European Reference Network
for rare or low prevalence complex diseases

Network Vascular Diseases (VASCERN)

VASCERN FIRST ANNUAL SEMINAR
13-14 October 2017
Paris, France

SEMINAR REPORT

#VASCERNdays2017

Content

ACRONYMS AND ABBREVIATIONS

AVM	Arteriovenous Malformation
BoMS	Board of Member States
CPMS	Clinical Patient Management System
CT	Computed tomography
EC	European Commission
ECP	ERN Collaborative Platform
EDPS	European Data Protection Supervisor
EJP	European Joint Programme
EMA	European Medicines Agency
ePAG	European Patient Advocacy Group
ERN	European Reference Network
ERN-CG	European Reference Network-Coordinator Group
EU	European Union
GLA/GSD	Generalized Lymphatic Anomaly/Gorham-Stout Disease
HCP	Health Care Provider
HCCVM	Hyperkeratotic Cutaneous Capillary Venous Malformation
HPO	Human Phenotype Ontology
HTAD-WG	Heritable Thoracic Aortic Diseases Working Group
HHT-WG	Hereditary Haemorrhagic Telangiectasia
ICD10	International Classification of Diseases, Tenth Edition
ISSVA	International Society for the Study of Vascular Anomalies
KPI	Key Performance Indicator
MAC	Montalcino Aortic Consortium
MS	Member States
MSA-WG	Medium-Sized Arteries Working Group
MRI	Magnetic Resonance Imaging
ORDO	Orphanet Rare Disease Ontology
PO	Patient Organisation
PoK	Pills of Knowledge
PPL-WG	Paediatric and Primary Lymphedema Working Group
QoL	Quality of Life
RD	Rare Disease
RADICO	Rare Disease Cohorts
RDWG	Rare Disease Working Group
ROPAC	Registry of Pregnancy and Cardiac disease
SGA	Specific Grant Agreement
VASCA-WG	Vascular Anomalies Working Group
VASE	Vascular Anomaly- Sirolimus- Europe
vEDS	Vascular Ehlers-Danlos Syndrome
VVM	Verrucous Venous Malformation
WG	Working Group
WP	Work Package

EXECUTIVE SUMMARY

The first annual seminar (#VASCERNdays2017) for VASCERN, the European Reference Network on Rare Multisystemic Vascular Diseases, was held from Friday, October 13th to Saturday, October 14th, 2017 in Paris, France, where the VASCERN Coordination is based (Hôpital Bichat-Claude Bernard, Assistance Publique-Hôpitaux de Paris). Healthcare professionals, patient representatives and other stakeholders were given the chance to reflect on the many accomplishments achieved by all, only 7 months after VASCERN's official launch in March, 2017. Over 80 participants from 11 European countries were in attendance.

The first day's plenary session was very interactive as experiences were exchanged in an open and inclusive manner. Although the challenges of lack of time and funding and political issues related to new HCP member participation were brought up on several occasions, an overall determination resonated from all. Strategies to overcome these issues such as prioritizing our activities, exploring various sources of funding though European Joint calls, and lobbying at the national level were discussed. The European Commission (EC) and ERN Board of Member States (BoMS) representatives made it clear that they would work alongside the ERNs to assist in various policy matters and in their integration into the national healthcare systems. This first day also gave participants a glimpse into the major advances made in our Work Packages. Notable progress was reported in many areas including the development of the VASCERN mobile application, the first versions of patient pathways and discussions on clinical guidelines, the definition of Pills of Knowledge and their educational benefits, and the growth of the VASCERN website with increasingly valuable content, supported by active social media networks. It was decided that VASCERN would implement the FAIR principles in our registries. The demonstration of the Clinical Patient Management System (CPMS) generated much interest and feedback from VASCERN's HCP representatives as a promising eHealth tool for virtual panel discussions.

The second day consisted of five Rare Disease Working Group (RDWG) sessions in the morning followed by two transversal Working Group (WG) sessions in the afternoon. The five RDWGs: Heritable Thoracic Aortic Diseases (HTAD-WG), Hereditary Haemorrhagic Telangiectasia (HHT-WG), Medium-Sized arteries (MSA-WG), Paediatric and Primary Lymphedema (PPL-WG), and Vascular Anomalies (VASCA-WG) had a chance to meet face to face and have lengthy discussions on VASCERN's various projects. In the afternoon, the e-Health and Training & Education WG and the Patient Registry WG held parallel sessions with most VASCERN members attending one of the meetings. These group meetings proved to be the highlight of the seminar for many and much work was completed.

At the end of the seminar, the VASCERN ePAG (European Patient Advocacy Group) presented their updated "Wish List" (see page 30) for the ERNs, which was noted with great interest. With patient representatives in all of our Working Groups, the patient voice is guaranteed to be heard, and our decisions can be steered by the guiding principle of putting patients' needs first. While there are still many obstacles ahead, all members of VASCERN are determined to meet these challenges head on in order to reach our goal of improving the diagnosis, care and treatment of patients with rare multisystemic vascular diseases across Europe.

DAY1: PLENARY SESSION

Welcome by Prof Guillaume Jondeau and brief introductions by all participants

Prof Guillaume Jondeau, VASCERN Coordinator, opened VASCERN Days 2017 by warmly welcoming all participants and thanking them for making the journey to Paris. He briefly talked about the ERNs and our network's specialization in rare multisystemic vascular diseases before going on to present a map of Europe with each of the 31 HCPs displayed, followed by one with 12 ePAG Patient Organisations (POs). Representatives from the 30 HCPs (representative from Ireland was absent) and 11 ePAG organisations present (one representative was absent) stood up and introduced themselves to the attendees. The VASCERN Coordination team and other stakeholders present also made brief introductions. This opening exercise enforced the collaborative atmosphere already evident in the room and gave all participants a chance to get acquainted with one another, many for the first time.

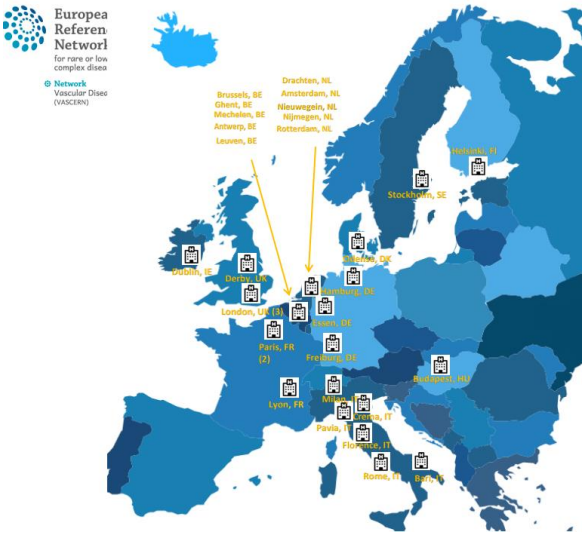


Figure 1: **Map of 31 HCP members in the VASCERN network**

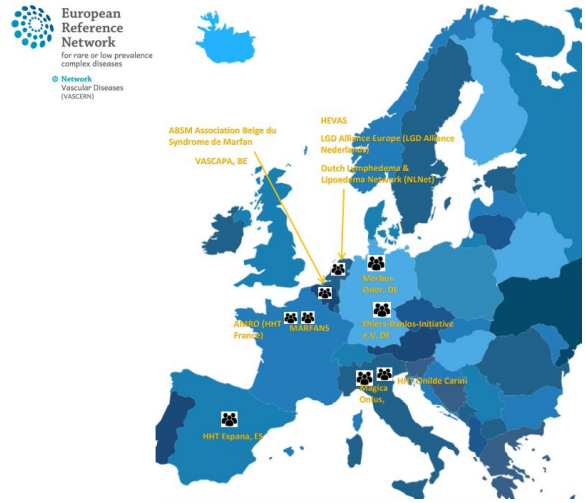


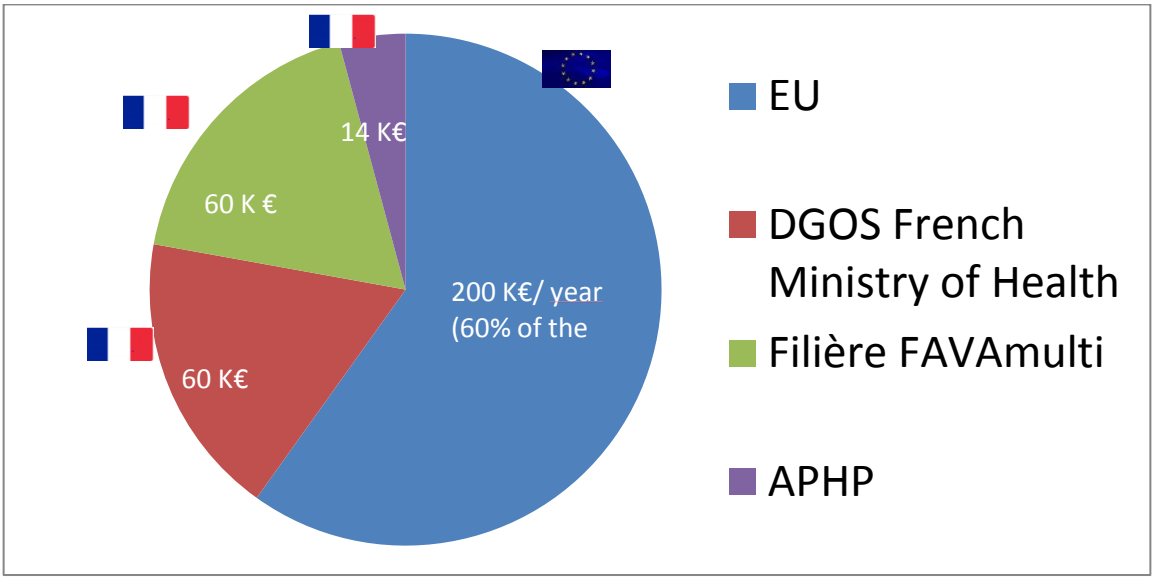
Figure 2 **Map of ePAG patient organisations**

Link to the Video:
https://youtu.be/5wvdM8NpgpE
Link to the presentation:
https://vascern.eu/wp-content/uploads/2017/10/Welcome-and-introduction-of-participants.pdf
See Annexe for full list of Participants

VASCERN Structure and Organisation

Prof Guillaume Jondeau delved into the structure and organisation of VASCERN, which specializes in vascular diseases including rare, low prevalence and complex disorders that affect different types and sizes of vessels and are multisystemic. The 5 RDWGs correspond to the vessels affected: Aorta (HTAD-WG), Medium-Sized Arteries (MSA-WG), small arteries/veins/lymphatics/capillaries (VASCA-WG and HHT-WG) and lymphedema (PPL-WG). It is estimated that a potential 1.3 million patients in the EU could be referred to our network (underestimated prevalence). Fibromuscular Dysplasia will be included in the future under the MSA-WG. VASCERN includes **31 HCP Members** from **11 EU Member States (MS)**. He stated that we needed to extend our network to new countries that are not currently included and that this will be the aim of the new ERN call for membership in 2018. He introduced the term of Affiliated Partners, which would include centres that do not meet the criteria for full HCP membership.

The structure was presented: 5 RDWGs, each with a Chair and a Co-chair, a patient group (ePAG) with one Chair and 5 Co-chairs (one per RDWG, ensuring communication of all information to POs), and 4 transversal WGs, each with one Chair and one Co-chair (Patient Registry, eHealth/Training & Education, Ethics, and Communication). Our Board is chaired by the Coordinator and includes 1 representative from each HCP and the ePAG Chairs that must meet once a year (EU requirement) for strategic decision making. The General Assembly includes more HCP team members and POs and meets once a year in the framework of the Board meetings (Annual Seminar). The Council, the operational decision making body, is composed of the WG Chairs and the Coordinator and meets every 4 months. The five RDWG, the transversal WGs and the ePAG patient group all have monthly virtual meetings and give feedback to the Council. The Advisory Board is not yet set up but will be a Board for consultation and external evaluation. Finally there are InterERN WGs where ERN Coordinators or ERN Members discuss various topics including Monitoring of ERNs, Ethical & Legal issues, Research, IT & Data sharing, Knowledge Generation, Cross-border Healthcare and Brexit. He presented an overview of our Action Plan and **1st year funding scheme**.



Marine Hurard, VASCERN Project Manager, then presented the tools used by VASCERN in order to achieve our Action Plan. She detailed that the funding is used for manpower (the Coordination team), meetings, communication, translation and eHealth tools. She also mentioned the various virtual communication platforms at our disposal, which enable the ERNs to have the medical knowledge and expertise travel rather than the patients:

- WebEx for videoconferences already used by all of our WGs since March 2017 for monthly virtual meetings;
- ERN Collaborative Platform (ECP) for sharing all documents and minutes of meetings, as well as news, the agenda, and a forum for discussion. Members were encouraged to connect, a direct link is available on the VASCERN website homepage;
- CPMS, the Clinical Patient Management System, to discuss complex patient cases via virtual panels.

To help us in implementing the CPMS, VASCERN has answered in September, along with all of the other ERNs, the 2017 CEF Telecom eHealth call in order to receive co-funding for 2 IT staff (CPMS operational helpdesk). It is a 75% EU co-funding (125 000 Euros).
She also presented several VASCERN communication tools and encouraged members to follow them. Finally, she presented an overview of the numerous VASCERN meetings (Council, WGs and ePAG, both virtual and face-to face) that the various VASCERN WGs have had to date as well as the WGs road map, showing the high level of activity since the official launch in March 2017.

Q&A

An HCP representative congratulated the Coordination team for their hard work in overcoming the bureaucratic issues and getting the network up and running. Another HCP representative asked about filming of interviews during congresses/meetings and mentioned that this has already been done by a learned society and it is very effective**. Prof Jondeau** replied that this will be the idea of the Pills of Knowledge (PoK) and that having regular meetings will encourage the recording of these interviews.
One HCP representative inquired if any VASCERN funding could be used for setting up registries and databases. Participants were informed that there has already been a call for registries last year and that 5 ERNs have received funding for this activity, although it is hoped that these 5 ERNs will cooperate and share their work with the other ERNs. In the future there will be the Horizon2020 call, the Connecting Europe Facility (CEF) call, and other indirect funding for registries.
One HCP representative thanked Marine Hurard for all of her hard work and suggested that it would be helpful to have less but more concise and targeted e-mails. **Marine Hurard** replied that thanks to the ERN Collaborative Platform (ECP) and the Chairs diffusing information to their own groups this will reduce the amount of emails being sent to everyone. It was pointed out that Members can subscribe to news on the ECP. E-mails will be clear and concise, with necessary actions highlighted.
Another HCP representative asked for feedback on the Inter-ERN WG on IT activities. Prof Jondeau relayed that the main result of the interERN WG was to answer CEF call and he assured that all information will be shared to members.
A stakeholder made a plea that members try to influence their own organisations in regards to having their IT systems interoperable with those of the ERNs. Another participant chimed in saying that the goal is that there be direct connections between each HCP's electronic patient files and the

European centralized infrastructure with no additional work necessary. He urged that HCP representatives have discussions with their hospital in order to make their systems interoperable with the European infrastructures. He also added that within VASCERN there should be cross discussions between the eHealth and Registry WG as they are connected. It was pointed out by another participant that the importance is not the specific systems used by the hospitals themselves (as there are many), but that the systems used by hospitals are all interoperable and follow the same European standards.
A question was raised on the ERN Coordinator Group (ERN-CG). Prof Jondeau replied that the ERN-CG is meeting regularly to discuss several ERN common issues and that the circulation of information is working well.

Link to the Video: https://youtu.be/kaDCtdEtEkY
Presentation of VASCERN Structure and Organisation

VASCERN Patient Group (ePAG)

Matt Bolz-Johnson, Healthcare and research Director at EURORDIS (Rare Diseases Europe – The Voice Rare Disease Patients in Europe), started his presentation by applauding everyone for their hard work and for their shared belief in the power of collaboration. He stated that the success of the ERNs will be based on the strength of the collaborations between clinicians, patients and researchers. He then presented the general ePAG framework and how the founding principles of patient engagement in the ERNs lead to the creation of the 24 ePAGs by EURORDIS. ePAG representatives are present in all of the 150 clinical working groups of the ERNs, so that the needs of patients are aligned with those of the clinicians. The ERN blueprint for patient involvement was briefly presented which emphasized how patient input is beneficial in all of the ERN activities, before **Matt Bolz-Johnson** passionately proclaimed that “patient involvement should be part of every activity you do”! An ePAG guide for fostering engagement and involvement of patient representatives was outlined for clinicians as well as the ePAG leaderships program, designed for patients to build their capacities in leadership and to learn from each other. He also urged clinicians to inform EURORDIS of any POs that they may know of in order to add them to the VASCERN ePAG. He concluded in saying that EURORDIS’ Rare Barometer Voices, panels of 6000 RD patients from 23 countries, is a tool that will be further developed so that it can be utilized by ERNs to answer social and clinical issues in order to direct future strategic decisions.

Paolo Federici, Patient Group (ePAG) Chair, presented the ePAG Co-chairs (one per RDWG) and ePAG representatives. Through their monthly virtual meetings, the VASCERN ePAG group discuss patients’ needs and several of the network’s work packages. The availability and dissemination of patient focused information was clearly stated as one of their top priorities. He went on to say that thanks to the creation of ERNs, certain past hurdles such as lack of experts, poor collaboration between healthcare professionals, lack of

national/local guidelines, and scarcity of data were no longer an issue and that they could now focus on defining the priorities of patients and contributing to achieving their numerous goals (see Wish List, page 30). The VASCERN ePAG's achievements were briefly outlined as were their future goals of being recognized as serious stakeholders, activating more POs to join VASCERN and stimulating research in the RD field.

Q&A

Matt Bolz-Johnson indicated that the Rare Barometer Voices survey platform was already available in 24 languages and it needs to be discussed on how it can be used within the ERN framework and developed further. The next question was brought up by a representative from Spain where the expert centres in VASCERN's area of expertise are not formally recognized yet and a discussion about how doctors from Spain can participate in the ERNs was held. It was asked if they could join as ePAG members, to which Prof Jondeau stated that doctors are not patients and should not be considered as such. The way forward in this particular situation is for doctors, POs and the public to maintain continued pressure on the Spanish government so that they recognize these HCPs as expert centres, consequently allowing them to apply for full HCP membership. Patients should also inform VASCERN of expert centres in countries that are not yet members, as the priority of the next call for HCP membership to VASCERN should be in these countries. Finally the question of partnerships with Industries (pharmaceutical, biotech companies) was brought up. **Matt Bolz-Johnson** said that the interaction between ERNs and industries was not yet defined and that the ERNS are awaiting the code of conduct from the interERN WG on Ethical and Legal issues.

Link to the Video: https://youtu.be/xInc-wBtWCU
VASCERN Patient Group (ePAG) Presentation

VASCERN 1st Year Action Plan: State of Play

This session, animated by **Marine Hurard,** focused on the current state of play of VASCERN's first year Action Plan implementation and feedback from the Council (operational decision-making body, which consists of the Chairs of the various RD and Transversal WGs). The panel of RDWG Chairs discussed each Work Package (WP) on stage.

Hereditary Haemorrhagic Telangiectasia (HHT-WG) - Chair: Prof Claire Shovlin
Heritable Thoracic Aortic Diseases (HTAD-WG) – Chair: Prof Julie De Backer
Medium-Sized Arteries (MSA-WG) – Chair: Dr Leema Robert
Paediatric and Primary Lymphedema (PPL-WG) – Co-chair: Prof Sahar Mansour (replacing Chair, Robert Damstra)
Vascular Anomalies (VASCA-WG) – Chair: Prof Miikka Vikkula

WP1: Sharing of experience by the discussion of difficult clinical cases

The number of anonymised cases discussed by each RDWG to date was reported: HHT: 7 cases, HTAD: 3 cases, MSA 4 cases, PPL 4 cases and VASCA 6 cases. All Chairs were unanimous in their enthusiasm for these case discussions. The immediate impact on patient care was stressed as one of the main reasons these discussions are so enjoyable. The RDWGs are looking forward to using the CPMS in order to conduct proper clinical case discussions via virtual panels.

WP2: Definition of patient pathways

These pathways visually represent the clinical pathway of a disease from presenting feature to treatment and follow-up of a patient. In the MSA-WG, the patient representative has been heavily involved in this activity. The VASCA-WG has started collecting ideas but it has not been a focus of their group until now. PPL has started working on a draft. HHT has a revised version 2 that has been validated by the patients. In the HTAD-WG, the drafts had been made and they will continue to discuss various topics (e.g. specific imaging modalities that tend to differ by country). The EU is eagerly awaiting patient pathways from the ERNs. We hope to have 5 first version patient pathways by the end of the year 1 implementation period (March 2018), to be continued and improved upon during our 2nd year of operation.

WP3: Cross-border pathways Mobile Application

Dr Alessandro Pini, Chair of the e-Health and Training & Education WG gave an update on the creation of the VASCERN mobile application (**VASCERN App**) that will enable patients and doctors to easily find and contact VASCERN expert centers and POs. The dataset includes detailed contact information and has been sent to all HCPs and POs. The collection of datasets is underway in order for the App to be launched by the end of our 1st year.

WP4: Pills of Knowledge (PoK)

Pills of Knowledge were defined as videos of 3-5 mins on a topic chosen by the RDWGs in the languages of the experts. They will be available on the VASCERN website and YouTube Channel. In addition, **Prof Jondeau** mentioned that each RDWG should collect a list of useful links (educational material for patients and doctors) and validate them so that they can be added to the website.

WP5: Registries

Prof Leo Schultze Kool, Chair of the Patient Registry WG, quickly laid out the bottom-up approach of starting with local registries and minimal datasets to avoid control and privacy issues at the start. This was to be discussed further the next day during the Patient Registry WG session (see page 29).

WP6: Clinical trials

HTAD-WG have no ongoing clinical trials at the moment. HHT-WG: 1 clinical trial completed, 2 ongoing, 1 new trial funded. They will initially perform the trials in a pilot phase locally, before extending it to other HCP members, if results are promising. VASCA-WG: 1 clinical trial (VASE) is ongoing but it was pointed out that extending it to other European centers has proven to be extremely challenging and requires increased support and funding. It was proposed that it may be best to conduct the same trial locally in various HCPs and then compare results, instead of large multinational clinical trials. MSA-WG: 1 clinical trial in France is ongoing but to in order to extend it to

the other HCP centers, there are many questions that still need to be discussed (e.g. who will dispense the medication).
Conclusion: If we want transnational European clinical trials, there needs to be more support and funding opportunities.

WP7: Availability of conferences on YouTube
This is an e-learning tool that will be developped by collecting videos that contain medical content (from VASCERN experts) and VASCERN meetings/interviews. This content will be validated by the RDWGs before being upoaded to YouTube.

WP8: Definition of clinical outcomes
This deliverable is more complicated than anticipated. As we will await the results of the work being conducted by the interERN WG on Monitoring and Assessment of ERNs and the work conducted at the EC and ERN Board of Member States (BoMS) levels, this deliverable is delayed. There was a little confusion over if these outcome measures are monitoring the activity of the network or the satisfaction of the patients. Some indicators are simple while others are not as easy to define. HHT has selected outcomes for patients but also ones that identify centres that provide adequate care versus those that do not.

WP9: Writing guidelines

a) **Clinical guidelines**
MSA-WG have started working on guidelines on how to manage pregnancies in vascular Ehlers-Danlos Syndrome (vEDS). VASCA-WG is still clarifying the complicated classification and nomenclature of Vascular Anomalies (working on Orphanet, ICD classifications), after which the guidelines will be worked on, perhaps in collaboration with other ERNs. PPL-WG is currently collecting what exists and then will work with the existing guidelines that they have. They identified PPL treatment & follow up as a potential guideline topic for 2018. HHT-WG have collected published guidelines and identified areas with no guidelines and will try to start with small guidance documents (e.g. priority for antiplatelet and anticoagulant use for HHT). HTAD-WG have started drafting ACTA2 recommendations based on expert opinion and are identifying dicussion items. It was brought up that while we are using the term clinical guidelines, as there is no supporting data available, the term expert opinion may be more suitable. Clinical statement is another very useful option that is clearly defined and that involves a group of experts that prepare a document stating what they believe to be good practise and can be produced in a shorter timeframe than clinical guidelines.

b) **The Do's and Don'ts Factsheets: guidelines for optimal care of these patients facing frequent situations not related to their rare diseases**
There are currently factsheets in French for the diseases of the HTAD, MSA and HHT WGs that are being translated into English and that will be published once reviewed and validated by VASCERN RDWGs. Next year's action plan includes the translation of these documents into other languages, and the creation of factsheets for the other two remaining RDWGs (PPL and VASCA).

WP10: Communication

This currently covers the VASCERN's website, the monthly newsletters, the ERN Collaborative platform and social media (Twitter account). It will soon include a Facebook page, YouTube Channel*, updates to the website and increasing use of the ECP. The internal collaborative platform, the ECP, is indeed also very important for sharing files, using the forum for discussion, sharing the agenda, sharing news, etc.

*Post VASCERN Seminar Comment: VASCERN Facebook page and YouTube channel are now live since October 31st, 2017!

Q&A

Following this overview, one HCP Representative mentioned that the discussion of patient cases with other RDWGs or ERNs would be useful. The CPMS will allow for this possibility. Another HCP Member inquired about the interactions between European learned societies and ERNs. It was stated that there is no formal interaction apart from receiving their letter of support during the ERN application process. It was mentioned by an HCP Representative that they may now be interested in supporting us financially, given the fact that we have started to reach our deliverables. A final question was asked regarding how the European Medical Agency (EMA) and drug safety agencies are to be involved in the ERNs. It was stated that off-label use of certain medication is not monitored and collecting adverse effects using drug registries may be beneficial in order to assess important safety aspects.

Link to video: https://youtu.be/Caqa3iPUIVM
Presentation: VASCERN 1st Year Action Plan: State of Play

Achievements, Challenges & Opportunities for ERNs

The ERN Policy

Anna Carta, ERN Team of DG Sante at the EC, gave the rationale behind the creation of the European Reference Networks (ERNs) and their purpose: the pooling of expertise in order to provide fair and equitable access to quality medical care and treatment to all rare disease patients in Europe. ERN virtual consultations will allow for knowledge to travel, rather than the patient, who is treated at their local national healthcare provider in a familiar setting. Although ERNs will mainly work within their own network, collaboration between the 24 ERNs is to be encouraged. The phases of the **ERN lifecycle** were presented, from the legislative and initial planning phase that ran from 2011-2014, to the current implementation (deployment) stage that will run from 2017-2018. A more structured consolidation phase should occur in 2019-2020 with full service production, continuous monitoring and outcome assessment until the ERN project is reassessed in 2021. She acknowledged all of the actors involved in the implementation of the ERNs, with an emphasis on

the key role of the ERN BoMS and how they continue to contribute to the success of ERNs by defining strategies and guidelines on many important issues. The numerous positive impacts that ERNS will have on patients, professionals, healthcare systems and society were affirmed. **Anna Carta** concluded by informing participants about the publication of the Horizon 2020 (the European Union programme for research and innovation) draft work programme, which contains calls directed towards the rare disease community.

Link to the Video: https://youtu.be/OiQafzG_hbI
Presentation: The ERN Policy (pages 1-14)

The ERN Collaborative Platform and the Clinical Patient Management System

Jean-Marie Misztela, team leader of ERN IT project at the EC, briefly reviewed the three ERN IT tools proposed to the ERNs by the EC: the ERN collaborative platform (ECP), the Clinical Patient Management System (CPMS) and the simple document storage tool, Circabc. He reminded everyone that the ECP was a platform for sharing documents and a forum to facilitate networking between members but that the upload of any patient identifying data was strictly forbidden. The CPMS, currently in the testing stage, is the platform where real patient cases will soon be discussed by HCP representatives via virtual consultations. Several Key Performance Indicators (KPIs) for platform usage by ERNs had been measured, with VASCERN coming out in the lead with the most posts, thanks to our over 60 users. The videoconference tool, WebEx, was mentioned, with the main message being to read the best practice/guidelines before all meetings. The various actions that had taken place to date regarding the CPMS were reviewed and the EU login user accounts were presented as the secure login system for protecting patient data. **Jean-Marie Misztela** insisted that user feedback is greatly appreciated in order to improve the tool so it is efficient for all (send directly to: SANTE-ERN-ECP-ITSUPPORT@ec.europa.eu or SANTE-ERN-CPMS-ITSUPPORT@ec.europa.eu). He said that once they have the green light from the European Data Protection Supervisor (EDPS) the real version of the CPMS will be launched, most probably in November 2017*. He invited everyone to meet him during the lunch hour for a live CPMS demonstration.

*Post VASCERN Seminar Comment: The CPMS went live on the 20th of November, 2017

Link to the Video: https://youtu.be/Irdx8IISGcc
Presentation: The ECP and CPMS (pages 15-26)
Link to the CPMS: https://cpms.ern-net.eu/login/

Highlights: CPMS demonstration by Jean-Marie Misztela

During the lunch break of the 13th of September participants were given the chance to follow a live, 10 minute demonstration of the Clinical Patient Management System (CPMS). Groups of 15 participants at a time learned how to enrol a patient and start a panel using this new platform. To many, this was their first exposure to the CPMS. These sessions were very interactive with many important questions being brought up and feedback being given by the participants.

ERN Board of Member States views

Muriel Eliaszewicz, Representative of the French Health Ministry at the ERN Board of Member States (BoMS), gave participants a summary of the points discussed during the last BoMS meeting on October 11th, 2017. The first point was the procedure for the new ERN call for HCPs to join existing ERNs. According to the presentation of the BoMS' Chairs, she declared that each network needed to update their specific selection criteria, prepare a mapping document in order to identify geographical, scientific and clinical gaps and identify their needs for new members. Concerning the HCP call, new HCP applications will have to pass through three steps: pre-assessment of the applications by each ERN (discussions still on going on this issue), validation by MS and finally designation by the EC. It was pointed out that if the ERN and the BoMS are not in agreement, it is the decision of the BoMS that will prevail. The ERN Coordinators Group (ERN-CG) position paper on the new HCP call insisted on priority being given to HCPs in countries where ERNs are not currently represented and the need to update and harmonize the minimum set of criteria for HCP Members and to clarify the definition of a centre of excellence. EURORDIS equally prepared a position paper for this call that suggested a stepwise focused approach to new HCP Member inclusion and the need for close collaboration between ERN Coordinators and MS. The second point involved Affiliated Partners and the procedure to be followed for their nomination. The BoMS presented a draft position paper that described two types of Affiliated Partners (national centres or national coordination hubs) and how priority would be given to Affiliated Members from a country without a full member in the given ERN. The ERN-CG will be kept informed of developments and has been requested to draft a position paper on this issue, but as the final decision by the BoMS on procedures will be given in December 2017*, this will result in a delay for the call for Affiliated Partners. A discussion was also held on how to integrate the ERNs at a national level (in order to harmonize the legal frameworks of ERNs) and how patients will be referred to the ERNs. There are many points still to be clarified but she insisted that it would be crucial to determine the care pathway for the referral of patients to the ERNs and that collaboration between the BoMS, the ERN-CG and each ERN would

be beneficial to all involved. For these reasons, France participates in the WG related to the integration of ERNs at the national level.

*Post VASCERN Seminar Comment: the BoMS of December 2017 was cancelled.

Link to the Video: https://youtu.be/KKN1zQgeaKc
Presentation: ERN board of Member States Views
Link to the ERN Board of Member States page (including Members, Minutes of Meetings and key documents): https://ec.europa.eu/health/ern/board_member_states_en

European Joint Programme on Rare Diseases Research: Opportunities for ERNs

Daria Julkowska, from the French National Research Agency, gave an overview of the European Joint Programme (EJP), which is a Horizon 2020 Co-fund action designed to support coordinated national research and innovation programmes. The goal of the EJP on RDs will be to create a research and innovation pipeline in order to ensure the "rapid translation of research results into clinical applications and uptake in healthcare for the benefit of patients". The timeline of this instrument was briefly reviewed from the initial discussions with the working groups, for the preparation of the two concept drafts of the EJP, to the publication of the official work program 2018-2020 of the Commission in October 2017 that will lead to the kick-off of the official writing phase of the application for the EJP. It will consist of four pillars: funding, coordinated access to data services, capacity building and empowerment, and helpdesk and innovation, all of which ERNs can participate in. Through pillars 1-4, ERNs will be able to respond to joint transnational calls as research/clinical partners, participate in pilot projects, contribute to the e-learning platform with training material that will be shared with the RD community and finally benefit from helpdesk and support services designed to accelerate transnational research. As it will not be possible to involve all 300 ERN partners directly, there will be two options for ERNs to be beneficiaries of the EJP on RDs: either all the ERNs will be beneficiaries via a representative (either a coordinating partner or single designated partner) that will be able to distribute funds to the other members of the ERN or a selection of ERNs will be beneficiaries and others can be added later. This is still to be discussed. Lastly, **Daria Julkowska** mentioned that the European Research Area Network on Cardiovascular Diseases (ERA-CVD) is an additional funding opportunity for VASCERN members doing transnational research projects with at least 3 partners from 3 countries.

Link to the Video: https://youtu.be/xCkoLK_oFpg
Presentation: EJP on RD research: opportunities for ERNs

Q&A

After this very informative session that delved into the issues of financing and health policy that affect all ERNs, there were many questions from participants.

A Dutch HCP representative inquired about the involvement of health insurance companies, as in the Netherlands they decide where the money of funding is going. **Carta** replied although the Netherlands' healthcare system is based on this functioning, in other countries it is the public national healthcare systems, so this matter will have to be decided on a national basis.
It was warned that the concept of General Practitioners (GPs) bypassing the local HCP systems and directly contacting the ERN is risky because it could overload the healthcare professionals in the ERN and that they should first contact their local HCPs (within the ERNs) that then refer the patient to the ERN. It was agreed that the procedure for referral of patients to the ERNs needs to be discussed at the national level.

Muriel Eliaszewicz added that there is a great discrepancy between EU Member States (MS) regarding their national healthcare systems, which makes funding a complicated issue and discussions are on-going. National funding schemes for ERNs depend on the MS (e.g. Germany will give 10% budget to HCPs in the ERNs) and it is still being discussed on how to integrate the ERNs in the National Healthcare Systems. In France, National Reference and Competence Centres are clearly identified but there is still the need to work on the care pathways in order to have clear procedures for GPs referring patients to the National Reference Centres and then to the ERNs.

A participant asked about the timeline for the Affiliated Partner processes to be put into place in order to increase the participation of the smaller countries that have the greatest need for access to expertise. It was replied that for the moment it is unknown, but the BoMS hopes that in December 2017 there will be a decision taken for the next call for Affiliated Partners.

It was asked how we can include Eastern European countries as new HCP Members when they do not meet either the criteria for full members or Affiliated Partners. The standard for full member status must be maintained and countries that do not fill these criteria must wait for the Affiliated Partners call. It was reminded that only the 28 EU MS plus Norway and Iceland (European Economic Area - EEA countries) can participate in this project and apply for funding but other countries can collaborate without having the official member status.

An Italian HCP Member said that there was an upcoming national meeting on ERNs and wanted to inquire if other countries were having similar meetings and what were the main questions being discussed? **Carta** replied that ERN info days are running nationally in several countries (e.g. Spain, Germany) where patients present their needs. The main questions from HCPs so far are regarding the new calls, while the ERNs want to know how the national ministries will see the integration of the ERNs in their healthcare systems.

Link to Video: https://youtu.be/ermlpr0AysE

DAY 1: VASCERN BOARD MEETING

VASCERN Terms of Reference for Validation by the Board

Marine Hurard went through the VASCERN Terms of Reference (ToR), which are our rules of functioning. The composition, roles and responsibilities and procedures of the Board, Assembly, Coordinator & Coordination team, Council, RDWG, Transversal Working Groups and ePAG patient group (and the yet to be developed Advisory Board) were detailed. The role and responsibilities of the WG Chairs and the HCP Representatives were also outlined. The rules regarding Meetings are also included in the ToR**.** She pointed out that these ToR could be reviewed in the future and the VASCERN Board adopted the ToR as presented.

Link to the Video: https://youtu.be/iIQMFKxIW-o
Presentation: Terms of Reference for Validation by the Board

Priorities for Work Packages: feedback from Chairs

Hereditary Haemorrhagic Telangiectasia (HHT-WG) - Chair: Prof Claire Shovlin

Prof Claire Shovlin informed the plenary of the excellent progress that the HHT-WG has made to date, reaching all month 6 deliverables, and many of their month 12. She also communicated that before starting, a survey was sent out to the VASCERN HHT members, in order to prioritize the deliverables that would be addressed first and that would be of most benefit to patients. She stated that the most important new guidance to be developed by the HHT-WG was to cover areas where there was none. Through the survey results from 58 respondents, it was identified that the top problems in HHT were considered to be "bleeding and anaemia"," finding informed care/support", and "genetics and family aspects of HHT" (Abstract published in Angiogenesis 2017). She concluded by saying that the plans for the rest of Year 1 would be discussed and finalized in the HHT WG meeting the next day.

Heritable Thoracic Aortic Diseases (HTAD-WG) – Co-chair: Prof Guillaume Jondeau (replacing Chair, Prof Julie De Backer)

The HTAD-WG has chosen to focus on patient pathways. The WG has also discussed the important questions to be addressed in PoK and has prepared a list of these questions to be made into pills. They have 2 registries underway: the Montalcino Aortic Consortium (MAC) registry which is an international registry on HTADs, with the European part of the project centralized in Paris, and the ROPAC registry that will follow pregnant women with thoracic aortic diseases, currently in the planning phase. For the definition of clinical outcomes they have chosen Marfan syndrome with FBN1 mutations as well as proposed the possible parameters. A draft manuscript of ACTA2 recommendations has been drafted by Dr Ingrid Van de Laar and will be presented during the HTAD-WG session the next day.

Medium-Sized Arteries (MSA-WG) – Chair: Dr Leema Robert

The MSA-WG has focused on three main areas: Research clinical trials, registries, and patient passports. They hope to incorporate the model of the current research clinical trials being done on vEDS by Prof Xavier Jeunemaître in France and enlarge it to include other HCPs from our network. The RADICO registry, on-going in France, is also hoped to be enlarged to include patients from other centres of the MSA-WG. They have equally aimed at standardizing available patient passports in order to empower patients with their medical information that they can present to medical personnel in order to receive proper treatment. **Dr Robert** lastly emphasized that the MSA-WG has particularly enjoyed the difficult patient case discussions.

Paediatric and Primary Lymphedema (PPL-WG) – Co-chair: Prof Sahar Mansour (replacing Chair, Dr Robert Damstra)

Prof Sahar Mansour explained that although the PPL-WG had been set up a little later than the other WGs, it had nonetheless already started collecting data, working to define a patient pathway for PPL and identifying clinical guidelines and information for patients that can be used by the network.

Vascular Anomalies (VASCA-WG) – Chair: Prof Miikka Vikkula

Prof Miikka Vikkula stated that the main activity has been finalizing the Orphanet Classification on rare vascular anomalies and also trying to integrate some of the vascular anomalies in the ICD 11 classification. Once this essential step is accomplished, the VASCA-WG hopes to set up a registry, followed by the writing of recommendations. Outcome measures are to be done at the international level and will be followed up. Patient pathways will be worked on and hopefully delivered for month 12. They will also try to initiate some clinical trials for the WG although, as previously stated, there are many challenges to face when setting up transnational trials.

Link to the Video: https://youtu.be/N8B6Hyifj8k
Link to the presentation Priorities for Work Packages: Feedback from Chairs (pages 6-24)

Transversal WG - eHealth / Training and Education WG – Chair: Dr Alessandro Pini

Dr Alessandro Pini, eHealth / Training and Education WG Chair, gave a short update on the development of the VASCERN mobile application that will display our network's HCPs and POs along with their contact information, on an interactive map. He explained that through four virtual meetings, a dataset was defined for the mobile application and this dataset was sent out to all HCPs and POs to complete. Once all the datasets are complete a month will be needed in order to create the application followed by 15 days to test it and check for any errors in information. The first version will be in English and it is envisaged that a later version (timeline to be decided) will include other EU languages, translated by the HCPs or POs. Before concluding, **Dr Pini** briefly showed one of the interview-style PoK that features a specialist talking about a specific subject for 3-5 minutes. These informative PoK will be produced by the RDWGs and will cover topics for both clinicians and patients.

Link to the Video: https://youtu.be/4OI7YTXYaak
Link to the eHealth / Training and Education WG presentation (pages 26-36)

Transversal WG - Patient Registry WG - Chair: Prof Leo Schultze Kool

Prof Leo Schultze Kool, Patient Registry WG Chair, started his presentation by introducing the term interoperability and how we should aim to set up databases in such a way that not only the program but also the content are exchangeable with other databases. He briefly gave a description of the FAIR (Findable, Accessible, Interoperable, Reusable) data principles and let everyone know about the creation of a technical subgroup that will guide the implementation of FAIR within VASCERN registries. The issue of limited time of HCP representatives was the main concern brought up by several HCP representatives but after **Dr Marco Roos** highlighted how VASCERN had been invited to join a consortium of the Initiative 2 (IMI-2) call of European Health Data network (EHDN), and how it would benefit our network to be a part of this, it was voted by the majority of members to implement FAIR principles in our registries. **Prof Schultze Kool** outlined the plan of starting with local registries where the structure (minimal dataset) and program used for each database is FAIR compatible and can be extended upon later. The EC has already put out a proposed minimal dataset and each RDWG can add additional points if necessary. It was also asked that each RDWG have a representative in the Patient Registry WG in order to keep the RDWGs up to date on any developments. Prof Schultze Kool proposed that that data stewards (e.g. IT staff at HCPs) be identified in order to help with the data entry involved in setting up new FAIR registries and lessen the time and cost limitations brought up during the discussion.

Link to the Video: https://youtu.be/diEQUwOdGJg
Link to Presentation of Patient Registry WG feedback (pages 38-46)
Minimal EU Common Dataset

Funding

Marine Hurard gave a quick breakdown of VASCERN's budget by comparing the provisional budget with the actual expenses up until October 2017. The first year EU co-funding amount of 200,000 Euros was allocated to personnel costs, other direct costs (e.g. organisation of meetings including room, catering, travel and accommodation, and other subsistence costs) and subcontracting costs (e.g. communication and dissemination tools, translation, eHealth tools (Mobile App, videos)). Due to the HCP administrative delays involving the Grant Agreement preparation (resulting in no possibility to spend the EU funding until June 2017) and delays in the recruitment of the full-time Project Officer and part-time Administrative Assistant (not until September 2017), the total expenditures to date were less than what had been initially estimated. The expenses were explained, including the budget of the 2 days seminar.
One HCP member asked if the money that had not yet been spent would be lost if it was not used and it was replied that as it is a one year ERN Specific Grant Agreement (SGA), funding is not carried over into the next year. The EU 60% co-funding is received with regard to the actual expenses at the time of the financial reporting (M13-M14). The remaining money can be used until the end of M12 to cover the costs for meetings, as well as the translation of documents. For our second year of operation, funding will also be covered by a 1 year SGA (March 2018-March 2019). Afterwards, a Multiannual Grant Agreement (3 years) will enable more flexibility and time to manage expenses.

Link to the Video: https://youtu.be/fZvCHlYBSzA
Presentation of Funding (pages 48-49)

New ERN call for new ERN members

Prof Guillaume Jondeau briefly presented the ERN Coordinators position paper on the 2018 call for new members to join existing ERNs. He stressed the three main points:
1) Ensuring the expansion of the network to new countries that are not currently represented;
2) The active participation of ERNs in the decision process;
3) The regular renewal of network specific criteria to be met by all potential applicants (i.e. with experience we can change the selectivity of our criteria as required).

As the expansion to new EU Member States (MS) is the top priority for this upcoming call, it is currently unclear if new centres from MS that are already represented in the ERN will be selected or not. Finally, it was reminded that after the first year of experience, each RDWG can revise their inclusion criteria for the selection of new members, if they feel it is necessary.

Link to the Video: https://youtu.be/XkwsKXgv6lk
Presentation of New ERN call for new ERN members (pages 50-52)

Participation in interERN WG: Monitoring

Monitoring of ERN activity is imperative for evaluation and reporting purposes. **Prof Jondeau** presented the work of the interERN WG on monitoring which was set up to discuss the complex issues involved in this action and the possible indicators of activity that could be used by all ERNs. Several questions that have already caused much debate during group meetings are: who should be considered as a patient of the ERN (i.e. those that are seen by HCPs or only those discussed in a panel using the CPMS) and how to measure patient satisfaction within the ERNs. Some of the indicators that have been proposed include number of MS/WGs in network, time from diagnosis to first treatment, number of procedures performed within an ERN (e.g. surgeries), adherence to clinical practice guidelines, number of transnational (i.e. two or more HCPs from different countries) grants and/or clinical trials, and number of patients in registries. It was pointed out by an HCP Representative that the number of publications was not included in this list and **Prof Jondeau** agreed that common publications between 2 or more HCPs would indeed be a good indicator. As of now, the interERN WG on monitoring is still examining the possible indicators to be included and further deliberation is required before an official list will be finalised.

Link to the Video: https://youtu.be/tr33pNeRjLw
Presentation: Participation in interERN WG: Monitoring (pages 53-57)

Participation in interERN WG: Ethical and Legal issues

Romain Alderweireldt, VASCERN Ethics WG Chair, is a lawyer and a patient representative for ABSM (Association Belge du Syndrome de Marfan) and a member of the interERN WG on Ethics and Legal issues. He reported that the WG is currently preparing a draft document outlining the possible conflict of interests that could be encountered in the context of the ERNs in order to assist those involved in decision making processes. It should be each individual member's responsibility to disclose a particular decision or action that could be construed as a conflict of interest for them. When this occurs, they should submit their question for peer review, which will be performed by an internal review body comprised of ERN Project Managers, who will determine if a conflict of interest exists. If they are unable to reach a conclusion, the matter will be referred to the BoMS. The InterERN WG is currently working on a code of conduct that will detail the recommendations on this procedure and that will be available soon.

Link to the Video: https://youtu.be/3v7bdqvIzvs
Presentation: Participation in interERN WG: Ethical and Legal issues (pages 58-60)

RD-Action work for interERN participation

Victoria Hedley, RD-ACTION thematic coordinator, commenced her speech by pointing out that the 24 ERNs face many common challenges and that there is much to be learned from sharing knowledge with each other. RD-Action is a Joint Action for rare diseases that has been working with various stakeholders on the concept of ERNs since 2015 (before RD-ACTION, the same partners supported the conceptualization of an ERN via an earlier Joint Action, namely EUCERD Joint Action). RD-ACTION plays a role in assisting ERNs, mainly through workshops which unite ERN members, RD-Action partners (e.g. Orphanet), DG Sante, ePAGs, topic experts and Member States. The goal of these workshops is to work with the ERNs to provide guidance, policies and support and they always reserve a place for one representative from each ERN. So far, they have given workshops on such subjects as exchanging data for virtual care in the framework of ERNs, good practices for interoperable data-sharing, and indicators and outcome measures for ERNs. Upcoming workshops were detailed, including a workshop on clinical practice guidelines in December, one in Frambu, Norway (April 11-13th, 2018) on the potential of ERNs to provide integrated care for rare diseases, as well as one or two workshops on the theme of ERNs and research. She invited all participants to visit RD-Action website (http://www.rd-action.eu/european-reference-networks-erns/) where you can find presentations and reports from previous workshops.

Link to the Video: https://youtu.be/qMjIRqo9dNo
Presentation: RD-Action work for interERN participation (pages 61-69)

Criteria for an event to be endorsed by VASCERN

The criteria for the endorsement of a meeting by VASCERN were listed by **Prof Jondeau**. The program of a meeting must be viewed and accepted by the RDWG and the ethics WG in order for a meeting to be endorsed by VASCERN. Endorsement is also dependant on the fulfilment of the following requirements: meeting must include members of VASCERN, a presentation of VASCERN must be included in the program and VASCERN must be provided with at least one video (e.g.an interview of a member), photos for website, and a report of the meeting for dissemination. The organising committee of the event should send a formal letter requesting endorsement by VASCERN of their meeting, clearly stating that the requirements for endorsement will be met.

Link to video: https://youtu.be/WlZLKvZkyFM
Presentation: Criteria for an event to be endorsed by VASCERN (pages 70-71)

Registry: the FAIR principles

Dr Marco Roos, from Leiden University Medical Centre and who equally co-leads the rare disease package of Elixir, gave the final presentation of the day on the FAIR principles and how it can be integrated into our registries in order for our stakeholders to use both well-defined data from across data sources within VASCERN and relevant data from outside VASCERN for basic queries and advanced analysis without the issues caused by data incompatibility or opaque access. FAIR, which stands for Findable, Accessible, Interoperable, and Reusable, combats the problem of data siloing (i.e. data systems that are incompatible or not integrated with each other), thereby reducing the chance of lost, inefficiently used or unnecessarily recreated data. To better illustrate the advantages of FAIR, the plenary session was invited to participate in an activity where **Dr Marco Roos** introduced four patients from independent, incompatible data sources and a question ("find a candidate treatment for one patient"). By making the data sources interoperable (using common semantics and identifiers from ontologies so that they are machine readable) connections could be made to elucidate a candidate treatment for one of the patients without sharing sensitive patient information. He raised the question of who should make our data FAIR and the concept of data stewards, individuals that can be trained at the level of the HCP and act as the link between doctors and data experts, was explained. The strategy for VASCERN would be to first organise FAIR data stewardship, define the coding needed for our data, the access mechanisms needed and to define the minimum dataset.

While all participants agreed that this was an exciting project there was the unavoidable question about the magnitude of work this intervention would require, as time and funding are limited. **Dr Roos** reminded everyone that work is inevitable, whether it is though re-entering data into a new system or the conversion of existing data, but that by training your own data stewards to do some of this work, the burden on HCP representatives could be lessened. Finally one HCP representative pointed out that there did not seem to be any terms to describe the serial progression of treatment and effect. Roos replied that while ORDO and HPO are the most commonly used ontologies, there are many others that can be explored to meet our needs.

Link to the Video: https://youtu.be/1qL5Zs2JyB8
Presentation of Registry: The FAIR Principle

Patient Group (ePAG) Meeting

After the plenary session finished, the VASCERN Patient Group (ePAG) held a face to face meeting. This meeting was attended by the Patient Group (ePAG) Chair, Paolo Federici, as well as 10 other ePAG representatives. Special guest Matt Bolz-Johnson from EURORDIS also attended this meeting. The group finalized their "Wish List" (see page 30) that was presented at the end of the seminar and that highlights the priorities of patients in regards to VASCERN's activities.

DAY 2 MORNING: 5 PARALLEL RARE DISEASES WORKING GROUP SESSIONS

HHT-WG meeting

The HHT-WG meeting was attended by 12 HCP members, including the group's Chair, Prof Claire Shovlin. Three ePAG patient representatives were also present as was special guest, Matt Boltz-Johnson from Eurordis. The ePAG Co-Chair for HHT, Claudia Crocione, was unfortunately not able to make it to this meeting.

The meeting commenced with thanks to the 61 VASCERN-HHT members who had completed the VASCERN Priority Survey identifying across clinicians, patients and scientists, agreement in the most important problems in HHT (Abstract published in Angiogenesis 2017). The structure of outputs across the first year was explained with reference to the M6 and M12 deliverables and the 6 month report. The plans for the rest of Year 1 were discussed. In turn:

A one page summary of the 7 cases discussed by the

WG was presented. The cases are proving very helpful for the expert clinicians to discuss their difficult cases. In addition, it was decided that future cases for year one would be prioritized in order to ensure broad representation of other common HHT clinical situations not already discussed (e.g. paediatric bleeding, cerebral AVM, ENT/AF/anticoagulant case). The case summaries will be presented in the M12 report with an official publication in year 2. An international ethical case was also discussed and will be featured in a forthcoming publication.

- It was confirmed that the first HHT patient pathway had been completed and formally validated. Updates and additional pathways were to be considered in year 2.
- It was agreed that invited presentations to international societies would be recorded "cold" as well as sections of two VASCERN workshops held at the 2017 International HHT Meeting in Dubrovnik. HHT members were encouraged to consider recording 3-5 minute PoKs in their own language on topics previously approved by the WG. It was intended to have 2-3 recordings completed by December 2017, for upload by end of Year 1.
- Three French multicentre clinical trials were presented, one of which is completed and two that are ongoing. One future British HHT trial was also presented that is currently awaiting regulatory approvals. The various obstacles (particularly ethics and funding) to deliver multi-national ERN trials within the next 1-2 years were discussed at length by the WG. Currently, only single-centre clinical trials are completed/ in progress. The French and UK members will seek ways to involve other ERN HCPs in their ongoing or imminent clinical trials for Year 2 Outputs – these will be pilot studies with a plan to secure funding for true multicentre studies for Year 3 Outputs.
- The HHT drug registry was presented, with thanks to the VASCERN-HHT members who had entered data on the first two drugs assessed (Abstract published in Angiogenesis 2017). Currently data entry is retrospective, but it is hoped that the Drug Registry may become a prospective system to evaluate further treatments and side effects. Transverse action with the VASCA-WG (and potentially other WGs) may be feasible.
- Two potential topics were considered for the M12 Output: the Clinical Outcomes, and New Oral Anticoagulant Agents (NOACs). Each is to be the focus of an HHT WG Clinical Statement to be developed, with the first one for a M12 Output and the second for Year 2.
- The WG strongly endorsed the need for a mechanism to be found to allow the Spanish Reference HHT Centre to be allowed to join as a Full Member.

HTAD-WG meeting

The HTAD-WG meeting was attended by 19 HCP representatives, including the group's Co-Chair Prof Guillaume Jondeau, and ePAG Co-Chair Valentina Favalli in addition to two other ePAG patient representatives. Julie De Backer, chair of the HTAD-WG, was unfortunately absent from this meeting.

- The HTAD WG chose to dedicate their entire meeting to working on the definition of patient pathways for HTAD and the discussion of writing recommendations for ACTA2 disease.
- Many questions were explored in regards to the patient pathways for HTAD with clinical flowcharts for thoracic aortic aneurysm, aortic dissection, skeletal features and sudden death being discussed. It was mentioned that a Dutch patient pathway is also available and it will be examined by the group at a future meeting.
- The items defined previously for the recommended guidelines for a child/adult with ACTA2 mutations were discussed by the group, with topics including the form of imaging to be used (MRI or CT), when a first CT scan should take place, when surgery should be considered, cases with cerebral involvement, and recommended medications. Points on life-style, pregnancy/delivery and timing of a first genetic counselling session were also considered.

MSA-WG meeting

The MSA-WG meeting was attended by six HCP representatives, including Dr Leema Robert (MSA-WG Chair), as well as the ePAG Co-chair for MSA (Juergen Grunert) and an additional invited guest, Jérôme Weinbach (RADICO).

- Patient passports were discussed, in particular electronic versions. The collection of already available vEDs patient passports was underway in order to standardize patient passport.
- The possibility of using the format of the French RaDiCo registry for the MSA-WG vEDS registry was discussed. HCP members of the MSA-WG interested in participating in the RaDiCo-SEDVasc cohort as an EU recruiting centre were given details on how to do so.
- It was discussed how the French ARCADE (Angiotensin II receptor blockade in vEDS; double blind, randomized, placebo controlled, and multicenter) trial, currently underway, could be extended to other HCPs in the MSA-WG to make it a multinational trial. Many questions were brought up including how long it will take to set up in other countries, the cost of randomisation, and funding and ethical/regulatory approval issues.
- List of possible new affiliated partners for the MSA-WG was prepared. The inclusion of Alexandre Persu in Belgium for fibromuscular dysplasia was emphasized and the group awaits more information in regards to the timeline for these applications.

PPL-WG meeting

The PPL-WG meeting was chaired by Prof Sahar Mansour (Co-Chair of PPL-WG), as Prof Robert Damstra (Chair of PPL-WG) was unfortunately absent. A total of 9 HCP representatives were present in addition to the ePAG Co-chair for PPL, Natascha Assies.

- Great progress was made in defining the patient diagnostic pathway for primary lymphedema.
- A schedule for clinical case discussions was set up until February 2018.
- Existing registries were collected and the codes used were examined. It was decided that they would contact Orphanet to update the codes/classification for diseases in the PPL group as ICD10 codes are not adapted to the complexities of the diagnoses of primary lymphedema.
- A database with the status of clinical trials for the PPL-WG was to be prepared.
- Potential clinical outcome measures for the PPL-WG were discussed. Quality of life (QoL), frequency of cellulitis, and limb measurements were mentioned and their limitations examined. Further discussion on QoL as a clinical outcome measure will be had in a face to face meeting of group members in Derby, U.K. in January 2018.
- Group agreed to collect all existing guidelines and a list of possible guideline topics was made. Further discussion needed on how to prioritize which guidelines the group would like to develop. Agreed that a patient version, to be used alongside the official guidelines, would also need to be produced.
- It was brought up that members of the PPL-WG would be presenting at the 8th International Lymphoedema Framework Conference in June 2018 and suggestions for presentations were welcomed.
- List of possible new affiliated partners for PPL-WG was prepared.

VASCA-WG meeting

The VASCA-WG meeting was chaired by Prof Miikka Vikkula and was attended by 6 other HCP representatives, the ePAG co-chair Caroline Van den Bosch and 2 other patient representatives.

- Patient pathways were discussed after seeing the example of the HTAD-WG followed by brainstorming on how to include all vascular anomalies and how to take into account the many differences in primary clinical presentation and age of onset.
- The VASCA-WG wishes to integrate the Orphacodes into the ISSVA classification. There are differences between the two classification systems that need to be addressed. A subworking group will prepare a classification proposal to be discussed at a future VASCA WG meeting.

- Identification of information leaflets, booklets for patients: currenty 2 books from HEVAS, 1 from Cliniques universitaires Saint-Luc (CUSL) and one from VASCAPA (not yet printed). All will be collected to determine translation needs.
- Group wishes to set-up European expert opinions for management of vascular anomalies and task forces will be set up based on pathology.
- New collaborative ERN clinical trials and research studies were briefly elaborated. Ongoing collaborative studies within VASCA WG: VASE (4 centers: CUSL, Helsinki University Hospital, University Medical Center Freiburg, CHU de Caen) clinical trial, genetic bases of GLA/GSD (2 centers: CUSL, University Medical Center Freiburg), genotype-phenotype in VVM/HCCVM (2 centers: CUSL, Our Lady's Children's Hospital Crumlin).
- Members talked enthusiastically about the upcoming ISSVA 2018 meeting and decided which abstracts would be submitted by which group member. List of abstract topics include Orphanet and ICD11, VASCERN VASCA-WG, VASCA Registry, Multidisciplinary centers, and the Patient's Voice.
- New possible centres were identified by WG and will be contacted to see if they are ready for the full member or affiliated member calls in 2018.

DAY 2 AFTERNOON: 2 PARALLEL TRANSVERSAL WORKING GROUP SESSIONS

E-Health and Training & Education WG

The e-Health and Training & education working group was attended by 29 participants, including the Chair of the WG, Dr Alessandro Pini, and 8 ePAG patient representatives.

- An update was given on the development of the VASCERN mobile app. This APP will allow patients to easily find the closest specialist centre and the closest PO. The mobile app data set has been sent out to all HCPs and POs and it was instructed that these datasets should be completed during the meeting, if not already done so. It was agreed upon that the POs will be included in the database and for the purpose of the APP itself, all the 78 will be listed. Common mistakes to avoid when completing the datasets were mentioned to assist members with this task.
- The formal and practical issues of the mobile app were discussed. The group chose the name VASCERN App for our mobile application and it was agreed that the VASCERN logo will be used.
- It was reminded that it would take 1 month to create the 1st beta version of the mobile app, once the database has been completed, and 15 days to test the App (for functionality and to check for any errors in information). This will be followed by 7-10 days, necessary for further corrections/implementation.

- The first mobile app version will be in English with a multi-lingual APP to be developed later. It will be the responsibility of each HCP and PO to translate the information in their local language. The timeline for this will be discussed in future meetings.
- PoK were defined as "ideally" short videos (3-5 mins) where a specialist explains a given topic. It was stated that the issues to be considered when making these pills such as target (what audience are they indeded for), content (what information do we need pills to be created for, which can be collected from other sources and adapted), format (e.g. Q&A style), and media (where will these PoK be shared, e.g. VASCERN website, YouTube, mobile app, Facebook) were discussed with the group.
- It was decided that each RDWG would make a list of possible topics for their PoK and try to deliver 2 by the end of February 2018.
- The creation of a VASCERN YouTube channel will allow for the sharing of both local events from single VASCERN Members (previously endorse by the VASCERN) and VASCERN Events. It was assured that it would be launched by November 2017.

Patient Registries WG

The Patient Registry WG meeting was attended by 22 participants, including Prof Leo Schulze Kool (chair of the Patient Registry WG), and focused on the considerations and steps to be taken for the implementation of the FAIR principles in VASCERN registries. The main points presented were:

1. Time: how much work is involved to make registries FAIR compatible and who will do this work?
2. Money: it will take 40-80K to make a local database FAIR compatible. Who will pay for this? Are there funding opportunities? Who will pay for data managers?
3. Privacy issues: what are the privacy issues involved with the set-up of European registries and data sharing?
4. Local rules: National and HCP level rules regarding sharing of data and ethics
5. Publication rights: Who will have access to these databases and who will be allowed to do research and publish using this data?
6. Research questions: what are the research questions that this group want to answer? This will determine the minimum dataset for the registry. There was some discussion around this issue and it was decided to start a pilot in one of the WGs.

The EU's minimal data set was examined by all participants and Prof Shultze Kool and Dr Marco Roos questioned whether there needed to be modifications to this dataset. It was decided that each RDWG should examine the dataset and see if additional disease group specific data points were to be added.

Patient Group Wish list

Highlights: VASCERN's ePAG Wish List

At the end of the two day seminar, our patient ePAG working group updated their Wish List. They are very happy with the progress achieved to date by VASCERN members but would like underline the following priorities:

1. Improve quality and equity of diagnosis, care and treatment:
-Improve expertise, effective therapies and facilities across countries
-Drive forward equity in access to quality care e.g. through the adoption of evidence based pathways and treatment protocols, inclusive of the patient perception and preference
-Increase the level of awareness of rare vascular diseases to improve levels of diagnosis.
-Patient friendly information.

2. Always put the patient's safety first within the network and beyond:
-Clinical needs of people living with a rare vascular disease should be more widely understood and recognised in wider health system (e.g. defining different transfusion thresholds for HHT patients and its recognition in wider healthcare systems)

3. Improve pace and impact of clinical research and make it easier to conduct clinical trials:
-Improving clinical research and making it easier to conduct clinical trials across EU, specifically streamlining regulation processes (including biobanks, registries, classification)
-Increases in multicenter clinical research across the network
-Patients to contributing to research and setting patients priority

4. Prioritise the development of Disease Specific Registries:
-Registries should be prioritised with resources invested now to accelerated their development.
-Patients can support the availability of registries to build large European cohorts.
-Data quality is critical and needs to be clinically validated
-Inputting should be undertaken by patients as well as clinicians.

5. Patients to contribute to the identification of experts in the new call for HCP members for existing ERNs:
-Linking patient advocacy groups to potential new HCPs interested in focus on our conditions

Conclusion

VASCERN Days 2017 was a great success and celebrated the impressive amount of work achieved by all members to date. It was inspiring to see doctors, patient representatives and stakeholders joined together by the common goal of improving the lives of patients with rare vascular diseases. In regards to the various work package deliverables, it was summarized that although not every RDWG had completed all of them individually, collectively we had covered everything in our action plan and would meet the deliverables as a team. This showcases the true spirit of collaboration of the ERNs and is a remarkable success considering the many challenges brought up on various occasions, including the limited time of both HCP and ePAG representatives (who are participating in kind), the lack of funding that is indispensable when trying to set up such ambitious multinational projects, the ethical/legal hurdles involved with cross-border sharing of data, the administrative burdens and the complexities of integrating the ERNs into the various national health systems. Patient involvement radiated as the key to the success of ERNs with everyone agreeing that the patient's perspective should be considered in every action we take. Thanks to our very active and passionate group of ePAG representatives, the other members heard first-hand the priorities and needs of patients within the ERNs.

Satisfaction survey results (see annex) concluded that the majority of respondents enjoyed RDWG sessions most and desired longer sessions at VASCERN Days 2018. The networking opportunities were also highly valued by most respondents. Finally, funding opportunities and interERN teamwork were mentioned as desired topics for next year. It was voted that #VASCERNdays2018 will take place on October 11-12, 2018 (Location TBC) and we look forward to organising another event that nurtures collaboration and that is a rewarding experience for all of our members.

VASCERN Useful links

Website: https://vascern.eu/
ERN Collaborative Platform (Members area): https://webgate.ec.europa.eu/ern/network/access
CPMS: https://cpms.ern-net.eu/login/
Twitter: https://twitter.com/vascern
Facebook: https://www.facebook.com/vascern.eu/
YouTube: https://www.youtube.com/channel/UC1sI4_jnqiaLhjNhktiN7ZA

Annex of Seminar Report

Seminar Programme: https://vascern.eu/wp-content/uploads/2017/10/2.-Programme-VASCERN-Seminar-13-14-Oct.pdf
List of participants: https://vascern.eu/wp-content/uploads/2017/10/3.-Participants-list-VASCERN-Seminar-13-14-Oct-FINAL.pdf
List of Participants by Working Groups: https://vascern.eu/wp-content/uploads/2017/10/4-WG-participant-lists-VASCERN-Seminar-14-Oct.pdf

Satisfaction Survey Results

Organisation					
Please indicate your overall satisfaction with the organisation of the seminar in regards to:	Poor	Fair	Good	Very good	Excellent
Quality of the venue and its materials (rooms, technical equipment, etc.)	0%	15%	39%	39%	7%
	0	6	16	16	3
Quality of the meals proposed	0%	7%	31%	57%	5%
	0	3	13	24	2
Hotel accommodation (if applicable)	0%	7%	41%	49%	2%
	0	3	17	20	1
Information/communication about the seminar and venue	0%	0%	5%	46%	49%
	0	0	2	19	20
The schedule/programme for each day	0%	10%	30%	43%	18%
	0	4	12	17	7
The length of the seminar proposed each day	0%	8%	45%	38%	10%
	0	3	18	15	4
Helpfulness of on-site organisers	0%	0%	8%	40%	53%
	0	0	3	16	21
Quality of overall organisation	0%	0%	13%	47%	39%
	0	0	5	18	15
Time given for networking	3%	3%	30%	40%	25%
	1	1	12	16	10
Content of the seminar					
Please indicate your overall satisfaction in regards to the topics and content of the seminar:	Poor	Fair	Good	Very good	Excellent
Presentations and topics discussed in the plenary session	0%	16%	39%	26%	18%
	0	6	15	10	7
The choice of presenters	0%	0%	50%	30%	20%
	0	0	20	12	8
The Q&A periods	0%	5%	38%	44%	13%
	0	2	15	17	5

The topics discussed during the Board meeting	0%	13%	49%	18%	21%
	0	5	19	7	8
The length of the Board meeting	3%	19%	42%	19%	17%
	1	7	15	7	6
The length of the RDWG sessions	3%	37%	16%	26%	18%
	1	14	6	10	7
The topics discussed in the RDWG sessions	0%	3%	10%	38%	49%
	0	1	4	15	19
The length of the transversal WG sessions	0%	19%	35%	35%	10%
	0	6	11	11	3
The topics discussed in the transversal WG sessions	3%	13%	39%	32%	13%
	1	4	12	10	4
C. Post-event remarks					
	Yes	No			
Did the annual seminar meet your expectations?	97%	3%			
	37	1			
Do you have any suggestions to improve next year's seminar?	79%	21%			
	22	6			

All COMMENTS & SUGGESTIONS TO IMPROVE		
Rooms, accomodation		
Next time no presentation in the premises of the restaurant. Too much noise & not enough space. Too small plenary room, so could not see bottom of slides and acoustics was not ok so could not hear all either	3	
Bigger plenary room	6	
Meals		
Meal (Hotel) : Excellent; (Restaurant) : Fair	1	
Lenght of the different WG sessions		
More time for the RDWG sessions	23	
Transversal session	Too long Too short	2 2
More time for ePAG meeting (Patient group)	1	
Plenary, Board session	Too long	3
Less repetition on 1st day	1	
Content		
More interaction within the different WG such as HHT-Lymphoedeama & VASCA	1	
WG inter/exchange meetings f. e. VASCA/PPL met expectations	1	
Funding: We do need funds/Funding for research	2	
Overall organisation		
More networking: More time devoted to discussion, time to talk to people, meeting everyone and networking, networking	5	

Thank you for a great meeting! Excellent 2 days. Really interesting and productive. Very well organized! Good job! Thank you very much for all the hard work to support these groups. Exceedeed expectations. It's fine as it is, for me. My thanks to Marine, to Matt and to Guillaume and all the staff who made possible the meeting	9	
All aspects of the seminar were superb (with the exception of the theft during a reception but this cannot be 100% prevented)	1	
Bag opened and wallet stolen	1	
A bit more practical information/plans	1	
1st day: am General VASCERN plenary , pm 2h30 VASCERN WG 2nd day am summary VASCERN WG Chairs, 2h30 VASCERN WG + add : extras	1	
Next time Paris would be a good place host for the meeting again	1	
Longer breaks	1	
Why are there taken so much photos. Is this necessary?	1	

What were your least favourite moments of the seminar?	
The plenary session	9
CPMS (Demonstration of the patient software system, should have been better planned)	2
Achievement challenges & opportunities for the ERNs	1
Talk about funding	1
The eHealth transversal	1
Enjoyed everything :)	1
Some repetition on Day 1	2
Some presentations too technical	1
Presentation of the EJP on RDR	1
Long talks, a lot of EU abbreviations	1
Transversal groups last afternoon	1

What subject would you like to discuss at next year's seminar?	
Funding	6
Differencies between countrie in legal issues	1
More time in the groups (RDWG)	3
More information about H2020 programme EJP	1
Inter WG actions!	1
Legal aspect of registry/consent forms	1
Same topics but up to date	1
Work packages are giving the topics	1
More ERN exchange (With other ERN f. ex Skin/Brain)	1
Practical steps forward	1
More scientific topics	1
Making WG sessions at different times so that we can participate in MSA HTAD etc	1
eHealth & dataset	1
The degree of satisfaction of patients after one year and a half of ERN	1

European Reference Network
for rare or low prevalence complex diseases

Network
Vascular Diseases (VASCERN)

Coordinator
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