

**European Society of Minimally Invasive Neurological Therapy**



**ESMINT**

**THE FIRST 10 YEARS...**

**A STEPPING STONE TO THE FUTURE**



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# ESMINT MISSION





The ESMINT (European Society of Minimally Invasive Neurological Therapy) has been established in order to promote the benefits of minimally invasive neurological therapies in Europe through education, training and support for high quality scientific research.

The ESMINT society has over the course of the last 10 years followed the path that was set by the founders. They translated the goal of the society into ‘the mission’ which has three main objectives:

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## **1. Education**

*To provide continuing education and training for physicians and scientists practicing or interested in developing interventional neuroradiological or endovascular neurosurgical, minimally invasive techniques for the treatment of neurological diseases.*

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## **2. Exchange**

*To promote the exchange of ideas and information for the further definition of the role, direction and goals of interventional neuroradiology and endovascular neurosurgery.*

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## **3. Financial charter**

*The activities of the association will be funded by membership fees, participation fees and donations.*



# HISTORY



Honorary Member 2018 Alex Berenstein with the ESMINT Executive Board 2018-2020

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## Historical overview

The ESMINT society was established in Zürich on August 2009 by the founding members Prof. James Byrne, Prof. Jens Fiehler and Prof. Daniel Rüfenacht. At that time the goal of the society was to be; 'a non-profit making, educational and scientific association, providing continuing education and training for physicians and scientists with an active personal involvement and interest in interventional neuroradiology, endovascular neurosurgery and minimally invasive techniques for the treatment of neurological diseases'. A first annual meeting was started in Nice in September 2009 and a teaching course was held in December 2009 in Barcelona.

During the first meeting in Nice, the constitution of the society was written and agreed on and the first Executive Board with Prof. Jacques Moret as president, Prof. James Byrne as General Secretary and Prof. Daniel Rüfenacht as Treasurer was formed. Mike Iliopoulos, a driving force behind the installation of the board and legalities of the constitution, joined the board as a constant factor and was named Executive Director running the ESMINT office in Zürich. The office was later complemented with Birgit Amend who started with administrative work and later became the responsible person for Marketing, Communications and Public Relations. The board of the society consists, based on the constitution, of the Executive Board and the Executive Committee chairs.

Although the society has grown bigger, and the workload within the office has increased dramatically, the society managed to still perform as a non-profit organization working towards our set goals. Over those years, the Nice meeting has grown from around 250 attendees at the first meeting to more than 863 attendees from 59 countries for the last edition.

Some changes took place over the years of which the most striking one was the evolution of the ESMINT Educational activities with the inauguration of the European Course called 'ECMINT,' a theoretical course consisting of 4 weeks spanning over 2 years addressing all parts of the neurointerventional spectrum. This course can be awarded with a diploma if the student passes all tests during the week as well as the central oral and written



examination in September in Nice. This diploma may be used, in conjunction with an adequate clinical portfolio, to seek accreditation as full neurointerventionalist. The quality and completeness of the ECMINT course have made this event grow to almost 100 participants each week and requests extending throughout Europe and beyond with a substantial waiting list.

ESMINT has managed to create a name that is recognized around the world and is becoming a brand in itself, whilst it is focused on activities that help the field of neurointervention globally. For example, In close collaboration with industry partners, ESMINT was instrumental in initiating the multisociety consensus meeting that took place at the WFITN meeting in Gold Coast, Australia and creating the resulting consensus document. This document was supported by 13 partner societies around the world and has set the lower limit to the standards of training for endovascular ischemic stroke treatment. The following guideline on standards of practice, that was agreed on during the WFITN meeting in Budapest, was equally influential and has the signature of 14 global societies.

Collaboration with the different societies is something the ESMINT has always tried to achieve. This is obviated by the joint work with the European Stroke Organization; besides the ESO-ESMINT guidelines that have been written and published, a large survey on acute stroke care in geographical Europe has been executed and published. The collaboration has been formalized by a memorandum of understanding between the two societies and both annual congresses host sessions of the respective collaborative society. The Society for NeuroInterventional Surgery (SNIS) is a United States based society that also shares the ESMINT signature of a multidisciplinary approach. There is a mutual agreement between the boards of the society where a representative of one society is attending the board seminar of the other society. This in order to learn from paths already followed by the sister society but also to start collaborative projects. The SNIS annual congress, as well as the annual ESMINT congress, host a session for the sister society with their representative speakers.

With the change that took place in our field after the ischemic stroke publications, it was impossible for ESMINT not to take a leading role. Besides the guidelines and surveys

mentioned above, ESMINT saw the need to increase the educational opportunities for physicians in the interventional treatment of ischemic stroke. EXMINT was created to prepare physicians for a formal training to become a neurointerventionalist for ischemic stroke treatment. This theoretical course consists of two weeks with the same signature as the ECMINT. The first week is dedicated to basic theory on ischemic stroke, neurophysiology and neuropathology, where the second week focusses more on treatment strategies and technical questions. Teaching is done through lectures, debates and workshop session with additionally session with industry to get familiar with their materials and software. After successfully passing the tests of the two weeks, the examination will, as is the case with ECMINT, take place in Nice and consists of both oral and written sections. Passing this final examination will be awarded with the EXMINT theoretical diploma that can be used, in conjunction with an adequate clinical portfolio, to seek accreditation as an ischemic stroke interventionalist. The first edition of the course has become a huge success with participants from numerous training backgrounds. As a note, the effect of adequate teaching became already clear after the first week, when two candidates came to the conclusion that it would take too much effort to be capable to perform ischemic stroke treatment and decided not to pursue this path that their hospital had tried to get them on.

As with any society, ESMINT owns a website for all communication. This site ([www.esmint.eu](http://www.esmint.eu)) can be used as a tool to get all necessary information regarding the society as well as the upcoming courses and congresses. The site contained a 'members only' area where one could find a 'Device Directory', which listed information that manufacturers uploaded, as well as 'How-to Guides', 'Casebook', 'Guidelines' and 'Job Announcements'. The previous online journal 'EJMINT' was until mid 2019 also available on the site, although it has been discontinued since early 2017. This ESMINT portal is frequently visited and, with regular updates, remains of interest to the membership and incidental visitors.

One of the beautiful things a society can do is honor those that helped the field develop to where it is today. The Honorary Membership category was created in keeping with the constitution and is awarded to: *'individuals who are judged to have made an outstanding contribution to interventional neuroradiology, endovascular neurosurgery or minimally*

*invasive treatment of neurological diseases*'. Candidates for Honorary Membership are proposed by an ESMINT member to the Executive Committee who will validate and submit for approval and awarding by the members during the General Assembly. Honorary members are requested to give an acceptance lecture during the ESMINT Meeting in Nice. During the past meetings that have taken place twelve members have been honored

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## **ESMINT honorary members**

<i>2009</i>	<i>Jean-Jacques Merland</i>
<i>2010</i>	<i>In Sup Choi</i>
<i>2010</i>	<i>Charles Strother</i>
<i>2011</i>	<i>Luc Picard</i>
<i>2012</i>	<i>Guido Guiglielmi</i>
<i>2013</i>	<i>Olof Flodmark</i>
<i>2014</i>	<i>Jacques Moret</i>
<i>2015</i>	<i>Andy Molyneux</i>
<i>2016</i>	<i>Karel ter Brugge</i>
<i>2017</i>	<i>Hermann Zeumer</i>
<i>2018</i>	<i>Alex Bernstein</i>
<i>2019</i>	<i>James Byrne</i>



Honorary Member 2016 Karel G. Ter Brugge with the Executive Board 2014-2016

# CURRENT STATUS





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## Membership

The society has up to now proven to be a valid representation of the multidisciplinary involvement in our field and has always been open to physicians from all disciplines and backgrounds. Because of this inclusive mentality there is a clear picture of status and challenges within neurointervention across Europe.

During the first congresses, up to 2016, all attendees automatically became members of the society. This strategy was initially chosen to get the largest amount of members without too much effort. Unfortunately this system was not sustainable since many people were member without knowing this and also industry participants turned out to be full members. It was therefore decided to start a new system that would lead to active membership application and payment of fees. To allow nurses, fellows in training and industry members to join the society, a separate membership category was created for those individuals.

Since the change of the system the number of members has increased steadily and we are at around 400 members in good standing before the 2019 congress.

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## Journal

With the EJMINT being only available online and proving difficult to be indexed in MedLine, the society was in need of an official journal. After a dedicated search and several negotiation rounds it was decided to choose ‘the Journal of NeuroInterventional Surgery’ JNIS, published by BMJ journals. After the SNIS launched their journal JNIS back in 2009, the impact factor grew to 3.925. The journal has an acceptance rate of 29% and a time to (online) acceptance of 22 days. The printed version takes 7 months to publish. All these attributes were of importance to ESMINT.

By joining JNIS, all ESMINT members are entitled to free access to the online version, which can be reached through the membership area of the ESMINT website.

Since it is important for ESMINT to protect the ‘European identity’ in the journal, the society is granted 3 associate editors on the editorial board. The ESMINT may propose

an Editor in Chief, once that seat is available. The current editor in Chief is Felipe C. Albuquerque and under his guidance a new editorial board will be appointed at the end of 2019.



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## Annual Congress

The current collaboration with the European Association of Neurosurgical Societies, European Stroke Organization and Society for NeuroInterventional Surgery will be continued and more formalized. As in the previous years ESMINT will protect the congress identity with the focus being on case based discussions with the audience and presenter. Over the last years we have seen a steadily increase in the number of attendees as well as submitted abstracts. Last year the audience of more than 800 people enjoyed 121 speakers with a scientific program of 28 oral presentation selected from 96 abstract submissions. The meeting had 9 industry symposia and 4 New Technology symposia as well as 265 m<sup>2</sup> in exhibition space. It has always been a principal

decision not to have parallel sessions, and although pressure to do so is increasing we strive to stick to this.

As described previously, the number of attendees has increased dramatically and the meeting is considered to be one of the most important annual conferences in neurointervention world wide. Despite having delegates from all over the world attending, last year from 59 countries, the signature is still very European. The ESMINT Board decided to discontinue the collaboration with Europa Organization, that was responsible for the organization from the first congress until the 9th, and start to work with CONGREX organization. The first congress under their organization took place in 2018 and was a success both from an attendance perspective and financially.

Since 2016 the meeting was accompanied by a 'symposium for angiosuite personnel'. This successful formula was repeated in 2017 in conjunction with the WFITN meeting in Budapest, and last year in Nice. This symposium will this year be organized by the ESMINT team, led by A. van Es, to be held at the WFITN meeting in Napels, in order to return to Nice again for the future editions of the ESMINT congress.

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## **Collaboration**

The society has, as explained in the historical part, reached out to multiple other groups that seem to have the same goal when it comes to neurointervention. These collaborations are in the current year still very much alive.

### **SNIS**

As stated previously, this society is considered a sister society and we largely share the same goals on most of the critical issues concerning standards of training, standard of practice, accreditation and certification as well as reimbursement and ethical issues. With the SNIS being focused on the North American colleagues, and ESMINT being focused on the variability in the European Geography, it needs no explanation that there are differences when it comes to the way goals are reached. Although we may not be able to copy-paste the way SNIS introduces new legislation, there are several shared projects.

One recent initiative deals with designing a template for contracts with industrial partners. This template is designed to work for consultancy, proctoring, non-disclosure and research work between industry and our physician colleagues.

Another initiative is to develop a common unit of measurements on the packaging of neurointerventional materials. A taskforce has been set up, with the aim of it being implemented within the next couple of years. A temporary solution is being proposed and our industry partners are in consultation.



SNIS president Blaise Baxter with the ESMINT Executive Board 2016-2018

A third initiative that will start in the year 2019 is the installation of the Amy Walters Foundation with financial support from industry. This foundation is created to allow both societies to invite a patient to their respective congresses. This patient will give a lecture to give insight into the impact, of their disease and treatment, on their daily lives. They will be the honorary guest during the whole meeting and can see how physicians work to

further the field using congresses. Amy Walters is a well known colleague from industry, that suffered a major stroke during the SNIS meeting in 2017, and she is the first person to be invited to both the SNIS and ESMINT meetings to tell her story.

The SNIS has one representative present during the seminar of the ESMINT Executive Committee, likewise ESMINT has a representative attending the annual seminar of the SNIS.

## *ESO*

The European Stroke Organization is a multidisciplinary society that is focussed on the reduction of the burden of stroke by connecting researchers, physicians and lay societies throughout Europe. The connection of ESMINT with ESO has led to several shared sessions at the respective annual congresses as well as research activities and development of guidelines. The latest guideline on mechanical thrombectomy in acute ischemic stroke was published in JNIS in February 2019. The collaboration has been formalized with a memorandum of understanding that serves as a basis for mutual discussion regarding the European wide policy in furthering stroke treatment. Both organizations are motivated to have a clear and quality based accreditation system for stroke centers. The collaborative survey that looked into the status of stroke care in Europe was essential for understanding the needs in Europe and the quality and availability of care. This survey has been published in February 2018 and a follow up paper in February 2019 in collaboration with ESO, EAN and SAFE.

ESO has a representative in the Neurology Executive Committee within ESMINT.

## *EANS*

The vascular section of the EANS is very much involved with ESMINT. Besides the joint session at the ESMINT congress in Nice, there have been multiple meetings of members of both societies in order to get research going. Topics of interest that were coined were vasospasm and cortical spreading depolarization.



EANS is represented at the annual meeting by having a joint session in the program. Furthermore, the vascular section has their own annual meeting in Nice the day before the ESMINT congress. The leadership of both groups are currently looking into a closer collaboration for the annual meetings and will assess the feasibility of this.

EANS has a representative in the Neurosurgery Executive Committee within EXMINT.

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## Education



ECMINT (European Course on Minimally Invasive Neurological Therapies) is a 2-year program for trainees in interventional neuroradiology and endovascular neurosurgery. The theoretical course is comprehensive with a curriculum compliant with the requirements of the UEMS specialist

section and is currently in its third edition. It teaches trainees all theoretical components that are needed to practice the subspecialty.

Teaching is by an international faculty over 4 residential periods of 4/5 days each and these are held at St Anne's College in Oxford. Students are encouraged to complete all 4 periods in sequence, but completion of each element will credit for CME points. The ESMINT examination committee will take examinations of students throughout the course.

The course, focussing on neurovascular disease and therapy, is open to delegates from all over the world. So far, there were attendees not only from Europe and the UK but also from Australia, the Middle East, Indonesia, Southern America and the USA. Their backgrounds vary from neuroradiology to neurosurgery and neurology to cardiology.

Each cycle comprises 4 separate course weeks spread over 2 years. Each theoretical 4-5-days, comprising lectures, small group tutorials and formative quizzes/tests, covers a different topic.

- Course 1: main theme: skull base disease including arteriovenous dural fistulas, vascular skull base tumors and venous disease.
- Course 2: main theme: aneurysms, subarachnoid hemorrhage and delayed cerebral ischemia
- Course 3: main theme: ischemic stroke
- Course 4: main theme: brain and spinal vascular malformations

The course covers, within each of the four topics, embryology, neuroanatomy, vascular anatomy, neuroimaging, clinical neuroscience, pharmacology, hematology, bioengineering, natural history and pathophysiology of neurovascular disease and management, including critical care. The lectures are all delivered by experts in their field from all over Europe and the UK.

If candidates pass the examinations at the end of each course week, they may sit for the diploma examination which is held prior to the ESMINT congress in Nice. The examination consists of a 40 minutes oral examination and a 3 hour written examination. The candidates that pass this examination receive their diploma at the ceremony during ESMINT congress.



Much of the theoretical knowledge outlined by the European Board of Neurointervention (EBNI) in their recommendations for acquiring competence in endovascular neurointervention, is covered by this two-year course. Once the candidates also fulfill the practical requirements set by the EBNI, they can apply for being recognized as an EBNI-fellow in Full Neurointervention.



In addition to the Oxford based ECMINT, which focuses on the theoretical basis for the full neurointerventional spectrum, the society started an additional course focusing

on ischemic stroke called EXMINT (European Stroke Course on Minimally Invasive Neurological Therapies). This course, that started in November 2018, is separate from ECMINT and purely dedicated to those physicians who want to perform stroke treatment only and that will not perform the full neurointerventional spectrum.

One EXMINT cycle comprises two 5-day courses, including lectures, small group tutorials, debates and tests. The first week deals with the theoretical background of ischemic stroke, neuropathology, neurophysiology, pharmacology and understanding of clot pathophysiology. The second week is directed towards the ischemic stroke treatment options and standards of care. The UEMS accredited the course with respectively 26 and 27 CME credits for the two weeks. Each session is concluded with a written examination and the candidates that pass both examinations can sit for the final examination that takes place prior to the annual ESMINT congress in Nice, France. This examination, consisting of a 30 minutes oral and 3 hour written test, will lead to a diploma in Ischemic Stroke theory. This diploma is also awarded at the ceremony during the ESMINT congress.

Once the candidates also fulfill the practical requirements set by the EBNI, they can apply in order to be recognized as an EBNI-fellow in Ischemic Stroke Intervention.

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## Examination

With two high end courses being run at the same time, the society has to make sure that the examinations are of adequate quality and live up to the standards of the European Board of Neurointervention (EBNI). The Executive Committee responsible for the examinations is working in close collaboration with the course directors and teachers to create a question bank that can be used. ESMINT has a contract with the company Orzone which is specialized in examinations in the medical field. Their online based written examinations, which are randomized in order to avoid cheating, can be followed in real time by the examiners and the scores are known in a matter of minutes after the test. The database with questions can be updated based on the ambiguity of the questions according to the scored results. The registration for the examinations is also done through their web-based system.

The examination committee is responsible for both the EXMINT and ECMINT tests and for the oral examinations a combination of two independent, experienced ESMINT members per student are used. The oral examinations for the ECMINT course are based on 10 minutes on general knowledge, 15 minutes discussion of a case that the participant brought and 15 minutes discussion of a case that the examiners brought.

The oral examination for the EXMINT students is similar except for the 10 minutes test on general knowledge which is not included. All written examinations will be passed with a 80% correct score. The oral examinations are either pass or fail after consensus between the two examiners. Failing an examination does not exclude a candidate from taking that specific part of the test again in the next year.



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## European Board of NeuroIntervention

The European Board of Neurointervention – EBNI – is a forum for recognition of competence and skills deemed necessary, for specialist physicians to master when involved in neurointerventions. This Board was founded in December 2016 as an ad hoc

committee of ESMINT devoted to guidance in teaching, training, practice and accreditation in neurointervention. The EBNI is a strictly independent institution free of any commercial and political influence. The treatment of, and care for, patients in need of neurointerventional therapy is dependent on a wide variety of specialist knowledge, including several different neuroscience fields. The EBNI accepts fellowships by all skilled and trained neurointerventionalists, regardless of underlying specialty. The Board will provide up to date guidelines for teaching and training including examination and practice with the expressed goal of providing safe and best possible treatment and care for patients in need of interventional procedures in the brain, head or spine. The Board will arrange programs by which peer review is used to ascertain recognition through accreditation of competence and skills of the already established individual neurointerventionalist. The Board will also provide guidelines making it possible for institutions training future neurointerventionalists to be recognized as having an EBNI-accredited training program.



**Neurointerventionalist**  
FELLOW OF EBNI

The EBNI started recently with the accreditation of established neurointerventionalists with at least 5 years experience as a senior-consultant. Accreditation of officially recognized neurointerventional training centers has also started and all accreditation is done based on the written guidelines, which are accessible through the EBNI website [www.ebni.eu](http://www.ebni.eu) and via the ESMINT office.

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## Research

### *TENSION*

ESMINT is a consortium partner for a large study that is sponsored by EU within the Horizon 2020 projects. This study, called TENSION (thrombectomy in stroke with extended lesion and extended time window) is a European wide multicenter study that aims to get scientific data that supports treatment for patients with low ASPECT scores and stroke onset beyond 6 hours. The key role for ESMINT in this project is facilitating implementation of the results of the trial by adopting them into guidelines.



The task of ESMINT is detailed under project WP-7 within the study called 'Dissemination, Transfer, Scientific Data pooling and sharing'. The main objectives are:

- To raise public and scientific awareness of the project and of the clinical problem of thrombectomy in patients with extended stroke lesions in an extended time window
- To facilitate networking and mutual communication both to the scientific community and the general public
- To reach all the potential clinical, scientific, and non-scientific audiences (target groups)
- To ensure efficient exploitation of project results
- To provide accurate and reliable results to inform evidence-based recommendations by national and European stroke guideline committees
- To ensure the transfer of the results of TENSION into clinical practice
- To provide health-economic evaluations to governmental bodies and policy makers

TENSION is intended to have a profound impact on the treatment of acute stroke in the EU. The results of the large randomized controlled clinical trial in TENSION will provide first class evidence to guide recommendations by guideline committees and to change clinical practice. Information of cost-effectiveness will inform health policy makers in decisions and actions supporting the are-wide implementation of thrombectomy for stroke in their countries. WP7 will ensure the rapid and comprehensive dissemination of the results of the project to all target groups. Strong connections of consortium members to national and European stroke organizations as well as to the large companies providing devices for acute stroke treatment will ensure efficient dissemination of the projects results to important actors in organizing stroke treatment.

Work Program 7, within this project, will be led by ESMINT which assembles European experts for interventional stroke treatment and has been involved in promoting thrombectomy for stroke by providing joined European recommendations for the organization of interventional stroke care bringing together six European Scientific societies (Fiehler et al., 2016). Dissemination will be supported by the project Coordinator (Universitätsklinikum Hamburg-Eppendorf), the Coordinating Investigator of the clinical trial (Universitätsklinikum Heidelberg), all National Coordinators (Austria, Czech-Republic,

Denmark, France, Norway, Slovakia, Sweden), who are members of European and national stroke associations, guideline-writing groups, councils and advisory boards of neurological and stroke associations. All scientific partners will be involved in this WP, building a consortium of well renowned, highly interconnected stroke researchers. TENSION also aims at initiating future stroke research. For this purpose, TENSION will follow the idea of sharing scientific data and providing open access to trial data.

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## Guidelines

ESMINT has written a number of guidelines within our field. Most of these publications are written in collaboration with other societies to allow for broader acceptance. Both multisociety consensus documents came about through the initiative of ESMINT, and the society has been a leading force in the other collaborations too. The published guidelines are (Only First author, ESMINT Authors and Senior Author listed):

**1. *European Stroke Organisation (ESO) - European Society for Minimally Invasive Neurological Therapy (ESMINT) Guidelines on Mechanical Thrombectomy in Acute Ischemic Stroke.***

Turc G, Bhogal P, White P, Fiehler J. Et al.

a [J Neurointerv Surg. 2019 Feb 26. doi: 10.1136/neurintsurg-2018-014569.](#)

b [Eur Stroke J. 2019 Mar;4\(1\):6-12. doi: 10.1177/2396987319832140. Epub 2019 Feb 26.](#)

**2. *Multisociety Consensus Quality Improvement Revised Consensus Statement for Endovascular Therapy of Acute Ischemic Stroke: From the AANS, ASNR, CIRSE, CIRA, CNS, ESMINT, ESNR, ESO, SCAI, SNIS and WSO.***

Sacks D, Cognard C, Vorwerk D.

a [J Vasc Interv Radiol. 2018 Apr;29\(4\):441-453. doi: 10.1016/j.jvir.2017.11.026. Epub 2018 Mar 1.](#)

b [AJNR Am J Neuroradiol. 2018 Jun;39\(6\):E61-E76. doi: 10.3174/ajnr.A5638. Epub 2018 May 17.](#)

c [Int J Stroke. 2018 Aug;13\(6\):612-632. doi: 10.1177/1747493018778713. Epub 2018 May 22.](#)

**3. *European consensus conference on unruptured brain AVMs treatment (Supported by EANS, ESMINT, EGKS, and SINCH).***

Cenzato M, Szikora I, Gruber A, Chapot R, Spelle L, Morgan MK.

[Acta Neurochir \(Wien\). 2017 Jun;159\(6\):1059-1064. doi: 10.1007/s00701-017-3154-8. PMID: 28389875](#)

#### **4. Standards of practice in interventional neuroradiology.**

Jansen O, Szikora I, Causin F, Brückmann H, Lobotesis K.

Neuroradiology. 2017 Jun;59(6):541-544. doi: 10.1007/s00234-017-1837-8. PMID: 28526977

#### **5. Training Guidelines for Endovascular Ischemic Stroke Intervention: An International multi-society consensus document.**

Lavine SD, Szikora I, Pierot L, Brouwer P, Gralla J, Renowden S, Andersson T, Fiehler J, Turjman F, White P, Januel AC, Spelle L, Kulcsar Z, Chapot R, Biondi A, Dima S, Taschner C, Szajner M, Krajina A, terBrugge K

a AJNR Am J Neuroradiol. 2016 Apr;37(4):E31-4. doi: 10.3174/ajnr.A4766.

b Interv Neuroradiol. 2016 Jun;22(3):256-9. doi: 10.1177/1591019916636801. PMID: 26957547

c J Neurointerv Surg. 2016 Oct;8(10):989-91. doi: 10.1136/neurintsurg-2016-012316.

#### **6. European Recommendations on Organisation of Interventional Care in Acute Stroke (EROICAS).**

Fiehler J, Cognard C,

Int J Stroke. 2016 Aug;11(6):701-16. doi: 10.1177/1747493016647735.

#### **7. Mechanical thrombectomy in acute ischemic stroke: Consensus statement by ESO-Karolinska Stroke Update 2014/2015, supported by ESO, ESMINT, ESNR and EAN.**

Wahlgren N, Cognard C, van Zwam W, Szikora I, Pierot L, Fiehler J, Gralla J, Lees KR

Int J Stroke. 2016 Jan;11(1):134-47. doi: 10.1177/1747493015609778.

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## **MEMBER AWARDS**

ESMINT had a number of member awards that were given as a financial incentive to the elected candidates during the annual congresses. The election took place by a committee based on predefined criteria and consensus. The Stroke Awards over the past years were sponsored by industry and discontinued due to changes within that company. The EJMINT awards were discontinued after EJMINT was replaced by JNIS.

**EJMINT best paper award recipients (4.000.- € per year):**

- 2014 Igor Lima Maldonado
- 2015 Marc Ribo, Zdravka Poljakovic
- 2016 Wim van Zwam

**ESMINT stroke grant recipients (13.500.- € per year):**

- 2015 Benjamin Gory
- 2016 Dinia Lavinia, Ivan Vukasinovic



2016 EJMINT recipient Wim van Zwam with part of the 2016 Executive Board

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## Webinar and Website

The Webinar Project was initiated at the ESMINT seminar in 2014, where the Executive Committee has decided to support the project. The Webinars we considered to be a live and interactive teaching system of the society and the project was led by Zsolt Kulcsar.

The first, inaugural, session was given on March 17, 2016 with Dr. Dodi Boccardi addressing the topic 'Flow diverters for aneurysms with branch from the sac'. Thereafter a number of topics on stroke, aneurysm treatment and AVM and AVF treatment were covered by well known European colleagues. Since 2019 Jan Hendrik Buhk took over responsibility for the webinars and a total of 21 webinars have been performed to date. All webinars are free for ESMINT members in good standing and participation as a non-member is possible at a fee. All lecturers for the past webinars did their work pro-deo, for which the society is very thankful.

The ESMINT website is one of the most visible portals to our society and contains a lot of information, however we feel it is not enabling a good user experience for our members. Therefore, the ESMINT Board has embarked on a new website design which will provide members with better information and functionality, due to go live at the congress in Nice in 2019.

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## **Other projects**

Unfortunately there were some projects that did not work well. One initiative that has been proposed and probed several times is the European Wide Database for intra-arterial ischemic stroke treatment and neurointervention in general. This project had to be discontinued when it turned out that implementing a European database will have a number of legal issues regarding storage of patient data and data crossing borders. Furthermore, the willingness to input data into the database was limited for centers without a research nurse to take care of the work. Finally, the fact that there are national (compulsory) databases, available in a number of countries such as Sweden, Germany and the Netherlands (MrClean registry), would make it almost impossible to get participation of the people involved.

The project that would work towards a digital infrastructure to allow databases to communicate with each other, and thus overcome the problem of already existing databases, proved unfruitful to date.



Another project that had to be discontinued is the actively used 'Device Directory' in which the various companies had a platform to provide 'Instructions for Use' (IFU), marketing material, product specifications and portfolio overviews. The biggest problem was the maintenance of the directory for keeping the information up to date, but also the legal implications if the provided information was not the most recent version



2018-2019 EXMINT students and teachers during the course in Prague



# FUTURE

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## Introduction

The future for ESMINT looks bright and in order to achieve the goals and mission of the society, the Executive Board has designed a roadmap for the next 5 years.

The plan was presented to the Executive Committee for approval during the seminar in April 2019 and accepted unanimously.

To summarize the goal of ESMINT (European Society of Minimally Invasive Neurological Therapy) one can say that it has been established in order to promote the benefits of minimally invasive neurological therapies in Europe through education, training and support for high quality scientific research. The Executive Board wants to add that:

***ESMINT wants to provide the framework for optimal neurointerventional care executed by fully trained, qualified, and accredited physicians throughout Europe, and make it accessible to all patients.***

The Executive Board has, to this end, set four key strategic goals. The aim of setting those goals is not necessarily to have them already achieved within the next 5 years, but rather to make sure that the (new) ESMINT activities are performed to serve these goals. These four strategic goals, that will be further explained later, are:

- 1. ESMINT having a leading role in ensuring patients have access to optimal neuro-interventional care throughout Europe:*
- 2. All practicing Neurointerventionalists in Europe being a member of ESMINT. The society should start functioning more as 'a community'.*
- 3. A structure that ensures continuity of ESMINT's long term goals, that provides support and benefit for all members of the society.*
- 4. Providing the community with scientific direction and support both in terms of a truly differentiated annual ESMINT Congress, and scientific projects.*

How the Executive Board approaches those goals is described hereunder.

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## **Strategic goal #1 - Optimal Neurointerventional care in Europe**

In order to fulfill this goal, ESMINT will have to address five recognized major needs. These are:

- Adequate number of qualified physicians
- Availability to neurointerventional treatment and reimbursement of procedures
- Optimal training
- Credible accreditation

After the analysis done by ESMINT in collaboration with ESO there is a better picture of where, in the geographical European area, the number of qualified physicians is too low and where the number is sufficient. ESMINT can play a role by establishing training programs for the underdeveloped or immature areas as well as support center with remote proctoring and facilitating the exchange of physicians.

Furthermore, ESMINT would like to continue to help develop guidelines for the treatment of Neurovascular diseases to further the quality on a regional level. These guidelines could also be used to establish acceptance of 'standard of care' by the national authorities. This in turn may also lead to a reimbursement that is fair for the procedures performed.

In order to reach optimal training, ESMINT can provide access to fellowships in accredited training centers with official programs that are based on the ESMINT and international guidelines. It is obvious that both ECMINT and EXMINT courses, which are very well attended, should be continued. For those courses it is important that they seek CESMA accreditation from the UEMS to be further recognized in board accreditation processes on a European level. In addition to the courses, the ESMINT examinations with the connected diploma, have had a large impact in the acceptance of junior colleagues.



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## **Strategic goal #2 - Membership of ESMINT**

ESMINT wants to increase the membership. This obviously is not a goal by itself, it is more that the society will have more impact if it represents a large proportion of the colleagues in our field. Besides lowering the threshold of becoming a member, by keeping a reduced membership fee, it is of importance to keep the society interesting enough to become a member. We would like that ESMINT Membership is valued by each and every member. With feedback from our valuable members, we have created the Membership area on the ESMINT Website, that facilitates the webinars, JNIS link, and by having a large amount of content within the membership area. But there is more that can be done. The ESMINT Executive Board has expressed the hope that the society could function more as a community in the future. At this moment there is not a lot of activity 'between physicians' as a result of ESMINT's actions. It would be of value if activities of the society would enable close collaboration between centers on research activities but also on exchanging information, knowledge, case discussions and local expertise.

In order to create a community, we feel it is important to give people a sense of belonging. We have thus created a formal membership for angiosuite personnel, and we are excited by the new "young member" sub-committee that Uta Hanning, Matthias Gawlitzka and Aymeric Rouchaud have inaugurated this year. We do see many more opportunities though, to create additional sub-communities for different regions, or research interest groups, or specialty level to help build ESMINTs reach.

If this kind of subsections come to function they may attract new members to the society and give ESMINT the extra content that it needs to be representing all colleagues.

A final possibility is that new junior members can, if so wished, have an assigned mentor from a list of voluntarily available senior members. This mentor can be of help with difficult cases, political issues, creating a network, or be a listening ear when dealing with complications.

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### **Strategic goal #3 - ESMINT structure**

The Executive Board would like to see the structure of ESMINT to be self-explanatory and transparent for the outside world. The main goal of a redefinition of the structure would be that the tasks should be so clear and defined that the society would keep on working the way it does, no matter which person is put in what position at any given point in time.

This can be achieved by multiple initiatives. One way is making blueprints for specific recurring processes (congress, webinars, courses, examination, general assembly, industry meetings, seminars) in order to know what is expected and required. A second initiative may be that an aspiring committee member is coupled to an ExCom chair, in order to see the work from within and he/she may want to take over that position in the future.

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### **Strategic goal #4 - Scientific direction**

The society has a scientific role that should not be underestimated. With the current involvement in international trials, ESMINT is gaining exposure. The initiative that will lead to the restructuring of the size denominations within the interventional field, will have a major impact as well. For the future, the society should continue to recognize gaps in scientific knowledge and help centers, individuals or ExComs with designing new trials, creating networks to execute those trials, and realize funding from industry, government or EU bodies.

In the annual congress, ESMINT has a valuable vehicle to support all research activities and present them to the world.

ESMINT uses different approaches for fostering neurointerventional research lead by neurointerventionalists.

- ESMINT already acts as project partner in European consortia for clinical trials, funded by the European Commission, national governmental funding bodies, foundations, or

by industry. Typically, ESMINT then uses its network for public relation and for defining common standards.

- ESMINT supports European registries under neurointerventional leadership by providing independent standards for studies and providing infrastructures for cross-country cooperation within Europe. Especially young researchers can apply for support with infrastructure and some limited budget to start pilot projects.
- ESMINT organizes the exchange of young researches among European institutions and will continue to fund research awards
- The ExCom chairs of the research committee F. Turjman and the New Product Evaluation committee C. Tascher, are working together on endorsement of industry initiated trials as well as physician initiated trials. Furthermore Christian Taschner is lining up our activities for endorsing the SPIRIT-statement for good quality research.

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## **The role of industry**

Our industrial partners are important in a number of ways, their new developments force us to do trials to prove the added benefit of their products. At the same time our industry partners look to us when it comes to guidance and direction in our field. The first multisociety consensus document, on standards on training, is a very nice example of this and industry has pledged to live up to those required standards of training.

At the same time, since industry is the main source of income for ESMINT, they expect to see how we invest ‘their’ money to further our field. The Executive Board has an open-book policy towards industry and all initiatives are financially accounted for. Hence, industry will help supporting our initiatives (such as courses and webinars) by advertising it with their customers.

In order to allow industry to have a better preparation for the requested sponsorship money, the Executive Board has decided to have the former ESMINT-industry meetings canceled and to introduce a new half-day meeting between industry and the Executive Committee during the annual seminar. The biggest advantage is that this meeting will allow for a longer time to discuss the projects and also to show the results of their investments from the year before. This meeting will be ended with a friendly dinner which

will further allow the ExCom chairs to interact with industry to engage in new projects or exchange plans for the future. The industry communication is the responsibility of the Professional Liaison Executive Committee chair and will be under the guidance of the Executive Board.

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## **ESMINT and the European countries**

Our society, as claiming to be a European representation, can play a role on an international level. For example ESMINT can serve as a body that provides answers to questions from governments, health insurance, health inspectorate, accrediting bodies, national societies and the likes. This can be initiated by the body that needs an answer, but in turn the society can actively reach out to those bodies to show that we have knowledge in this field and that we are willing to help where needed, and provide information. A nice example of this is the recent request our society got from Croatia where an EBNI accredited fellow asked for help to convince the government that the specialty should be constructed in accordance with the ESMINT perspective.

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## **JNIS best European Paper Award**

In 2019 the Executive Committee has decided to start a new award which will further the scientific purpose of the society. This initiative, led by Mo Aggour, will be an award for the best publication in JNIS that originated from Europe. A group of members will judge all European papers that were published in JNIS based on predefined scoring system. This scoring system is agreed upon by the chairs of the ExCom on New Product Introduction/ Evaluation and Research; Francis Turjman and Christian Taschner.

The judges are:

- Chair of the Committee on publication (Mo Aggour)
- Editor in Chief of JNIS (Felipe Albuquerque)
- Executive Board (Patrick Brouwer, Jens Fiehler, Zsolt Kulcsar)
- Congress President (Anne-Christine Januel)





# In short...

From this document it may have become clear that ESMINT has been an active society with a name that is recognized far beyond the European boundaries. The first 10 years of our society have been exemplary, and a great teaching for the future. We invite you to become a participating member and enjoy the growing community to share the experiences and get our field forward.



ESMINT Executive Board 2016-2018

# Lists

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## Previous presidents

Jacques Moret	(2009-2010)
James Byrne	(2010-2012)
Christophe Cognard	(2012-2014)
Istvan Szikora	(2014-2016)
Laurent Pierot	(2016-2018)
Patrick Brouwer	(2018-....)

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## Previous General Secretaries

James Byrne	(2009-2010)
Daniel Rüfenacht	(2010-2012)
Istvan Szikora	(2012-2014)
Laurent Pierot	(2014-2016)
Patrick Brouwer	(2016-2018)
Jens Fiehler	(2018-....)

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## Previous Treasurers

Daniel Rüfenacht	(2009-2010)
Sören Bakke	(2010-2012)
Isabelle Wanke	(2012-2014)
Patrick Brouwer	(2014-2016)
Jens Fiehler	(2016-2018)
Zsolt Kulcsar	(2018-....)

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## Executive Committees (current since 2018)

### Standing Committees

Rules Committee	Jan Gralla (CH)
Education Committee	Shelley Renowden (GB)
Examination Committee	Tommy Andersson (SE)
	Matthias Gawlitza (FR)
Guidelines Committee	Phil White (GB)
Research Committee	Francis Turjman (FR)
Membership Committee	Anne Christine Januel (FR)
Multidisciplinary Committee	Laurent Spelle (FR)
Professional Liaison Committee	Sal Lamin (GB)
Publication Committee	Mohamed Aggour (FR)
UEMS Committee	Alessandra Biondi (FR)
Eastern Countries Cmt. for INR developm.	Stefanita Dima (RO)
New Product Introduction/Evaluation	Christian Taschner (DE)
Ethics Committee	Maciej Szarner (PL)
Electronic Media Committee	Jan-Hendrik Buhk (DE)

### Ad Hoc Committees

ESMINT Portal	Zsolt Kulcsar (CH)
ECMINT 1 + 2	James Byrne (GB)
Fellowship Program	Luca Valvassori (IT)
Neurology Committee	Marc Ribo (ES)
Neurosurgery Committee	Andreas Gruber (AT)
Congress Relations Committee	Wim van Zwam (NL)
Medical Support Committee	Ad van Es (NL)
Stroke Task Force Committee	Christophe Cognard (FR)
INR Program Committee	Francis Turjman (FR)
Reimbursement Committee	Paul Bhogal (GB)
Implementation Committee	Tony Krajina (CZ)
History Committee	Hans Nahser (GB)
Continuation Committee	James Byrne (GB)
	Christophe Cognard (FR)
	Istvan Szikora (HN)
	Laurent Pierot (FR)

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## ESMINT Office

Communication, Administration, Marketing	Birgit Amend (DE)
Strategic and marketing consultant	Chloe Brown (GB)
Legal support	Andreas Notter (CH)
Director	Mike Iliopoulos (CH)

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## List of Webinars

*(available for members through the ESMINT website)*

### ESMINT Webinar 21

Date: July 8, 2019 | 05:00 PM CEST

Topic: Stents’ design & concepts, characteristics and innovative intra-cranial stenting techniques

**Speaker: Mohamed Aggour, MD**

### ESMINT Webinar 20

Date: June 24, 2019 | 05:00 PM CEST

Topic: First Pass Rate, Best Option!

**Speaker: Jens Fiehler, MD**

### ESMINT Webinar 19

Date: June 17, 2019 | 05:00 PM CEST

Topic: Cerebral sinus thrombosis, the dilemma...

**Speaker: Patrick Brouwer, MD**

### ESMINT Webinar 18

Date: May 6, 2019 | 17:00h

Topic: Primary combined approaches in mechanical thrombectomy

**Speaker: Marios Psychogios, MD**

### ESMINT Webinar 17

Date: March 18, 2019 | 17:00h

Topic: Organizational models for thrombectomy service: which options are most promising?

**Speaker: Jens Fiehler, MD**

ESMINT webinar 16 supported by Medtronic

Date: 12 November 2018

Topic: Complex stroke treatment: access techniques and treatment strategies

**Speakers: Prof Jan Gralla, Switzerland and Dr Pasquale Mordasini, Switzerland**

ESMINT webinar 15

Date: 14 May 2018

Topic: The role of flow diverters in the treatment of complex posterior circulation aneurysms

**Speaker: Prof. Christian Taschner, Germany**

ESMINT webinar 14

Date: 6 April 2018

Topic: Intracranial Flow Disruption: Indications, Results, Tips and Tricks

**Speaker: Prof. Laurent Pierot, France**

ESMINT Webinar 13

Date: February 20, 2018 | 17:30h

Topic: Aneurysm and patient selection for FD treatment: how to achieve the best results

**Speaker: Prof. Istvan Szikora, Hungary**

ESMINT Webinar 12

Date: January 29, 2018 | 17:30h

Topic: Dural arteriovenous fistulas (DAVF)

**Speaker: Prof. Christophe Cognard, France**

ESMINT Webinar 11

Date: December 18, 2017 | 17:30h

Topic: Liquid Embolic Agents in fistulous lesions: when and why I choose what

**Speaker: Prof. Patrick Brouwer, Sweden**



ESMINT Webinar 10: Microsurgery of AVM and the surgeon's perspective on preoperative embolization

Date: November 20, 2017 | 17:30h

Topic: Microsurgery of AVM and the surgeon's perspective on preoperative embolization

**Speaker: Prof. Karl Schaller, Switzerland**

ESMINT Webinar 9: Analysis and EVT of AV-shunt lesions in the spinal canal - Part II

Date: November 6, 2017 | 17:30h

Topic: Analysis and EVT of AV-shunt lesions in the spinal canal - Part II

**Speaker: Prof. Daniel Rüfenacht and Prof. Isabel Wanke, Switzerland**

ESMINT Webinar 8

Date: October 9, 2017

Topic: Analysis and EVT of AV-shunt lesions in the spinal canal - Part I

**Speaker: Prof. Daniel Rüfenacht and Prof. Isabel Wanke, Switzerland**

ESMINT Webinar 7

Date: September 25, 2017 | 17:30h

Topic: Unruptured AVM: How to approach, when to treat and when not to?

**Speaker: Prof. Laurent Spelle, France**

ESMINT Webinar 6

Date: July 3, 2017 | 17:30h

Topic: Tandem occlusions: To stent or not to stent

**Speaker: Prof. Thomas Liebig, Germany**

ESMINT Webinar 5

Date: June 12, 2017 | 17:30h

Topic: Stroke: Complications and their treatment

**Speaker: Prof. Jan Gralla, Switzerland**

ESMINT Webinar 4

Date: May 8, 2017 | 17:30h

Topic: How to approach a cervical dissection in acute stroke

**Speaker: Dr. Paolo Machi, Geneva, Switzerland**

ESMINT Webinar 3

Date: April 24, 2017 | 17:30h

Topic: Clot and technique: how to optimize mechanical thrombectomy

**Speaker: Prof. Tommy Andersson, Stockholm**

ESMINT Webinar 2

Date: March 27, 2017 | 17:30h

Topic: Imaging based patient selection for acute stroke treatment

**Speaker: Prof. Jens Fiehler, Germany**

ESMINT Webinar 1

Date: March 6, 2017 | 17:30h

Topic: Flow diverters for aneurysms with branch from the sac

**Speaker: Prof. Edoardo Boccardi, Italy**

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## Congress organization

Ms. Olivia Montanari Bürgin  
c/o Congrex Switzerland Ltd.  
Peter Merian-Strasse 80  
4002 Basel / Switzerland



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## Current Executive Board

President Patrick Brouwer (SE/NL)



General Secretary Jens Fiehler (DE)



Treasurer Zsolt Kulcsar (CH)



Director Mike Iliopoulos (CH)



Communication, Birgit Amend (DE)

