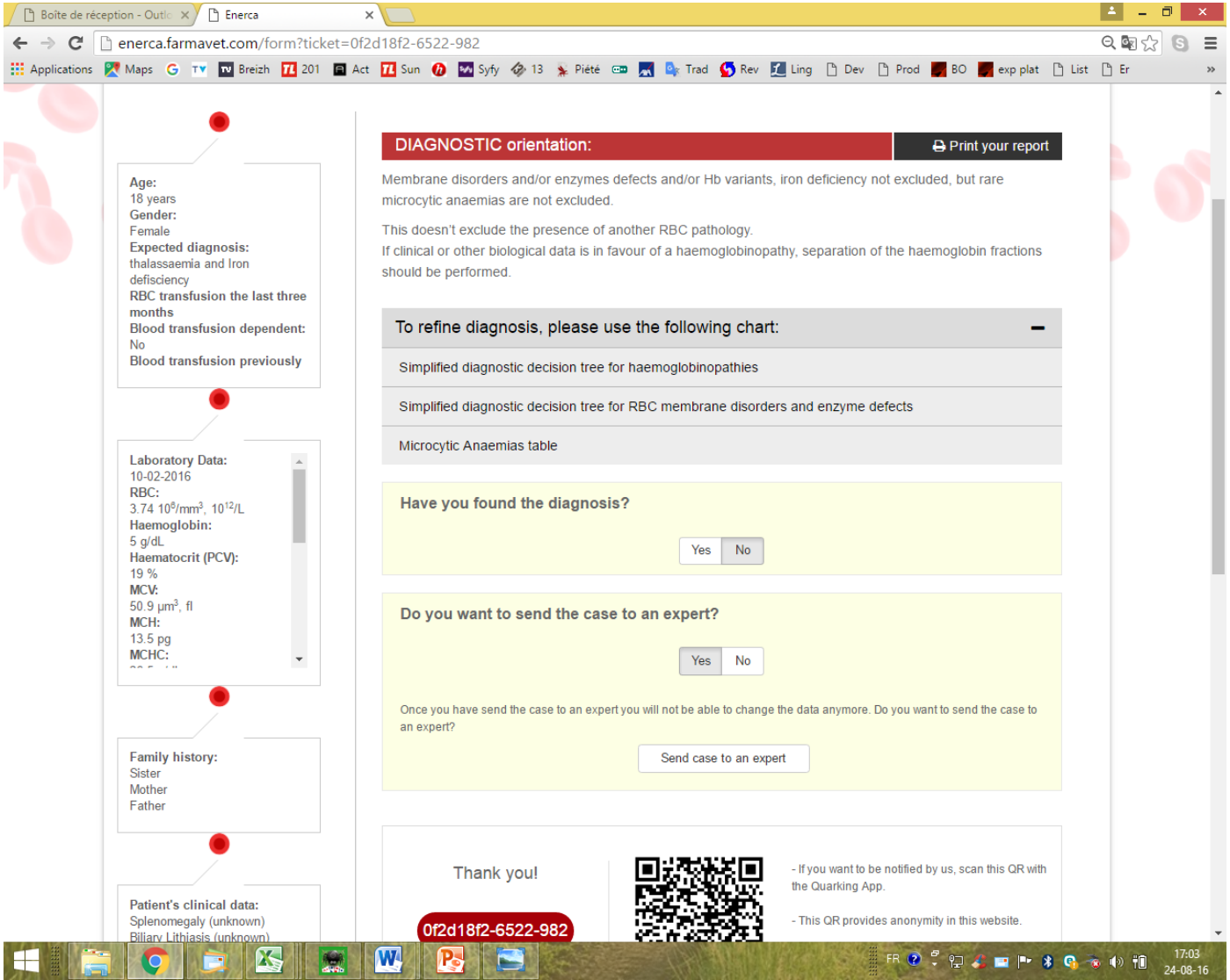
Telemedicine

Print a report

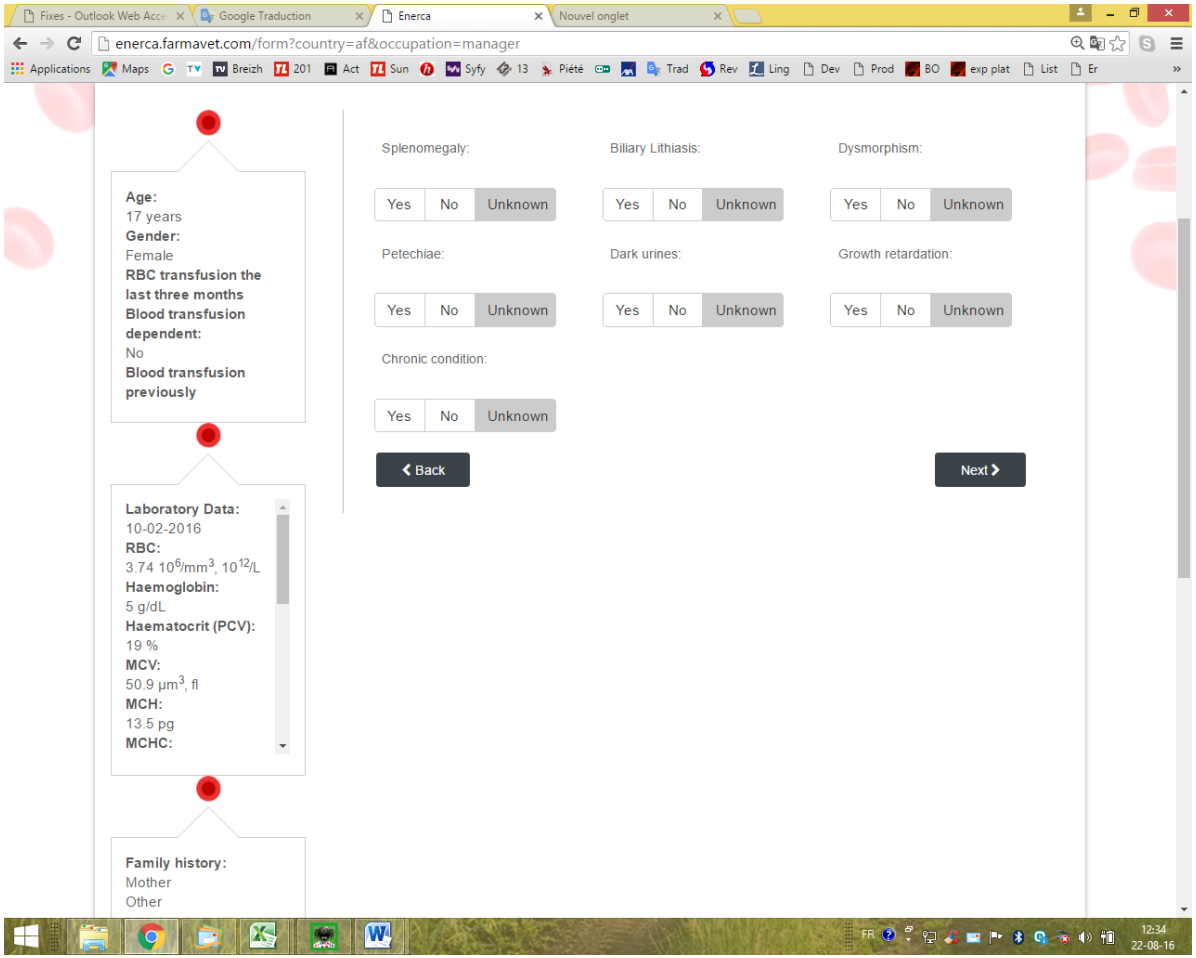
Laboratory Data			
Date of analysis:	5 Feb 2016		
			International Unit
RBC count:	3.74	10^6/mm³, 10^{12}/L	10^{12}/L
Haemoglobin:	5.00	g/dL	g/L
Haematocrit:	19.0	%	L/L
MCV:	50.9	µm³, fl	fl
MCH:	13.5	pg	pg
MCHC:	26.5	g/dL	g/L
Reticulocytes:	19.0	/1000 RBC	-
Absolute reticulocyte count:	49.0	10^3/mm³, 10^9/L	10^9/L
Reticulocyte Production Index:	0.8	-	%
WBC count:	11.0	10^3/mm³, 10^9/L	10^9/L
Platelet count:	211	10^3/mm³, 10^9/L	10^9/L
CRP:	-	-	mg/L
Vitamin B12:	163	ng/L, pg/mL	pmol/L
Folate:	6.10	ng/mL, µg/L	µg/L
Glomerular Filtration Rate (GFR):	-	-	mL/min/1.73m²
Haptoglobin:	90.0	mg/dL	g/L
Bilirubin:	0.48		µmol/L
Ferritin:	20.0	ng/mL, µg/L	µg/L

From telemedicine to tele-expertise

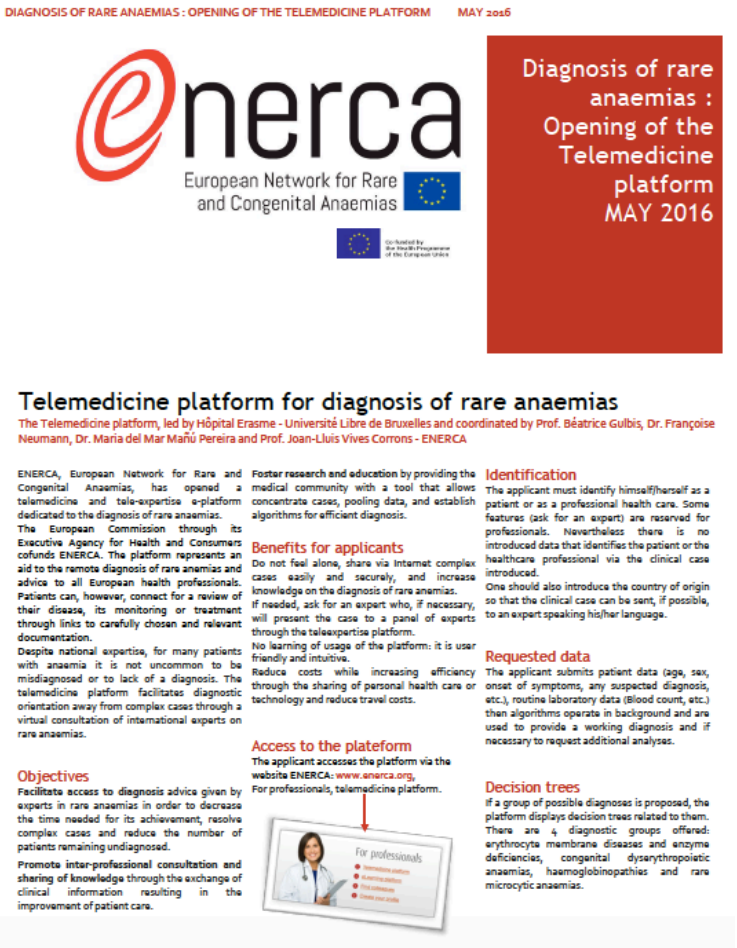
Diagnostic orientation



From telemedicine to tele-expertise



Summary and advertising: a flyer



DIAGNOSIS OF RARE ANAEMIAS : OPENING OF THE TELEMEDICINE PLATFORM MAY 2016

enerca

European Network for Rare and Congenital Anaemias

Diagnosis of rare anaemias : Opening of the Telemedicine platform MAY 2016

Telemedicine platform for diagnosis of rare anaemias

The Telemedicine platform, led by Hôpital Erasme - Université Libre de Bruxelles and coordinated by Prof. Béatrice Gulbis, Dr. Françoise Neumann, Dr. Maria del Mar Mañú Pereira and Prof. Joan-Lluis Vives Corrons - ENERCA

ENERCA, European Network for Rare and Congenital Anaemias, has opened a telemedicine and tele-expertise e-platform dedicated to the diagnosis of rare anaemias.

The European Commission through its Executive Agency for Health and Consumers cofunds ENERCA. The platform represents an aid to the remote diagnosis of rare anemias and advice to all European health professionals. Patients can, however, connect for a review of their disease, its monitoring or treatment through links to carefully chosen and relevant documentation.

Despite national expertise, for many patients with anaemia it is not uncommon to be misdiagnosed or to lack of a diagnosis. The telemedicine platform facilitates diagnostic orientation away from complex cases through a virtual consultation of international experts on rare anaemias.

Objectives

Facilitate access to diagnosis advice given by experts in rare anaemias in order to decrease the time needed for its achievement, resolve complex cases and reduce the number of patients remaining undiagnosed.

Promote inter-professional consultation and sharing of knowledge through the exchange of clinical information resulting in the improvement of patient care.

Foster research and education by providing the medical community with a tool that allows concentrate cases, pooling data, and establish algorithms for efficient diagnosis.

Benefits for applicants

Do not feel alone, share via Internet complex cases easily and securely, and increase knowledge on the diagnosis of rare anemias.

If needed, ask for an expert who, if necessary, will present the case to a panel of experts through the teleexpertise platform.

No learning of usage of the platform: it is user friendly and intuitive.

Reduce costs while increasing efficiency through the sharing of personal health care or technology and reduce travel costs.

Access to the plateform

The applicant accesses the platform via the website ENERCA: www.enerca.org,

For professionals, telemedicine platform.

Identification

The applicant must identify himself/herself as a patient or as a professional health care. Some features (ask for an expert) are reserved for professionals. Nevertheless there is no introduced data that identifies the patient or the healthcare professional via the clinical case introduced.

One should also introduce the country of origin so that the clinical case can be sent, if possible, to an expert speaking his/her language.

Requested data

The applicant submits patient data (age, sex, onset of symptoms, any suspected diagnosis, etc.), routine laboratory data (Blood count, etc.) then algorithms operate in background and are used to provide a working diagnosis and if necessary to request additional analyses.

Decision trees

If a group of possible diagnoses is proposed, the platform displays decision trees related to them. There are 4 diagnostic groups offered: erythrocyte membrane diseases and enzyme deficiencies, congenital dyserythropoietic anaemias, haemoglobinopathies and rare microcytic anaemias.

Summary and advertising: a flyer

These decision trees include links to the aetiology, course, diagnosis, treatment and monitoring of various anaemias.

Clinical case identification

Each clinical case is associated with an identification number so that the applicant can return to the platform and follow each of his/her clinical cases.

Report

All laboratory data submitted by the applicant with the introduced units (but also international units for educational purposes), diagnostic orientation, requested additional analyses, diagnosis eventually found by the applicant are the subject of a report and can be edited.
Decision trees can also be edited.

The applicant is a patient

Although the platform is dedicated to health care professionals, a patient can connect to the platform, introduce his/her data, be offered a diagnosis, and print the report. The patient can then contacts his doctor, submit his report and ask him kindly to log on to the platform and to eventually ask for help to the European experts in rare anaemias.

Seek the advice of an expert

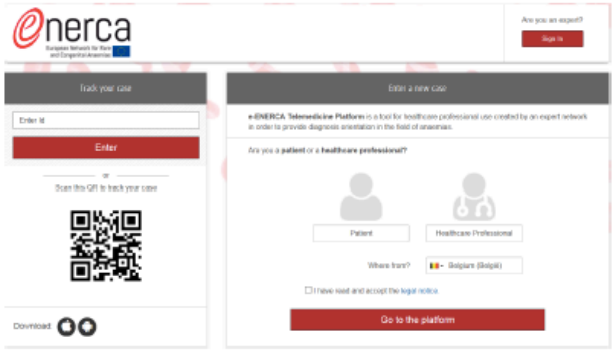
This part is still under development, but should be implemented in September.
When a diagnosis has been proposed and all laboratory data have been completed but the applicant has been unable to find a diagnosis, being a professional health care, he/she ask for the advice of an expert in rare anaemias.

The experts

ENERCA is a network of European experts. The applicant appealed to them to make the diagnosis of a rare anaemia. The expert having assumed a case may, in view to approach the final diagnosis, will request additional results of several analyses to the applicant, would ask for the advice of his/her colleagues, or would organize a panel of experts.
All contacts are made through the platform.

Conclusion

The telemedicine platform for the diagnosis of rare anaemias is an effective and innovative tool that is accessible to all - even if it is primarily aimed at health care professionals. It facilitates remote diagnosis orientation of complex cases by building a bridge among health professionals in distant locations and experts in rare anaemias.



Future

- To keep the platorm alive
- Involvement of the network partners as experts

Agenda

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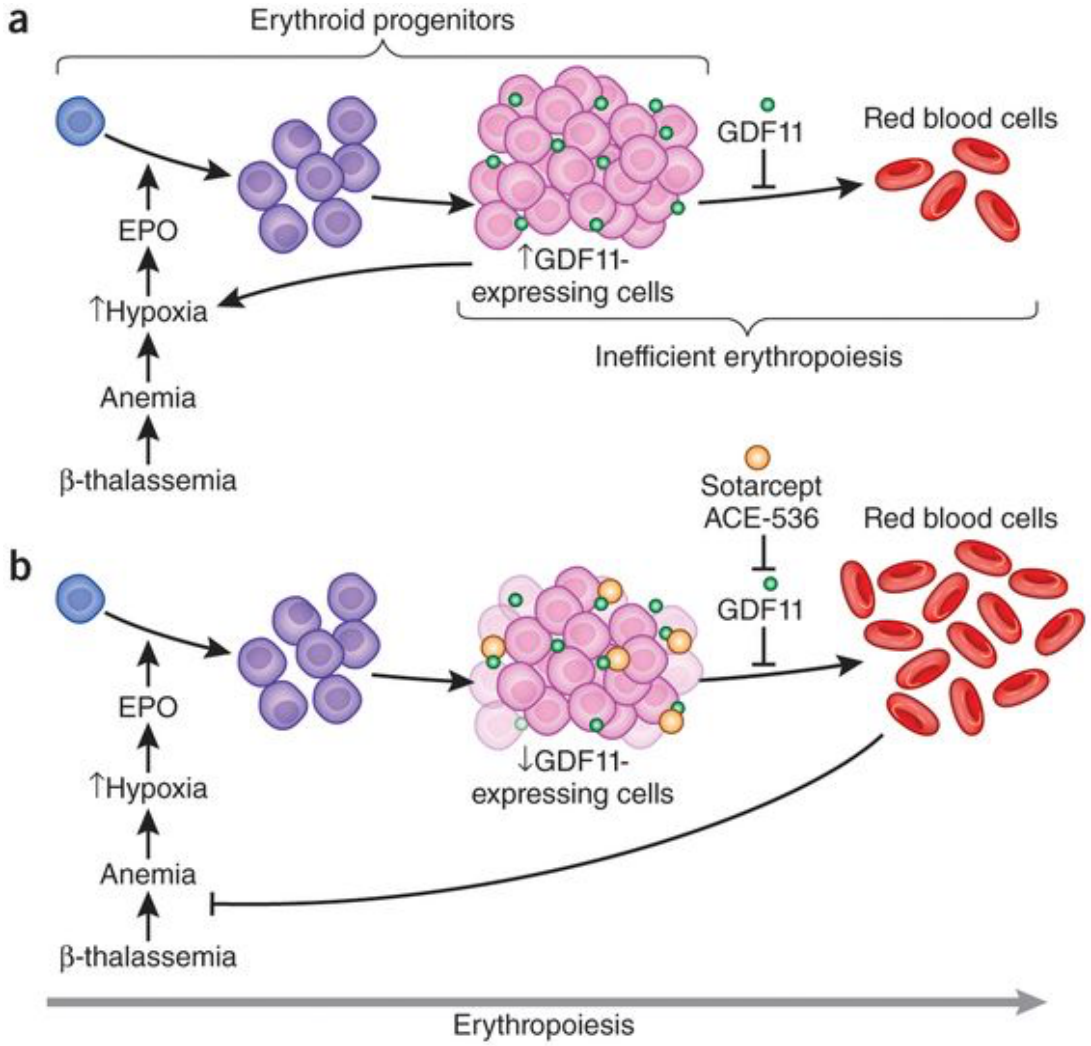
An Efficacy and Safety Study of Luspatercept (ACE-536) Versus Placebo in Adults Who Require Regular Red Blood Cell Transfusions Due to Beta (β) Thalassemia (BELIEVE)

- Luspatercept (ACE-536) is an investigational protein therapeutic that increases red blood cell (RBC) levels by targeting molecules in the TGF-β superfamily. Acceleron and Celgene are developing luspatercept to treat anemia in patients with rare blood disorders, including myelodysplastic syndromes (MDS) and beta-thalassemia.


a
Erythroid progenitors
GDF11
Red blood cells
EPO
↑GDF11-
expressing cells
↑Hypoxia
Inefficient erythropoiesis
Anemia
β-thalassemia
b
Sotarcept
ACE-536
Red blood cells
GDF11
EPO
↓GDF11-
expressing cells
↑Hypoxia
Anemia
β-thalassemia
Erythropoiesis

An Efficacy and Safety Study of Luspatercept (ACE-536) Versus Placebo in Adults Who Require Regular Red Blood Cell Transfusions Due to Beta (β) Thalassemia (BELIEVE)

Phase 3, double-blind, randomized, placebo-controlled, multicenter study to determine the efficacy and safety of luspatercept (ACE-536) plus Best supportive care (BSC) versus placebo plus BSC in adults who require regular red blood cell transfusion due to (β)-thalassemia.

The study is divided into the Screening/Run-in Period, double-blind Treatment Period, double-blind Long-term Treatment Period, and Post-treatment Follow-up Period.

Eligibility:	18 Years and older
• Study Type:	Interventional
• Study Design:	Allocation: Randomized
• Endpoint Classification:	Safety/Efficacy Study
• Intervention Model:	Parallel Assignment
• Masking:	Double Blind (Subject, Caregiver, Investigator, Outcomes Assessor)
• Primary Purpose:	Treatment

https://clinicaltrials.gov/show/NCT02604433

Clinical Trial: BELIEVE

- Primary Outcome Measures:
  - Proportion of subjects with haematological improvement from Week 13 to Week 24 compared to 12-week prior to randomization [Time Frame: Up to approximately week 24
  - *Hematological improvement(HI) is defined as ≥ 33% reduction from baseline in red blood cell count (RBC) transfusion burden with a reduction of at least 2 units from Week 13 to Week 24 compared to the 12-week. Reported as the Number of RBC units transfused from Week 13 to Week 24, and in the 12 weeks prior to randomization*

Next BHS GAM

Dear Presidents of BHS Sub committees,

Anne and I wanted to present ourself as the new BHS councilors for the contact between the BHS sub committees and the BHS board.

Next GAM: session dedicated to the the activities of each committees
When: Thurday 9th of February from 15h to 18h.

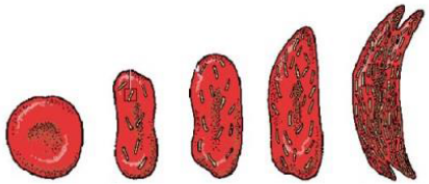
Short presentation (15 minutes – 3 minutes discussion)

- *Activities of your sub group*
- *Your projects for the futur*
- *The way to promote interactions between BHS board and BHS sub committees.*

Thank you very much for your contribution,
Cécile Springael -Anne Deweweire

Hôpital Universitaire des Enfants Reine Fabiola
Universitair Kinderziekenhuis Koningin Fabiola
www.huderf.be

CHU | UVC BRUGMANN



Sickle Cell Disease and RBC Disorders Annual Meeting

9 mars 2017 (9h – 17h)

Auditoire PP Lambert, CHU Brugmann

4, Place Van Gehuchten

1020 Brussels, BELGIUM

Program 9/03/2017

8h45	Introduction (Alina Ferster, HUDERF and Béatrice Gulbis, LHUB-ULB)
9h30	Deep sedation for cerebral MRI in young children with SCD: is it safe? (Cécile Callewaert, HUDERF, Brussels)
9h30	Is transition from pediatric to adult care associated with an increased rate of complications in SCD patients? (Tracy Vandergraesen, HUDERF et CHU-Brugmann, Brussels)
10h00	Débit sanguin cérébral par IRM et oxygénation cérébrale par NIRS chez l'enfant drépanocytaire (Suzanne Verlac, Centre Hospitalier Inter régional Créteil, France)
10h30	**Coffee Break**
11h00	Genotoxicity in SCD patients: Results of the « comete » assay. (Anar Rodrigues, Institut de Pharmacie, ULB)
11h30	A preliminary study of B cells in Sickle Cell Disease (Benoit Vokaer, Hôpital Erasme, Brussels)
12h00	Immune response in Sickle Cell Disease (Carole Nagant et Francis Corazza, LHUB, Brussels)
12h30	Aspects interculturels de la prise en charge de la drépanocytose (Jessica Frippiat, HUDERF, Brussels)

14h00	"Sickle cell disease and coagulation: an update" (Denis Noubouossie, Division of Hematology and Oncology, School of Medicine, University of North Carolina)
14h30	Evaluation of psychological disorders in children presenting sickle cell anemia: a preliminary analysis (Isabelle Lambotte, HUDERF)
15h00	Telemedecine and rare anemias (Béatrice Gulbis, LHUB)
15h30	Pulmonary function in a cohort of children with SCD (Serima Tebbache et Nicolas Lefèvre, HUDERF)
16h00	Cas cliniques/biologiques soumis pour discussion
16h30	**Clôture**

Belgian Registry

Belgian Registry

- Simplified dataset compared to the first project submitted in 2007
- 2 steps submissions
  - Amendment with change of PI and suppression of the online patients' database (for GP and other professionnals)
  - 2nd amendment with new participating centers
- Grant application (Iris Recherche – answer: Q12007)

Belgian SCD registry

REFERRING PHYSICIAN/ center Name :

Address:

Phone/Fax:

At inclusion in Registry:

Surname : **First name:**
Patient identification number:

Birth date : _ _ / _ _ / _ _ _ _

Country of origin : Mother : Father :

Sex: Male ☐ Female ☐

Diagnosis:
- SS ☐
- SC ☐
- SB0 ☐
- SB+ ☐
- G6PD deficiency: ☐

Time of diagnosis
- Neonatal screening ☐
- Neonatal diagnosis (patient-directed initiative) ☐
- If other: year: _ _ / _ _ / _ _ _ _

Previous history at start of FU in a center
- None (patient diagnosed at birth) ☐
- Yes ☐
  - ☐ Recurrent dactylitis (number…)
  - ☐ Recurrent ACS (number …)
  - ☐ Stroke of AIT
  - ☐ VOC ≥ 2 needed hospitalisation
  - ☐ Abnormal transcranial Doppler
  - ☐ Leg ulcer
  - ☐ Pulmonary hypertension (TRV >2.5 m/sec in children or > 2.7 m/sec in adults)
  - ☐ Pregnancy
    - ☐ Early termination
    - ☐ Fetal death
    - ☐ Live birth (gestational age: _ _ weeks)
  - ☐ Kidney disease
  - ☐ Lasertherapy for retinopathy
  - ☐ Osteonecrosis
    - ☐ Surgery
    - ☐ Hip (or other) replacment
    - ☐ Stem cell therapy
    - ☐ Chronic disability
  - ☐ Other: …..
  - ☐ Unknown
  - ☐ Previous treatment:
    - Antibiotics (ongoing; prophylaxisis) ☐
    - Chronic transfusion program ☐
    - Hydroxyurea ☐
    - Date of start HU: _ _ / _ _ / _ _ _ _
    - Unknown ☐

Annual update of data

(from birth after neonatal diagnosis and from FU the the center for others)

- Last contact: _ _ / _ _ / _ _ _ _
- Alive ☐
- Death ☐ (describe cause of death:……)
- Lost of follow-up ☐
  - Moved in another center ☐
  - Moved in another country ☐
  - Other ☐ (explain: ……)
- Known to have HLA identical sibling ☐
- Patient followed in paediatric ward ☐
- Patient followed in adult ward ☐

Biology (taken at steady-state):
- Hb: __ __ , __ (g/dl)
- MCV: (fl)

Research team

FERSTER Alina
GULBIS Beatrice

DEDEKEN Laurence (HUDERF)
LE Phu-Quoc (HUDERF + XL)
EFIRA, André BRUGMANN)
VANDERFAILLIE Anna (St PIERRE)
DEVOS Timothy (Gasthuisberg LEUVEN – A)
LABARQUE Veerle (Gasthuisberg LEUVEN – C)
BRICHARD Bénédicte (Cliniques St LUC)
HEIJMANS Catherine (HUDERF + Jolimont)
PHILIPPET Pierre (CHC)
MAES Philippe (UZA)
BENGHIAT Samentha (ERASME)
DRESSE Marie-Françoise (CITADELLE)
DE WILDE Bram (UZ Ghent)

WENDERICKX Bernard (Responsible of the Clinical Research Unit)- HUDERF

LE MARCHAND Bruno (Responsible of the electronic database - HSP)

Belgian Registry: Time Frame

- 1st amendment submission: October 2016
- 2nd : January 2017

- New version of the database: March 2017
- Start of data collection:
  - Prospective data: March 2017
  - Retrospective data: Q4 2017

Clinical case

Your opinion about an mysterious anemia… (1)

- Born in Tchetchenia at term. 2 healthy sibs
- No consanguinity
- Neonatl jaundice (8days phototherpy : ABO incompatibility?)
- Famille d'origine Tchétchène, en Belgique depuis 2004-
- Pallor, weakness and splenomegaly at the age of 4 months (malnutrition?) R/ Vitamines

Your opinion about an mysterious anemia…(2)

- Hospitalisation in Germany at the age of 3
- Diagnosis: ? Hemolytic anemia; Spherocytosis? (↓ osm R)
- Growth retardation (weight and height < P3). No cystic fibrosis, gastro-intestinal investigations negative)
- Normal neurological and cognitive development

In Belgium at 6 y:

- Pallor, jaundice, splenomegaly, etc…

	7 y	10	13
Hb (g/dl)	8,2	8,5	8,4
MCV (fl)	72	75	75
MCH (%)	23	26	24
	Microcytes, anisocytosis, hypochromia		
Plts (10^E3/µl)	157	136	99
WBC(10^E3/µl)	5,27	4,21	4,99
Lymphocytes(10^E3/µl/µl)	1,35	1,2	0,98
Reticulo (%)	3,8	3,3	3,5
Reticulo (/µl)	129000	131000	120000
Immature reticulocytes	5%		

Imprimer

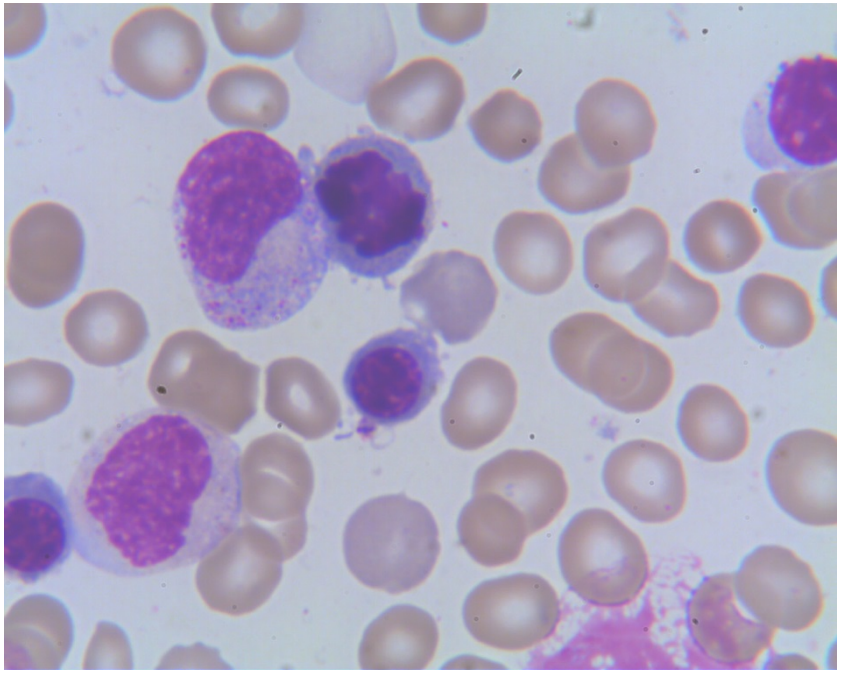
	14/09/16 10:38 81112939 Terminé	13/07/16 14:09 81097969 Terminé	11/02/16 09:30 81054650 Terminé	15/04/15 16:26 80973940 Terminé	07/01/15 10:57 80946162 Terminé	15/05/13 10:24 80783209 Terminé	17/04/12 15:20 80682434 Terminé	03/08/11 15:37 80612373 Terminé	09/03/11 13:34 80572186 Terminé	08/09/10 11:54 80520066 Terminé	02/03/10 16:51 80468146 Terminé	18/02/10 10:00 80464758 Terminé	02/02/10 10:07 80460232 Terminé
HEMATOLOGIE													
ANEMIES MICROCYTAIRE ET MACROCYTAIRE													
Fer [µg/dL]	71	65			63	71	71	45		85			67
Transferrine [mg/dL]	212	226			222	228	228			210			200
Saturation de la transferrine [%]	24	21			20	22	22			29			24
Ferritine [µg/L]	50	47 ©	52 ©	41	41	35	43	67	68	42	40	64	49
Ac.folique sérique [µg/L]											12		
Vit.B12 [ng/L]		526									672		

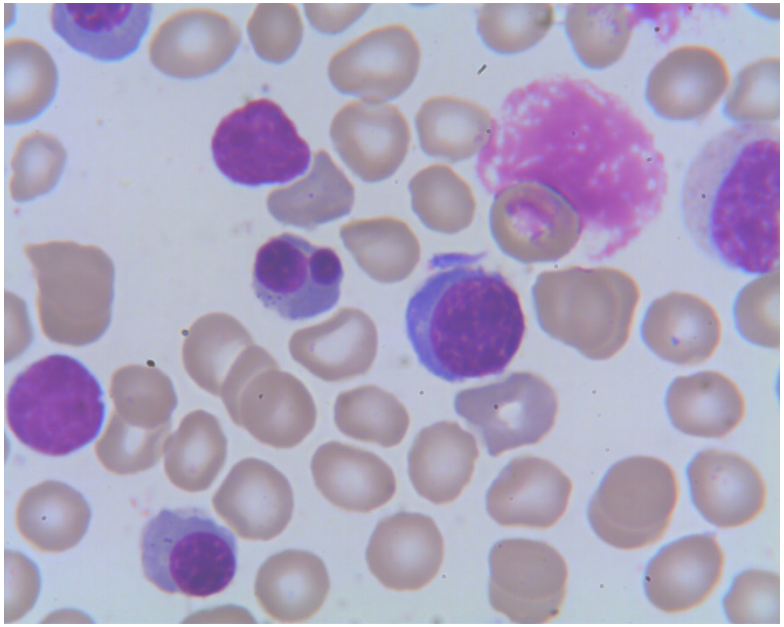
ANEMIE HEMOLYTIQUE											
Haptoglobine [mg/dL]						<^3	9	<^3	6	<^3 ®	9 ®
Bilirubine totale [mg/dL]	2.4	3.9	2.7	1.8	3.0	2.3	2.0			
Bilirubine directe [mg/dL]			0.4	0.4						
LD [UI/L]	129	127	154	134	160		140 ®			

Your opinion about an mysterious anemia…(3)

- Hemolysis???
- Enzymes and Hb electrophoresis N
- Cryohemolysis N (<10%)
- Ektacytometry:?? EP of RBC membrane proteins: N
- No immune deficiency
- No cardiac or renal abnormality
- No argument for Schwachmann disease, Fanconi, etc…

- Symptomatic biliary lithiasis → cholecystectomy





Your opinion about an mysterious anemia…(4)

- Bone marrow in favor of CDA type 2??

- Perls: Iron deficiency??? No change with oral supplementation. Indication for oral treatment???

- Bone biopsy: Erythroid hyperplasia with dysplastic and megaloblastic features

Your opinion about an mysterious anemia…(5)

- Poor growth – No puberty (13 y)
- Excellent mental and neurologic status
- ↑ splenomegaly
- ↓ platelets

Questions??

- Any suggestion about the diagnosis??
- Iron IV?
- Measurement of splenic/ liver Iron (MRI)
- Splenectomy?
- Other? – HSCT???

Journal Club

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Prepublished online September 13, 2016;
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A BMT CTN phase II trial of unrelated donor marrow transplantation for children with severe sickle cell disease

Shalini Shenoy, Mary Eapen, Julie A. Panepinto, Brent R. Logan, Juan Wu, Allistair Abraham, Joel Brochstein, Sonali Chaudhury, Kamar Godder, Ann E. Haight, Kimberly A. Kasow, Kathryn Leung, Martin Andreansky, Monica Bhatia, Jignesh Dalal, Hilary Haines, Jennifer Jaroscak, Hillard M. Lazarus, John E. Levine, Lakshmanan Krishnamurti, David Margolis, Gail C. Megason, Lolie C. Yu, Michael A. Pulsipher, Iris Gersten, Nancy DiFronzo, Mary M. Horowitz, Mark C. Walters and Naynesh Kamani

- MUD 8/8
- 30 children / 29 evaluable
- Median age: 14y Median FU: 26 Mo
- Cdt: Alemtuzumab-Flu-Melphalan
- GVH prophylaxis: calcineurine inhibitor + short MTX + methylPDN
- Bone marrow graft: 3,5 10^E8 NC/kg (1,3 – 6,8)
- EFS 1Y and 2Y : 76 and 69%
- OS 1Y and 2Y: 86 and 79%
- 1-Y incidence of cGVHD: 62%

- Main objective: OK >75% EFS but not safe!!

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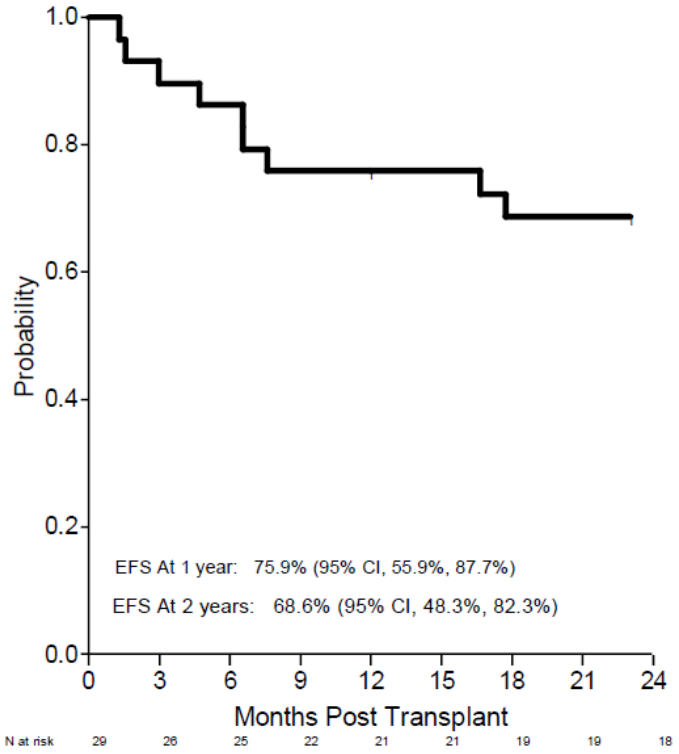


Figure 2A: 100-Day Probability of Acute Grade II-IV Graft-Versus-Host Disease

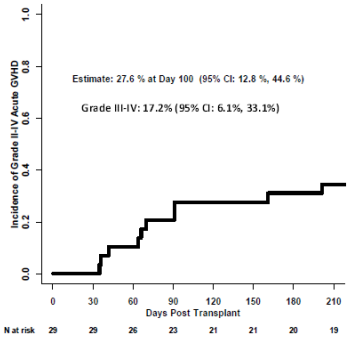
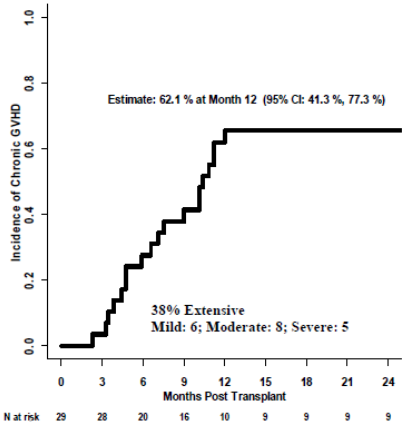


Figure 2B: One-year Probability of Chronic Graft-Versus-Host Diseas



RESEARCH ARTICLE

AJH

Successful matched sibling donor marrow transplantation following reduced intensity conditioning in children with hemoglobinopathies

Allison A. King,[1] Naynesh Kamani,[2] Nancy Bunin,[3] Indira Sahdev,[4] Joel Brochstein,[4] Robert J. Hayashi,[1] Michael Grimley,[5] Allistair Abraham,[2] Jacqueline Dioguardi,[2] Ka Wah Chan,[6] Dorothea Douglas,[7] Roberta Adams,[7] Martin Andreansky,[8] Eric Anderson,[9] Andrew Gilman,[10] Sonali Chaudhury,[11] Lolie Yu,[12] Jignesh Dalal,[13] Gregory Hale,[14] Geoff Cuvelier,[15] Akshat Jain,[4] Jennifer Krajewski,[16] Alfred Gillio,[16] Kimberly A. Kasow,[17] David Delgado,[18] Eric Hanson,[1] Lisa Murray,[1] and Shalini Shenoy[1]*

2015

- 43 SCD and 9 TM (2003-2014)
- Alemtuzumab-Fludarabine-Melphalan
- Median age: 11y
- Median FU:3.5 y
- OS and EFS: 93 and 90,7% for SCD
- TRM SCD: 5.7% (all teenagers)

associated with subsidence of infectious complications. All patients who engrafted were transfusion independent; no strokes or pulmonary complications of SCD were noted, and pain symptoms subsided within 6 months posttransplant. These findings support using RIC for patients with hemoglobinopathy undergoing matched sibling marrow transplantation (*www.Clinical Trials.gov: NCT00920972, NCT01050855, NCT02435901).

Am. J. Hematol. 90:1093–1098, 2015.

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Outcome and chimerism

- Chimerism > 95% in 33 SCD pts at 1y
- 10 mixed chimerism with NED at last FU
- 2 recieved DLI

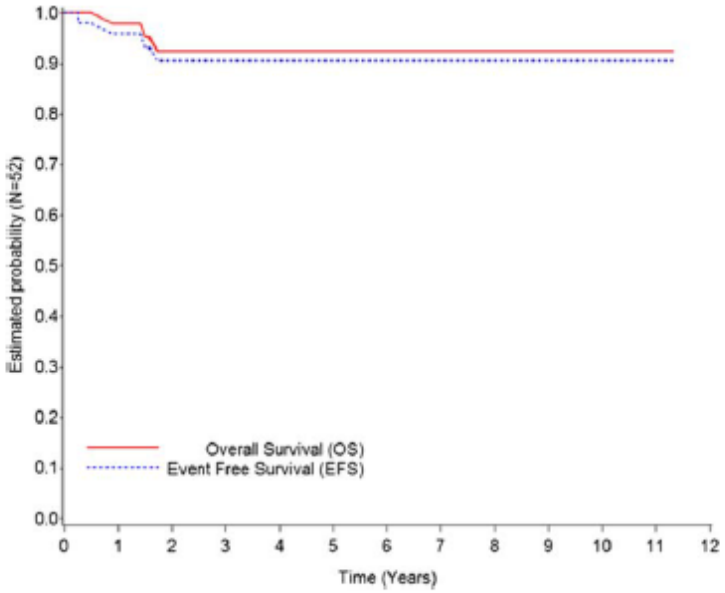

Figure 1. Overall/event-free survival following reduced intensity conditioning and matched sibling donor transplantation for hemoglobinopathy. The solid and interrupted lines represent the estimated probability of overall and event-free survivals, respectively. [Color figure can be viewed in the online issue, which is available at wileyonlinelibrary.com.]