

Dear Reader,

SITS started as an internet-based registry for intravenous thrombolysis already in 1996. In 2002 it was given a broader international role when European Union authorities requested that all patients treated with thrombolysis should be registered in SITS for a period of three years.

Today, over 270 000 patient files are included from more than 86 countries in the SITS registries. 82 scientific reports have been published/accepted for publication in international peer-reviewed journals based on SITS data, and many abstracts have been presented at different stroke conferences. This year, several abstracts based on SITS data have been accepted for presentation at ESO-WSO 2020 in Vienna, Austria.

With endovascular thrombectomy and direct oral anticoagulants revolutionising stroke care in recent years, SITS has enabled registration of data from patients who have received these and other modern therapies. The primary outcome results from the SITS Thrombectomy registry and from our first registry-based trial, SITS-OPEN, have been submitted for publication.

In 2019, SITS launched a new data entry protocol for intracerebral haemorrhage. The SITS ICH Registry has a new layout and we hope the data entry process will be easier in this format. A number of centres have started to record patient data in the ICH registry. We invite all current SITS centres to actively participate in the new registry.

In recent years, we have received requests to reduce the number of variables in our data entry protocols. We have reduced a number of variables in the IV thrombolysis and thrombectomy protocols and a new thrombectomy mini version of the data entry protocol will be launched in June 2020.

With this annual report we give an overview of the registry data, ongoing and planned activities, and a list of our publications. We take the opportunity to acknowledge the contributions of more than 330 authors involved in SITS publications. International, regional, national, national-regional, and centre/local coordinators, and users at participating centres are also acknowledged in this report.

We thank our Scientific Committee members (previous and current) who oversee scientific activities within SITS and contribute with their expert knowledge. We also thank all patients participating in the registry. Last but not least, we are grateful to our team members at the SITS Coordination Office who have been involved in the preparation of this report.

Kind regards,

N. Ahmed.

Niaz Ahmed
SITS Chairman



Nils Wahlgren
Previous SITS Chairman

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Contents

Background and purpose	4
Support and Funding	4
SITS Studies	5
SITS Registries / Data entry forms / Protocols	8
SITS World map	10
Current countries in SITS	11
General SITS data overview	12
SITS Thrombolysis Registry	13
Outcome data	15
SITS Thrombectomy Registry	18
SITS General Stroke Registry	19
SITS-EAST	20
SIECV-SITS	21
SITS Sub-Saharan Africa	22
SITS-MENA	22
SITS Top centres 2019	24
What is new in SITS – current and future	27
SITS Publications	29
Appendix	37

Background and purpose

SITS (Safe Implementation of Treatment in Stroke) is a non-profit, research-driven, independent, international collaboration. It is an initiative by the medical profession to assure excellence in acute treatment and secondary prevention of stroke, as well as to facilitate clinical trials.

SITS started in 1996 as an initiative by participants in the European-Australian randomised stroke thrombolysis studies (ECASS). In 2002, the European Medicines Agency (then EMEA, currently EMA) endorsed SITS as the registry for follow-up on thrombolysis treatment in acute ischemic stroke. SITS has since developed its services to enable follow-up of other evidence-based treatments in acute stroke such as thrombectomy, as well as secondary prevention.

The purpose of this report is to demonstrate how the registry has developed since 2002 with updated data since the previous report of 2018 and summarize how SITS has contributed to the body of knowledge on modern stroke treatment. The time span of the presented data is December 2002 – December 2019, illustrating the growth of SITS over 17 years. 82 scientific articles based on SITS data have been published/are accepted for publication in peer reviewed journals since 2007, with 333 co-authors. This would not have been possible without the dedicated efforts of SITS national, regional, and local coordinators, as well as local users.

The SITS network is expanding. More than 1700 stroke centres in more than 86 countries on five continents have contributed with data to the registry. This makes SITS one of the world's largest stroke treatment databases and networks, with participation of many leading stroke experts.

Support and Funding

SITS is financed from an unrestricted sponsorship from Boehringer-Ingelheim. SITS has previously been financed directly and indirectly by grants from Karolinska Institutet, Stockholm County Council, the Swedish Heart and Lung Foundation, the Swedish Order of St. John, Friends of Karolinska Institutet, and private donors, as well as received grants from the European Union Framework 7, the European Union Public Health Authority and Ferrer Internacional. SITS has recently completed studies supported by EVER Pharma, as well as in collaboration with Karolinska Institutet, supported by the Swedish Heart and Lung Foundation, Stryker, Covidien, PhenoX, and Codman. SITS is currently conducting studies supported by Boehringer-Ingelheim and Biogen.

SITS Studies

Completed studies

SITS-MOST – An open, prospective, non-randomised observational study of safety and efficacy of treatment with intravenous rt-PA within 3 hours of onset of acute ischaemic stroke, based on the SITS International Stroke Thrombolysis Register. Performed in European Union countries.

SITS-NEW – An observational study of safety and efficacy of intravenous rt-PA within 3 hours of symptom onset in acute ischaemic stroke patients, according to the Summary of Product Characteristics (SPC) of the countries involved. Performed in India, People's Republic of China, Singapore and South Korea.

SITS-UTMOST – A prospective, post-approval registry study of intravenous rt-PA (0.9 mg/kg) up to 4.5 hours after symptom onset in acute ischaemic stroke patients. The study has been completed and the main results were published in the European Stroke Journal in 2016.

SITS-OPEN – An international, multicentre, prospective, controlled, blinded evaluation study of safety and efficacy of thrombectomy in acute occlusive stroke. The SITS-OPEN trial results are under preparation for publication.

SITS TBY Study – A retrospective and prospective registry study of implementation of thrombectomy in routine clinical practice. The primary results were presented at ESOC 2018 and the manuscript is in its final stage for submission. Two main secondary result papers are also under preparation for submission.

SITS AF Study 1 – A retrospective and prospective study to identify the safest and most effective time point for initiation of oral anticoagulation (OAC) following ischaemic stroke of different severity in patients with atrial fibrillation.

Ongoing studies / projects

SITS AF Study 2 – A retrospective and prospective study to investigate the type, timing, safety and reasons for choice of acute interventions in patients taking direct OACs or warfarin prior to stroke onset. This study shall also evaluate the use of idarucizumab in patients on dabigatran suffering acute stroke.

Intracerebral Haemorrhage (ICH-IVH) Registry and Network – Intracerebral haemorrhage is the most devastating form of stroke, with 30-day mortality reaching 50% and half of the survivors suffering from severe disability. With emerging treatments, new diagnostic techniques and updated management guidelines for ICH, there is a need for a large international collaborative registry

to enable better follow-up, care quality assurance, and research studies in this field. The SITS ICH-IVH Registry and Network will become a valuable tool for clinicians and researchers striving to improve outcomes in the most severely afflicted stroke patients. We will soon establish an executive committee for the SITS ICH-IVH Registry. Initial data collection will go on for 2 years before analysis for the first publication will be performed. Top recruiting centre coordinators will be invited to join as co-authors and all participating centres will be acknowledged as collaborators.

SITS IVT >80 years Study – A prospective, post-approval registry of intra-venous rt-PA (0.9 mg/kg) in acute ischaemic stroke patients over 80 years within the SITS-ISTR Registry. Although IVT in patients >80 years has been used off-label in many countries, treatment in patients >80 years will probably increase further after approval. The SITS-ISTR provides an instrument for continuous monitoring of thrombolysis treatment in stroke, and provides a technical platform for the SITS >80 years post-approval study. At least 1000 patients from approximately 60 European sites are planned to be registered in this prospective study.

SITS IVT Pediatric Study – Until recently, IVT with alteplase was not approved in patients with acute ischaemic stroke aged under 18 years. Based on observational data, regulatory authorities in several countries have now approved use of IVT with alteplase in patients 16-18 years, if other Summary of Product Criteria (SmPC) are fulfilled. Regulatory authorities have requested monitoring of treatment in this age group, SITS will therefore perform a study of IVT in patients with acute ischaemic stroke aged 16-18 years. The study protocol was recently approved by the Swedish ethics committee. We encourage all SITS centres to participate in this study and interested centres can inform their paediatric department about the upcoming study.

SITS Cerebral Oedema Study – Large hemispheric infarction often leads to high morbidity and mortality and real-world data on clinical management, outcomes and healthcare utilization is limited. There is also a growing interest in understanding the efficacy and effectiveness on thrombectomy in patients with large infarcts. The number of incidents, current clinical management, recurrent strokes and functional outcomes, including how thrombectomy modifies the risk of cerebral oedema in patients with large hemispheric infarction, will form the basis for this study.

SITS-TEST – The SITS Tenecteplase in Ischemic Stroke Monitoring Study (SITS-TEST): In the SITS IVT registry, it is now possible to enter whether tenecteplase is used as IVT therapy in acute ischemic stroke. SITS is planning an observational study of safety and outcome of intravenous tenecteplase in acute stroke in routine clinical use.

SITS Fertile Woman Study – A retrospective and prospective study of intravenous rt-PA (0.9 mg/kg) given up to 4.5 hours after symptom onset in female acute ischaemic stroke patients, aged between 13 and 50 years, with particular focus on pregnancy and menstruation.

SITS Collaborative Project ESO-Angels / WSO-Angels – The European Stroke Organisation (ESO) and World Stroke Organisation (WSO) is currently implementing a Europe-wide and a world-wide project respectively aiming to stimulate high quality in stroke management by awarding excellent performance in key quality factors such as high proportion of ischaemic stroke patients undergoing reperfusion treatment, door-to-needle time, and proportion of patients treated in stroke units. Based on requests from numerous SITS users, we created the SITS-Quality Registry (SITS-QR) which can be used by SITS centres, including those participating in the ESO-Angels Award Program or the Angels Program outside ESO member countries.

Planned Projects

SITS Seizure Study – A prospective study of seizures in acute stroke patients treated with intravenous rt-PA (0.9 mg/kg) up to 4.5 hours after symptom onset.

SITS IVT Wake-up Stroke Study – SITS has published one article on IVT in patients with unknown stroke symptom onset. However, the main weakness of the study was missing data on whether the unknown onset time was due to wake-up stroke, the last known well time being known, or truly unknown time-points. Relevant variables have been added to the registry and data collection is ongoing. Top recruiting centre coordinators will be invited to join as co-authors.

SITS Low-dose IVT Study – In many Asian countries, 0.6 mg/kg bodyweight IVT thrombolysis is given instead of 0.9 mg/kg. Although the ENCHANTED trial did not show noninferiority of low-dose alteplase compared to standard-dose alteplase with respect to death and disability at 90 days, significantly fewer symptomatic intracerebral haemorrhages with low-dose alteplase occurred. SITS has now added the option to specify the alteplase dose and data collection is ongoing.

Data Completeness and High Quality Data Entry Project – SITS has started a pilot project to identify causes for incomplete data entry and ways to assist centres to complete and enter high quality data in the SITS registry. National and Local Coordinators will receive reports on data completeness at centers in their respective countries, in order to inform initiatives for improvement. The SITS-EAST Coordination Committee has agreed to start the project in SITS-EAST centres as a pilot project. The project will later be extended to SITS on a global level.

SITS Registries / Data entry forms / Protocols

A range of SITS data entry forms allow centres to collect data on patients receiving treatments during the acute stroke phase, care quality parameters and long-term outcomes.

SITS protocols are electronic forms that are automatically enabled in the registry depending on the chosen acute phase intervention. SITS protocols can also be downloaded as Case Record Forms in PDF format on the SITS website.

Current Registries / Data entry forms / Protocols

Thrombolysis Registry (IVT data entry form) – suitable for all stroke patients treated with IV thrombolysis.

- **Intravenous Thrombolysis Protocol, standard version (IVTP-s)** – protocol for registering stroke patients treated with IV thrombolysis.
- **Intravenous Thrombolysis Protocol, minimal version (IVTP-m)** – protocol for registering all stroke patients treated with IV thrombolysis. The minimal version omits certain variables at various time points, making the protocol less extensive compared to IVTP-s.

General Stroke Registry (APP-s and APP-m data entry forms) – suitable for any stroke and TIA patients who have not received IV thrombolysis or thrombectomy or for centres which do not use the IV thrombolysis or thrombectomy registries.

- **All Patients Protocol, standard version (APP-s)** – protocol for registering stroke and TIA patients who have not been treated with IV thrombolysis or thrombectomy or for centres which do not use the IV thrombolysis or thrombectomy registries.
- **All Patients Protocol, minimal version (APP-m)** – protocol for registering stroke and TIA patients who have not been treated with IV thrombolysis or thrombectomy. The minimal version omits certain baseline and imaging variables, 2-, and 24-hour follow-up.

Thrombectomy Registry standard version (TBYs Protocol) – suitable for all stroke patients treated with thrombectomy.

- **Thrombectomy Protocol, standard version (TBYs)** – protocol for registering stroke patients treated with thrombectomy with (bridging protocol) or without prior treatment with IV thrombolysis.
- **Thrombectomy Protocol, minimal version (TBY-m)** – launching soon - protocol for registering stroke patients treated with thrombectomy without prior treatment with IV thrombolysis. The minimal version omits certain variables.

Atrial Fibrillation and Oral Anticoagulation in Acute Stroke and TIA Registry

– suitable for all patients admitted to hospital with an acute ischemic stroke or TIA, diagnosed with atrial fibrillation. The registry provides additional data entry options for details surrounding atrial fibrillation and the use of oral anticoagulation for secondary stroke prevention.

SITS Quality Registry (SITS-QR) – suitable for some SITS centres, which prefer a short and simple stroke care quality registry protocol completed in 5 minutes. Can be used by centres in western European countries participating in the ESO-Angels Award Program or the Angels Program outside ESO member countries.

SITS Intracerebral Haemorrhage Registry (SITS ICH-IVH) – suitable for all stroke patients suffering intracerebral haemorrhage and/or intraventricular haemorrhage. The layout and data entry form for the SITS ICH-IVH Registry is different than the traditional SITS registry data entry form. Our aim with the new layout is to simplify data entry.

SITS COVID-19 specific variables – SITS has received a request from investigators to add COVID-19 specific variables to the data entry protocols. We have given priority to this project considering the global pandemic. These data entry options have recently been launched.

SITS Cerebral Venous Thrombosis Registry (SITS CVT) – coming soon - enables documentation of CVT risk factors, aetiology, management and outcomes of patients.

SITS World map



Current countries in SITS

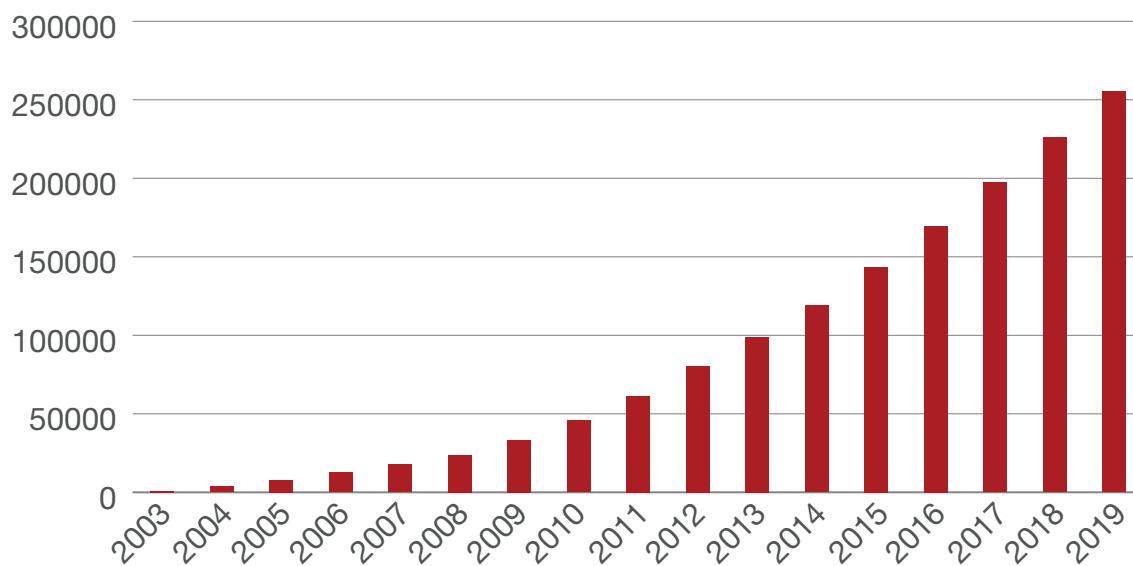
Country			
Albania	El Salvador	Libya	Russian Federation
Algeria	Estonia	Lithuania	Saudi Arabia
Argentina	Ethiopia*	Malta*	Serbia
Armenia	Finland	Mexico	Singapore
Australia	France	Rep of Moldova	Slovakia
Austria	Germany	Morocco	Slovenia
Belgium	Greece	Netherlands	South Korea
Bermuda*	Guatemala	New Zealand	Spain
Bolivia	Honduras	Nicaragua	Sri Lanka
Bosnia and Herzegovina	Hong Kong	Nigeria	Sweden
Brazil	Hungary	Norway	Switzerland
Bulgaria	Iceland	North Macedonia	Thailand
Chile	India	Oman	Tunisia
China	Iran	Pakistan	Turkey
Colombia	Ireland	Panama	Ukraine
Costa Rica	Israel	Paraguay	United Arab Emirates
Croatia	Italy	Peru	United Kingdom
Czech Republic	Japan	Philippines	Uruguay
Denmark	Kazakhstan	Poland	Venezuela
Dominican Rep	Kenya*	Portugal	Vietnam
Ecuador	Kyrgyzstan	Qatar	
Egypt	Lebanon	Romania	

* Not yet recruiting patients

General SITS data overview

Data presented in this general overview is based on all patient files entered in the SITS registries between December 25, 2002 and December 31, 2019. Patient recruitment is calculated using files with both confirmed and unconfirmed data.

Figure 1. Cumulative patient recruitment in SITS



*See the Appendix for patient recruitment per country

Table 1. Top 20 recruiting countries

Country	Patients	Country	Patients
Italy	56122	Portugal	5651
Czech Republic	33116	Egypt	4931
United Kingdom	26712	Spain	4807
Sweden	10745	Bulgaria	4362
Poland	7774	Estonia	4359
Germany	7716	Russian Federation	4167
Belgium	7322	Finland	4085
India	7074	Australia	4071
Slovakia	6555	Brazil	3989
Iran	5826	Lithuania	3946

Table 2. Number of patients registered using SITS data entry forms / protocols

Data entry forms	Number of patients
IVT standard	171751
IVT minimal	8194
Thrombectomy + IVT	9588
Thrombectomy	5927
APP Minimal	50719
APP Standard	9104

SITS Thrombolysis Registry

Data based on all patient files entered between December 25, 2002 and December 31, 2019 using the standard and minimal SITS IV Thrombolysis protocols. Patient recruitment is calculated using files with both confirmed and unconfirmed data.

Figure 2. Cumulative and annual registration of patients using IV thrombolysis protocols

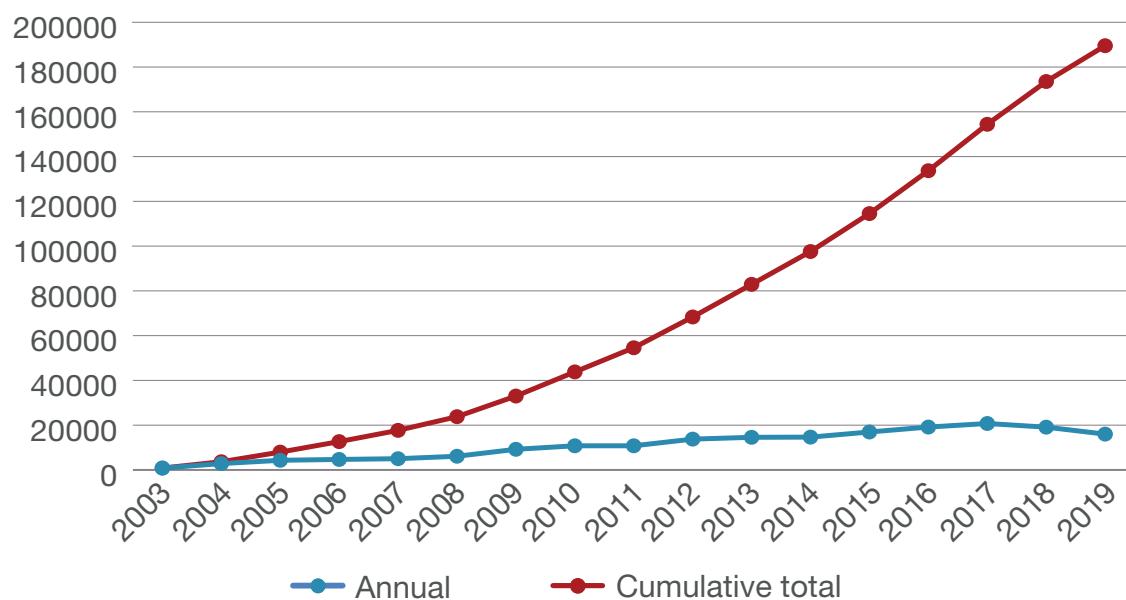


Figure 3. Change in median age per year during the last 13 years in patients with acute ischaemic stroke treated with IVT

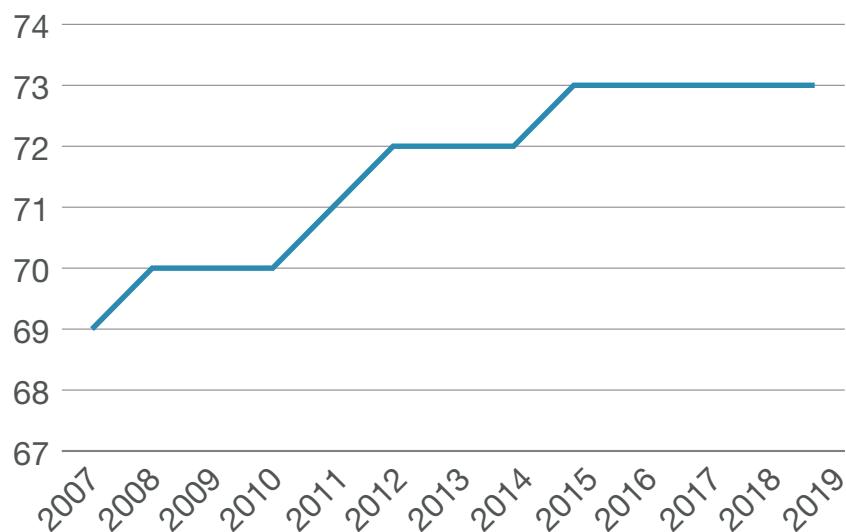


Figure 4. Change in median NIHSS score per year during the last 13 years in patients with acute ischaemic stroke treated with IVT

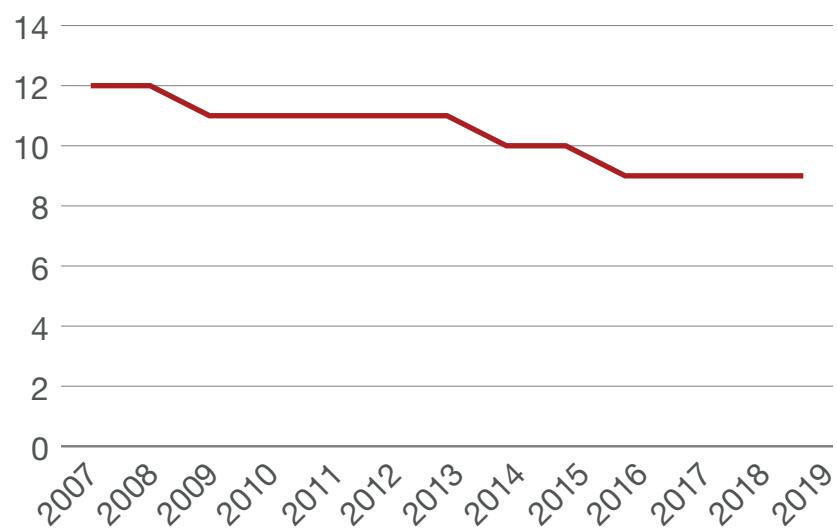
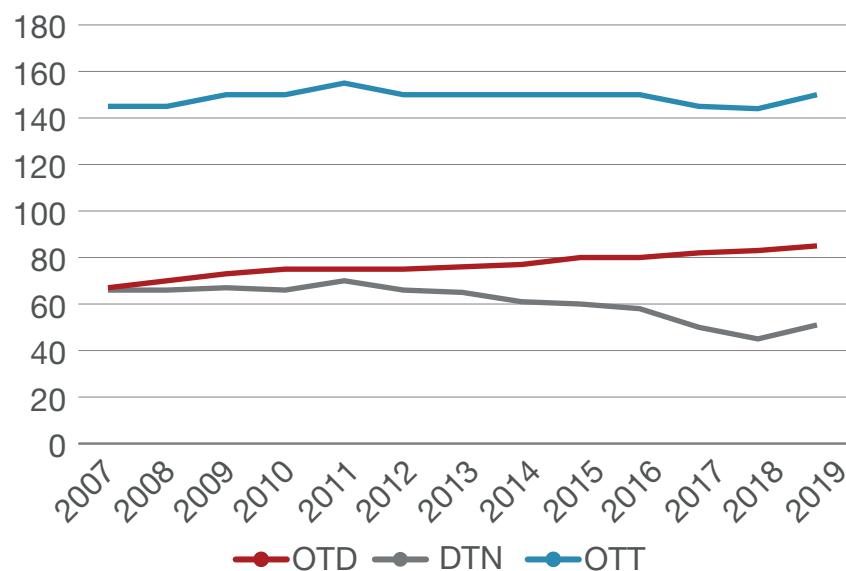


Figure 5. Change in median time logistics in minutes in IV thrombolysis treated patients - Onset to Door (OTD), Onset to Treatment (OTT) and Door to Needle (DTN)



Outcome data

Intracerebral haemorrhage in patients treated with IVT

Table 3. Proportions of patients with intracerebral haemorrhage

ICH	Proportion	SICH	Proportion
HI1	4,5%	SITS-MOST	1,7%
HI2	3,1%	ECASS II	4,5%
PH1	2,6%	NINDS	6,3%
PH2	2,7%		
PHr1	1,9%		
PHr2	1,0%		

In this table, we present the frequency of intracerebral haemorrhage (ICH) of various types, and of symptomatic intracerebral haemorrhage (SICH) by three definitions, in patients treated with IV thrombolysis. Data is based on more than 180 000 patients.

ICH Definitions

Haemorrhagic infarction type 1 (HI1): small petechiae along the margins of the infarct.

Haemorrhagic infarction type 2 (HI2): confluent petechiae within the infarcted area without space-occupying effect.

Parenchymal haemorrhage type 1 (PH1): local, or intra-ischemic confluent hematoma in $\leq 30\%$ of the infarcted area with at the most some slight space-occupying effect.

Parenchymal haemorrhage type 2 (PH2): local, or intra-ischemic confluent hematoma $>30\%$ of the infarcted area with a substantial space-occupying effect.

Remote parenchymal haemorrhage type 1 (P_Hr1): small to medium sized hematoma located remote from the infarct(s), with mild space occupying effect.

Remote parenchymal haemorrhage type 2 (P_Hr2): large confluent hematoma in an area remote from the actual infarct(s), with substantial space occupying effect.

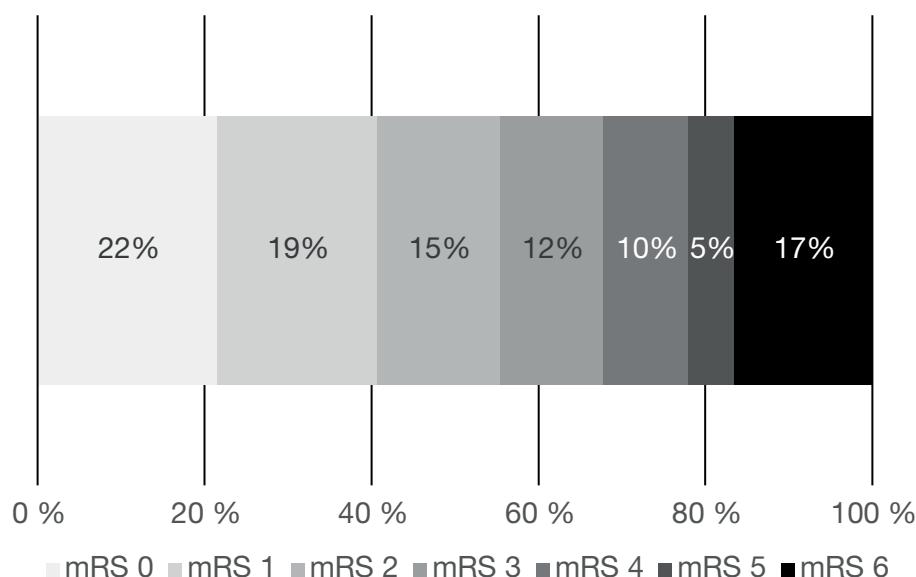
SICH Definitions

SICH per SITS-MOST: Local or remote parenchymal haemorrhage type 2 on the 22-36 h post-treatment imaging scan, combined with a neurologic deterioration of 4 points or more compared to baseline NIHSS or the lowest NIHSS value between baseline and 24 h or death within 24 h. Type 2 indicates a hematoma exceeding 30% of the infarct, with substantial space-occupying effect.

SICH per ECASS II: Any haemorrhage with neurologic deterioration as indicated by an increase in NIHSS ≥ 4 compared to baseline or the lowest value within 7 days, or any haemorrhage leading to death.

SICH per NINDS: Any intracerebral haemorrhage on any post-treatment imaging scans combined with any decline in neurologic status as measured by NIHSS between baseline and 7 days.

Figure 6. Outcome at 3 months in IVT treated patients



Data shows the distribution of patients on the modified Rankin Scale (mRS) as assessed at three months after the acute stroke.

Table 4. Outcome at 3 months in IVT treated patients

Outcome within 3 months	Proportion
Excellent outcome (mRS 0-1)	41%
Functional independence (mRS 0-2)	56%
Death	17%

SITS Thrombectomy Registry

Data based on all patient files entered between 2014 and December 31, 2019 using the SITS protocols for thrombectomy and bridging of thrombectomy with IV thrombolysis. Patient recruitment is calculated using files with both confirmed and unconfirmed data. Data collection using the thrombectomy protocols is ongoing and will be used in upcoming studies.

Figure 7. Cumulative registration of patients using thrombectomy protocols

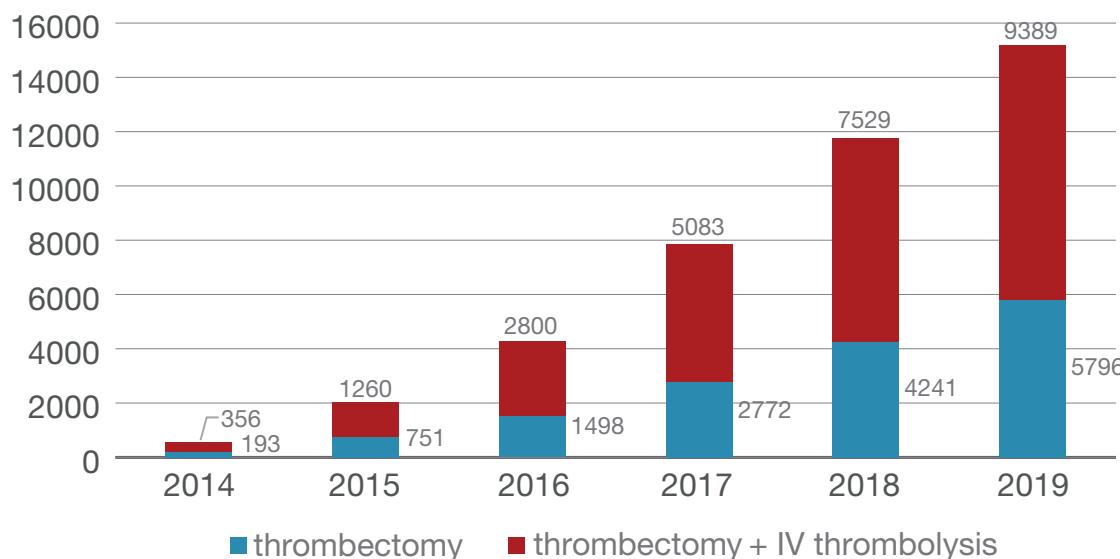


Table 5. Patient recruitment by country, thrombectomy protocols

Country	Patients	Country	Patients
Italy	3527	Greece	81
Czech Republic	3511	United Arab Emirates	54
Portugal	1420	Egypt	46
Lithuania	914	Norway	36
Slovakia	904	Russian Federation	32
Sweden	847	Thailand	28
Finland	746	Hungary	21
Belgium	696	Slovenia	21
Spain	672	Japan	18
Estonia	580	Brazil	17
United Kingdom	497	Saudi Arabia	13
Turkey	355	Panama	6
Poland	229	Morocco	4
Germany	127	Croatia	3
India	89	Australia	1

SITS General Stroke Registry

The SITS general registry is aimed for registering all stroke and TIA patients. Recruitment numbers presented are based on patient files with confirmed and unconfirmed data entered until December 31, 2019.

Figure 8. Global recruitment SITS General Stroke Registry

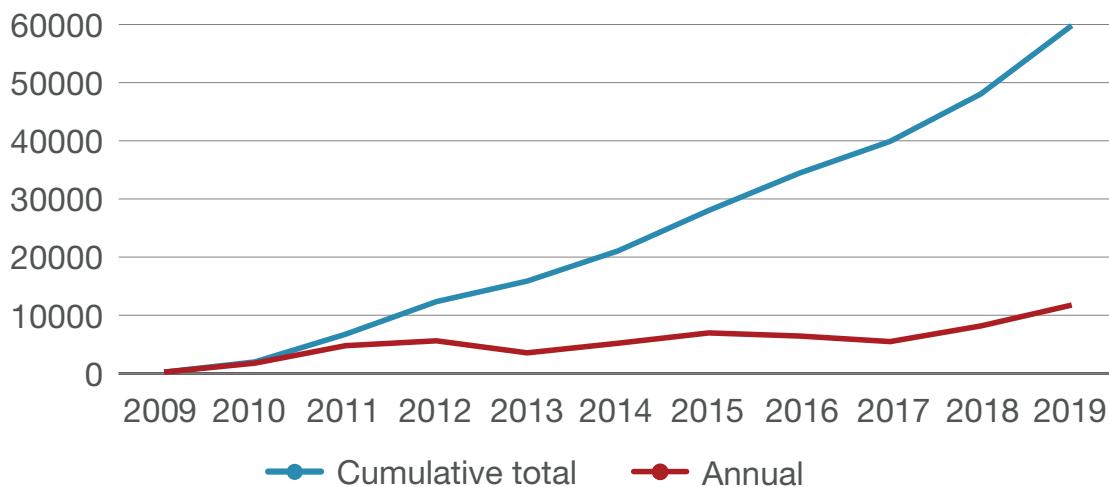


Table 6. Top 30 recruiting countries, general stroke protocols

Country	Patients	Country	Patients
India	6102	Chile	1419
Egypt	4226	Moldova	1347
Italy	4151	Turkey	1330
Bulgaria	3645	Sri Lanka	1267
Iran	3290	Argentina	1130
Tunisia	3189	Poland	1033
Russian Federation	2976	Australia	1012
Brazil	2798	Mexico	988
Qatar	2381	Morocco	917
Peru	2283	Thailand	668
Belgium	2269	Slovakia	574
Venezuela	2059	Germany	551
United Arab Emirates	1505	Czech Republic	525
Kyrgyzstan	1479	Dominican Republic	449
Sweden	1419	Ecuador	418

SITS-EAST

SITS-EAST is a regional network in Central and Eastern Europe. It started as a study of implementation of evidence-based stroke therapy supported by the SITS International Registry. The registry was initiated in autumn 2007 with the support of a European Union grant. It is now an ongoing registry for the documentation and statistical evaluation of stroke management in Eastern Europe. During 2018, the SITS EAST Coordination Committee initiated the project of data completeness and high-quality data entry. The Committee consists of Janika Körv - Estonia, Adam Kobayashi - Poland, Georgios Tsivgoulis – Greece and Zuzana Gdovinova – Slovakia.

Participating countries*:

Albania, Bulgaria, Croatia, Czech Republic, Estonia, Greece, Hungary, Kazakhstan, Kyrgyzstan, Lithuania, Macedonia, Moldova, Poland, Romania, Russian Federation, Slovakia, Slovenia, Turkey, Ukraine, Bosnia and Herzegovina, Armenia, Serbia

*See the Appendix for participating centres.

Figure 9. Cumulative recruitment, SITS-EAST – all protocols

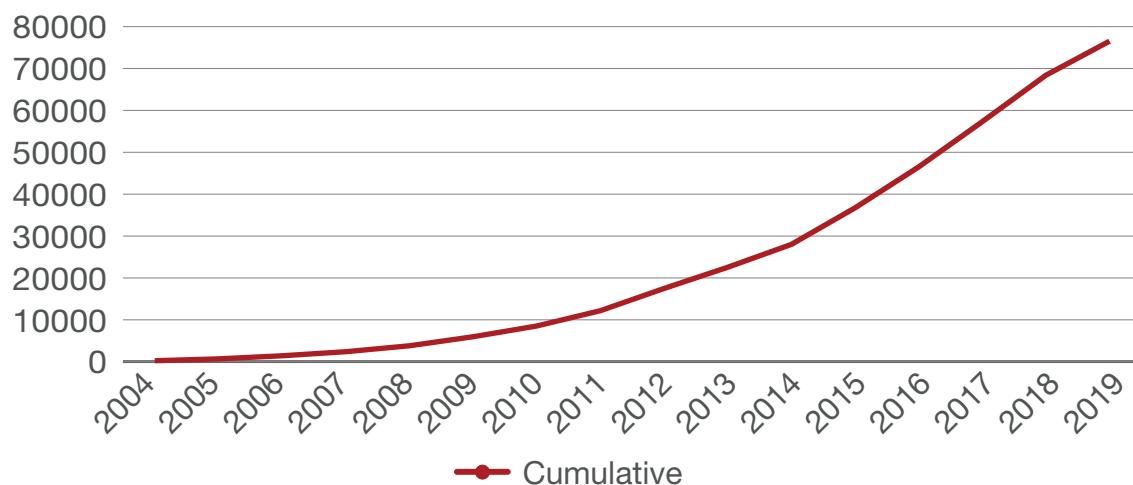
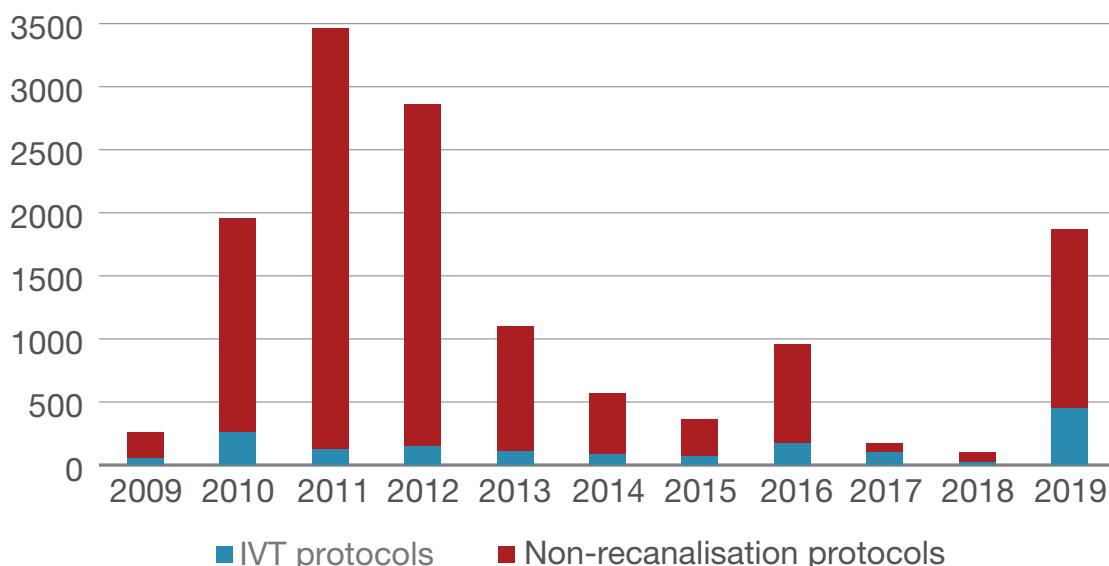


Table 7. Number of patients registered using SITS protocols in SITS-EAST

Data entry forms	Number of patients
EVT Protocols	6651
IVT Protocols	56188
APP Protocols	13729
QR Protocols	697
Total	77265

SIECV-SITS

Figure 10. Annual recruitment, SIECV-SITS – all protocols



The SIECV-SITS registry was initiated through a joint venture by Sociedad Iberoamericana de Enfermedades Cerebrovasculares (SIECV) and SITS. The SIECV-SITS Stroke Registry is a database for documentation and statistical evaluation of stroke management in Central and Latin America. Recruitment numbers presented are based on patient files with confirmed and unconfirmed data, entered until December 31, 2019. Since 2018, Sheila Martins is appointed International Regional Coordinator for SIECV-SITS.

Participating countries*:

Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela.

*See the Appendix for participating centres.

Table 8. Number of patients registered using SITS protocols in SIECV-SITS

Data entry forms	Number of patients
EVT Protocols	23
IVT Protocols	1583
APP Protocols	12112
QR Protocols	1925
Total	15643

SITS Sub-Saharan Africa

The SITS – Sub-Saharan Africa registry is a regional network south of the Sahara. Since 2018, Foad Abd-Allah functions as the International Regional Coordinator for SITS Sub-Saharan Africa.

Participating countries*:

Ethiopia, Kenya, Nigeria, Tanzania.

*See the Appendix for participating centres.

SITS-MENA

The SITS-MENA Registry was initiated in 2013 as part of the SITS Regional Network in the Middle East and North Africa. Several countries and centres in the Regional Network are also participating in a prospective observational study of ischemic stroke in the region. Recruitment numbers presented are based on patient files with confirmed and unconfirmed data, entered until December 31, 2019. Since 2018, Suhail Alrukn functions as the International Regional Coordinator for the SITS MENA region.

Participating countries*:

Algeria, Egypt, Iran, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Tunisia, United Arab Emirates.

*See the Appendix for participating centres.

Figure 11. Annual recruitment, SITS-MENA – IVT and APP Protocols

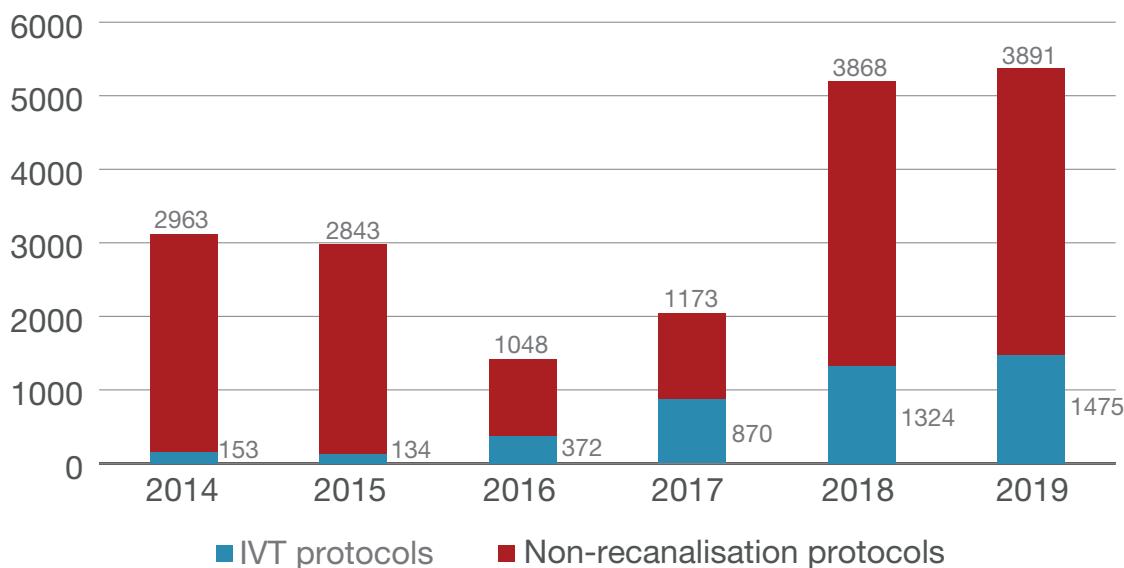


Table 9. Number of patients registered using SITS protocols in SITS-MENA

Data entry forms	Number of patients
EVT Protocols	117
IVT Protocols	4395
APP Protocols	15855
QR Protocols	4857
Total	25224



Picture from the META Stroke Academy meeting held in Dubai 13-14th of December 2019 where SITS participated.

SITS Top centres 2019

Each year, SITS points out the top 20 centres fulfilling the highest standards of data collection into the SITS Registry over the last two years. The SITS Top Centres list is initiated to encourage centres to continue to enter high quality data into the SITS Registry and in keeping with our mission - to assure excellence in acute treatment and secondary prevention of stroke, as well as to facilitate clinical research.

The following centres received a diploma as the 2019 top centre in SITS using the IVT/TBY/APP protocol / the SITS Registry for the longest time period:

IVT protocol Top Centers

1. Valiasr – IRAN
LC: Abdoreza Ghoreishi
2. University Hospital of Heidelberg – GERMANY
LC: Peter Ringleb
3. South Glasgow University Hospital – UNITED KINGDOM
LC: Azmil Abdul-Rahim & Angela Welch
4. Tartu University Hospital – ESTONIA
LC: Janika Körv
5. Krajska Nemocnice Liberec – CZECH REPUBLIC
LC: Lubomir Jurak
6. Aberdeen Royal Infirmary – UNITED KINGDOM
LC: Mary Joan Macleod
7. Hamad General Hospital – QATAR
LC: Naveed Akhtar
8. FN Motol – CZECH REPUBLIC
LC: Ivana Sarbochova

TBY protocol Top Centers

1. Hospital Sao Jose – PORTUGAL
LC: Ana Paiva Nunes
2. FN Ostrava – CZECH REPUBLIC
LC: Eva Hurtikova
3. FN Olomouc – CZECH REPUBLIC
LC: Daniel Sanak
4. Hospital San Carlos – SPAIN
LC: Jose Egido
5. FN Hradec Kralove – CZECH REPUBLIC
LC: Eva Vitkova

APP protocol Top Centers

1. Hamad General Hospital – QATAR
LC: Naveed Akhtar
2. Sveta Marina Varna – BULGARIA
LC: Evgeniya Kalevska, Silva Andonova
3. Valiasr – IRAN
LC: Abdoreza Ghoreishi

Longest Time Period in SITS Registry

1. Karolinska University Hospital – SWEDEN
LC: Tiago Moreira
2. Helsinki University Central Hospital – FINLAND
LC: Daniel Strbian, Lauri Soinne
3. CHU St. Luc Woluwe – BELGIUM
LC: Andre Peeters
4. Newcastle upon Tyne Hospitals NHS Foundation Trust – UNITED KINGDOM
LC: Anand Dixit

What is new in SITS – current and future

The number of centres and countries participating in SITS has increased further during 2019. Patient input to the registry has continued to reach all time high levels. We believe this is a strong indicator that SITS remains highly relevant for centres treating acute stroke patients worldwide.

The SITS ICH Registry, a new data entry form with a new layout was launched in May 2019. We invite all SITS Local Coordinators to try the ICH data entry form at their centre.

Recruitment from the SITS-MENA (Middle East and North Africa) network has seen strong progress. Selected centres from the SITS-MENA countries participated in a two-year prospective observational study of demographics, risk factors and treatments in stroke patients. The results of the study were published in the International Journal of Stroke. A prospective observational study of IV thrombolysis treatment in the region has also recently been published. A follow-up study of the use of IVT in the MENA region will be initiated during the spring of 2020.

A renewal of the SITS regional network in Latin America has recently been started, and we look forward to increased participation by new and old SITS centers. A report describing the results of the first SIECV-SITS observational study was recently published in Stroke. SITS also participated in the Global Stroke Alliance meeting in Brazil in March 2020 which was a great success, and we hope these types of activities contributes to increased participation in the region.

SITS implemented a thrombectomy registry in 2013 and a strong increase in patient recruitment was seen in both 2017, 2018 and 2019. The primary results of the thrombectomy registry has been submitted for publication and main secondary results are being analysed and will be submitted for publication during 2020. We encourage SITS centres to submit project proposals for further analysis of the thrombectomy dataset.

SITS is increasingly focusing on data quality and completeness. We started a pilot project in 2018 in collaboration with SITS National Coordinators in SITS-EAST countries and this work will continue in the future on a global level.

We also started announcing centres with top recruitment and high level of data completeness. With this we hope to stimulate recruitment and data quality in the SITS registry.

In 2014, we developed a new online reporting tool for descriptive patient statistics. With this tool, SITS users can select and obtain pre-designed reports, where standard variables are already chosen, or create custom-made reports. The output can be downloaded either as raw data presented in an excel file structured on an individual patient level, or as a summary with calculated descriptive statistics.

In 2015 we developed a new tool, called Download tool, that enables SITS users to export their patient raw data registered in their SITS centre. Centres can download their centre data and National Coordinator can download national data.

In 2018, we developed a new data entry form, called SITS-QR, which is a lightweight protocol focusing on a few numbers of quality parameters in patient care. SITS centres can consent to participate with their SITS-QR results quarterly in an international programme, called Angels Award, to help centre improve their stroke care.

SITS has recently completed the work on reducing a number of variables from the IVT protocol in collaboration with Prof. Danilo Toni, the National Coordinator for Italy. A minimal version of the thrombectomy protocol will also be launched, during 2020.

During the ongoing pandemic of COVID-19, we have received request from SITS users to create a COVID-19 stroke related questionnaire in the SITS Registry. We have given priority to this project and the COVID-19 stroke related questionnaire was launched in June 2020.

Our intention with this report is to give the reader an update on SITS patient and centre recruitment status, as well as ongoing and planned activities since the publication of the first SITS International Report in 2014. We plan to publish the next report in spring 2021. We would be delighted to receive feedback on the current issue, as well as suggestions for future report contents. Any views and ideas on all matters concerning SITS are warmly welcomed by the International Coordinating Office.

SITS Publications

- 82.** Irene Escudero-Martínez, Michael V. Mazya, Christine Teutsch, Norbert Lesko, Zuzana Gdovinova, Leonardo Barbarini, Waldemar Fryze, Michal Karlinski, Adam Kobayashi, Georgi Krastev, Ana Paiva Nunes, Katarina Pasztoova, Andre Peeters MD, Piotr Sobolewski, Aleksandras Vilionskis, Danilo Toni, Niaz Ahmed MD; on behalf of the SITS Investigators. **Dabigatran initiation in patients with non-valvular AF and first acute ischemic stroke: a retrospective observational study from the SITS registry.** BMJ Open 2020;10:e037234. doi: 10.1136/bmjopen-2020-037234
- 81.** Keselman B, Gdovinová Z, Jatuzis D, Melo TPE, Vilionskis A, Cavallo R, Frol S, Jurak L, Koyuncu B, Nunes AP, Petrone A, Lees KR, Mazya MV, **Safety and Outcomes of Intravenous Thrombolysis in Posterior Versus Anterior Circulation Stroke: Results From the Safe Implementation of Treatments in Stroke Registry and Meta-Analysis.** Stroke. 2020 Mar;51(3):876-882. doi:10.1161/STROKEAHA.119.027071. Epub 2020 Jan 9 [PubMed]
- 80.** Alhazzani A, Al-Rukn S, Khan M, Moreira T, Wahlgren N. **Changing the face of stroke care in the Middle East North Africa region.** Stroke. 2020 February, Journal of the Neurological Sciences vol. 412, doi:10.1016/j.jns.2020.116727 [Epub ahead of print] [ScienceDirect]
- 79.** Thorén M, Dixit A, Escudero-Martinez I, Gdovinová Z, Klecka L, Rand VM, Toni D, Vilionskis A, Wahlgren N, Ahmed N. **Effect of Recanalization on Cerebral Edema in Ischemic Stroke Treated With Thrombolysis and/or Endovascular Therapy.** Stroke. 2020 Jan;51(1):216-223. doi: 10.1161/STROKEAHA.119.026692 [PubMed]
- 78.** Matusevicius M, Cooray C, Bottai M, Mazya M, Tsivgoulis G, Nunes AP, Moreira T, Ollikainen J, Tassi R, Strbian D, Toni D, Holmin S, Ahmed N. **Blood Pressure After Endovascular Thrombectomy: Modeling for Outcomes Based on Recanalization Status.** Stroke. 2019 Dec 11:STROKEAHA119026914. doi:10.1161/STROKEAHA.119.026914. [Epub ahead of print] [PubMed]
- 77.** Al-Rukn S, Mazya M, Akhtar N, Hashim H, Mansouri B, Faouzi B, Aref H, Abdulrahman H, Kesraoui S, Hentati F, Gebely S, Ahmed N, Wahlgren N, Abd-Allah F, Almekhlafi M, Moreira T. **Stroke in the Middle-East and North Africa: A 2-year prospective observational study of intravenous thrombolysis treatment in the region. Results from the SITS-MENA Registry.** Int J Stroke. 2019 Oct 8:1747493019874729. doi: 10.1177/1747493019874729. [Epub ahead of print] [PubMed]
- 76.** Charith Cooray, Michael Mazya, Robert Mikulik, Jurak Lubomir, Miroslav Brozman, Peter Ringleb, Anand Dixit, Danilo Toni, Niaz Ahmed. **Safety and outcome of intravenous thrombolysis in acute ischaemic stroke patients on prophylactic doses of low-molecular-weight heparins at stroke onset.** Stroke 2019 May;50(5):1149-1155. doi: 10.1161/STROKEAHA.118.024575.[PubMed]
- 75.** Alonso de Leciñana M, Mazya MV, Kostulas N, Del Brutto OH, Abanto C, Massaro AR, de Bastos M, Martins S, Ameriso SF, Gongora-Rivera F, Sacks C, Hoppe A, Abad P, Meza G, Arauz-Gongora A, Wahlgren N, Díez-Tejedor E; SITS-SIECV Investigators. **Stroke Care and Application of Thrombolysis in Ibero-America: Report From the SITS-SIECV Ibero-American Stroke Register.** Stroke. 2019 Sep;50(9):2507–2512. doi: 10.1161/STROKEAHA.119.025668. Epub 2019 Aug 6. [PubMed]
- 74.** Keselman B, Cooray C, Vanhooren G, Bassi P, Consoli D, Nichelli P, Peeters A, Sanak D, Zini A, Wahlgren N, Ahmed N, Mazya MV. **IV thrombolysis in stroke mimics - Results from the SITS International Stroke Thrombolysis Register (SITS-ISTR).** European Journal of Neurology. Accepted for publication, 2019-02-19.

- 73.** Marius Matusevicius, Maurizio Paciaroni, Valeria Caso, Matteo Bottai, Dheeraj Khurana, Mario de Bastos, Sheila Cristina Ouriques Martins, Yakup Krespi, Charith Cooray, Danilo Toni, Niaz Ahmed. **Outcome after intravenous thrombolysis in patients with acute lacunar stroke, an observational study based on SITS international registry** (Accepted for publication in International Journal of Stroke, January 2019)
- 72.** Al-Rukn S, Mazya MV, Akhtar N, Hashim H, Mansouri B, Faouzi B, Aref H, Abdulrahman H, Kesraoui S, Hentati F, Gebelly S, Ahmed N, Wahlgren N, Abd-Allah F, Almekhlafi M, Moreira T. **Stroke in the Middle-East and North Africa: A 2-year prospective observational study of stroke characteristics in the region.** Results from the SITS-MENA Registry. International Journal of Stroke. Accepted for publication.
- 71.** Are you suffering from a large arterial occlusion? Please raise your arm! Cooray C, Mazya MV, Bottai M, Scheitz JF, Abdul-Rahim AH, Moreira TP, Mikulik R, Krajina A, Nevsimalova M, Toni D, Wahlgren N, Ahmed N. *Stroke Vasc Neurol.* 2018 Sep 3;3(4):215-221. doi: 10.1136/svn-2018-000165. eCollection 2018 Dec.
- 70.** Tsivgoulis G, Katsanos AH, Mavridis D, Gdovinova Z, Karliński M, Macleod MJ, Strbian D, Ahmed N. **Intravenous Thrombolysis for Ischemic Stroke Patients on Dual Antiplatelets.** *Ann Neurol.* 2018 Jul;84(1):89-97. doi: 10.1002/ana.25269. Epub 2018 Jul 30. PubMed PMID: 30048012.
- 69.** Tsivgoulis G, Geisler F, Katsanos AH, Körv J, Kunz A, Mikulik R, Rozanski M, Wendt M, Audebert HJ. **Ultraearly Intravenous Thrombolysis for Acute Ischemic Stroke in Mobile Stroke Unit and Hospital Settings: A Comparative Analysis.** *Stroke.* 2018 Jul 9. pii: STROKEAHA.118.021536. doi: 10.1161/STROKEAHA.118.021536. [Epub ahead of print] PubMed PMID: 29986934
- 68.** Tsivgoulis G, Kargiotis O, Rudolf J, Komnos A, Tavernarakis A, Karapanayiotides T, Ellul J, Katsanos AH, Giannopoulos S, Gryllia M, Safouris A, Papamichalis P, Vadikolias K, Mitsias P, Hadjigeorgiou G. **Intravenous thrombolysis for acute ischemic stroke in Greece: the Safe Implementation of Thrombolysis in Stroke registry 15-year experience.** *Ther Adv Neurol Disord.* 2018 Jun 28;11:1756286418783578. doi: 10.1177/1756286418783578. eCollection 2018. PubMed PMID: 30034535; PubMed Central PMCID: PMC604860
- 67.** Mazya MV, Ahmed N, Azevedo E, Davalos A, Dorado L, Karlinski M, Lorenzano S, Neumann J, Toni D, Moreira TP; SITS Investigators. **Impact of Transcranial Doppler Ultrasound on Logistics and Outcomes in Stroke Thrombolysis: Results From the SITS-ISTR.** *Stroke.* 2018 Jul;49(7):1695-1700. doi: 10.1161/STROKEAHA.118.021485. Epub 2018 May 29. PMID: 29844031
- 66.** Vaclavik D, Vilionskis A, Jatuzis D, Karlinski MA, Gdovinova Z, Körv J, Tsivgoulis G, Mikulik R. **Clinical outcome of cardioembolic stroke treated by intravenous thrombolysis.** *Acta Neurol Scand.* 2018 Mar;137(3):347-355.
- 65.** Cappellari M, Turcato G, Forlivesi S, Zivelonghi C, Bovi P, Bonetti B, Toni D. **TARTING-SICH Nomogram to Predict Symptomatic Intracerebral Hemorrhage After Intravenous Thrombolysis for Stroke.** *Stroke.* 2018 Feb;49(2):397-404.
- 64.** Mundiyapurath S, Hees K, Ahmed N, Wahlgren N, Uhlmann L, Kieser M, Ringleb PA, Hacke W, Nagel S. **Predictors of symptomatic intracranial haemorrhage in off-label thrombolysis: an analysis of the Safe Implementation of Treatments in Stroke registry.** *Eur J Neurol.* 2018 Feb;25(2):340-e11.
- 63.** Volny O, Krajina A, Belaskova S, Bar M, Cimflova P, Herzog R, Sanak D, Tomek A, Köcher M, Rocek M, Padrl R, Cihlar F, Nevsimalova M, Jurak L, Havlicek R, Kovar M, Sevcik P, Rohan V, Fiksa J, Menon BK, Mikulik R. **Mechanical thrombectomy performs similarly in real world practice: a 2016 nationwide study from the Czech Republic.** *J Neurointerv Surg.* 2018 Aug;10(8):741-745.

- 62.** Ahmed N, Lees KR, Ringleb PA, Bladin C, Collas D, Toni D, Ford GA; The SITS Investigators. **Outcome after stroke thrombolysis in patients >80 years treated within 3 hours vs >3-4.5 hours.** Neurology. 2017 Oct 10;89(15):1561-1568.
- 61.** Thorén M, Azevedo E, Dawson J, Egido JA, Falcou A, Ford GA, Holmin S, Mikulik R, Ollikainen J, Wahlgren N, Ahmed N. **Predictors for Cerebral Edema in Acute Ischemic Stroke Treated With Intravenous Thrombolysis.** Stroke. 2017 Sep;48(9):2464-2471.
- 60.** Kellert L, Hametner C, Ahmed N, Rauch G, MacLeod MJ, Perini F, Lees KR, Ringleb PA; SITS Investigators. **Reciprocal Interaction of 24-Hour Blood Pressure Variability and Systolic Blood Pressure on Outcome in Stroke Thrombolysis.** Stroke. 2017 Jul;48(7):1827-1834.
- 59.** Tsivgoulis G, Katsanos AH, Kadlecová P, Czlonkowska A, Kobayashi A, Brozman M, Švigelj V, Csiba L, Fekete K, Körv J, Demarin V, Vilionskis A, Jatuzis D, Krespi Y, Liantinoti C, Giannopoulos S, Mikulik R. **Intravenous thrombolysis for ischemic stroke in the golden hour: propensity-matched analysis from the SITS-EAST registry.** J Neurol. 2017 May;264(5):912-920.
- 58.** Dorado L, Ahmed N, Thomalla G, Lozano M, Malojcic B, Wani M, Millán M, Tomek A, Dávalos A. **Intravenous Thrombolysis in Unknown-Onset Stroke: Results From the Safe Implementation of Treatment in Stroke-International Stroke Thrombolysis Registry.** Stroke. 2017 Mar;48(3):720-725.
- 57.** Anani N, Mazya MV, Chen R, Prazeres Moreira T, Bill O, Ahmed N, Wahlgren N, Koch S. **Applying open EHR's Guideline Definition Language to the SITS international stroke treatment registry: a European retrospective observational study.** BMC Med Inform Decis Mak. 2017 Jan 10;17(1):7.
- 56.** Scheitz JF, Abdul-Rahim AH, MacIsaac RL, Cooray C, Sucharew H, Kleindorfer D, Khatri, P, Broderick JP, Audebert HJ, Ahmed N, Wahlgren N, Endres M, Nolte CH, Lees KR. **Clinical selection strategies to identify stroke patients with large anterior vessel occlusion-Results from SITS-ISTR.** (Stroke, In press December 2016)
- 55.** Cooray C, Mazya M, Bottai M, Dorado L, Skoda O, Toni D, Ford GA, Wahlgren N, Ahmed N. **External Validation of the ASTRAL and DRAGON Scores for Prediction of Functional Outcome in Stroke.** Stroke. 2016 Jun;47(6):1493-9.
- 54.** Ahmed N, Hermansson K, Bluhmki E, Danays T, Nunes AP, Kenton A, Lakshmanan S, Toni D, Mikulik R, Ford GA, Lees KR and Wahlgren N. **The SITS-UTMOST: A registry-based prospective study in Europe investigating the impact of regulatory approval of intravenous Actilyse in the extended time window (3–4.5 h) in acute ischaemic stroke.** European Stroke Journal, first published on July 29, 2016 doi:10.1177/2396987316661890
- 53.** Lundström E, Zini A, Wahlgren N, Ahmed N. **How common is isolated dysphasia among patients with stroke treated with intravenous thrombolysis, and what is their outcome? Results from the SITS-ISTR.** BMJ Open. 2015 Nov 25;5(11):e009109. doi: 10.1136/bmjopen-2015-009109. PMID: 26608637
- 52.** Anani N, Mazya MV, Bill O, Chen R, Koch S, Ahmed N, Wahlgren N, Prazeres Moreira T. **Changes in European Label and Guideline Adherence After Updated Recommendations for Stroke Thrombolysis: Results From the Safe Implementation of Treatments in Stroke Registry.** Circ Cardiovasc Qual Outcomes. 2015 Oct;8(6 Suppl 3):S155-62. doi: 10.1161/CIRCOUTCOMES.115.002097. PMID: 26515204
- 51.** Mazya MV, Lees KR, Collas D, Rand VM, Mikulik R, Toni D, Wahlgren N, Ahmed N. **IV thrombolysis in very severe and severe ischemic stroke: Results from the SITS-ISTR Registry.** Neurology. 2015 Nov 6. pii: 10.1212/WNL.0000000000002199.

- 50.** Karlinski M, Kobayashi A, Czlonkowska A, Mikulik R, Vaclavik D, Brozman M, Gdovinova Z, Švigelj V, Csiba L, Fekete K, Kőrv J, Demarin V, Bašić-Kes V, Vilionskis A, Jatuzis D, Krespi Y, Shamalov N, Andonova S, Ahmed N, Wahlgren N; **Safe Implementation of Treatments in Stroke–East Registry (SITS-EAST) Investigators.** **Intravenous Thrombolysis for Stroke Recurring Within 3 Months From the Previous Event.** *Stroke.* 2015 Oct 8. pii: STROKEAHA.115.010420.
- 49.** Abdul-Rahim AH, Fulton RL, Sucharew H, Kleindorfer D, Khatri P, Broderick JP, Lees KR; SITS-MOST Steering Committee. **National Institutes of Health Stroke Scale Item Profiles as Predictor of Patient Outcome: External Validation on Safe Implementation of Thrombolysis in Stroke-Monitoring Study Data.** *Stroke.* 2015 Oct;46(10):2779-85. doi: 10.1161/STROKEAHA.115.010380.
- 48.** Tsivgoulis G, Kadlecová P, Kobayashi A, Czlonkowska A, Brozman M, Švigelj V, Csiba L, Kőrv J, Demarin V, Vilionskis A, Jatuzis D, Katsanos AH, Rudolf J, Krespi Y, Mikulik R. **Safety of Statin Pretreatment in Intravenous Thrombolysis for Acute Ischemic Stroke.** *Stroke.* 2015 Sep;46(9):2681-4. doi: 10.1161/STROKEAHA.115.010244.
- 47.** Flint AC, Rao VA, Chan SL, Cullen SP, Faigeles BS, Smith WS, Bath PM, Wahlgren N, Ahmed N, Donnan GA, Johnston SC; SITS International and VISTA-plus investigators. **Improved ischemic stroke outcome prediction using model estimation of outcome probability: the THRIVE-c calculation.** *Int J Stroke.* 2015 Aug;10(6):815-21. doi: 10.1111/ijjs.12529.
- 46.** Cooray C, Fekete K, Mikulik R, Lees KR, Wahlgren N, Ahmed N. **Threshold for NIH stroke scale in predicting vessel occlusion and functional outcome after stroke thrombolysis.** *Int J Stroke.* 2015 Aug;10(6):822-9. doi: 10.1111/ijjs.12451.
- 45.** Strbian D, Ahmed N, Wahlgren N, Lees KR, Toni D, Roffe C, Surakka IL, Tatlisumak T; SITS Investigators. **Trends in Door-to-Thrombolysis Time in the Safe Implementation of Stroke Thrombolysis Registry: Effect of Center Volume and Duration of Registry Membership.** *Stroke.* 2015 May;46(5):1275-80. doi: 10.1161/STROKEAHA.114.007170.
- 44.** Novotná J, Kadlecová P, Czlonkowska A, Brozman M, Švigelj V, Csiba L, Kőrv J, Demarin V, Vilionskis A, Mikulík R; SITS-EAST Investigators. **Hyperdense cerebral artery computed tomography sign is associated with stroke severity rather than stroke subtype.** *J Stroke Cerebrovasc Dis.* 2014 Nov-Dec;23(10):2533-9. doi:10.1016/j.jstrokecerebrovasdis.2014.04.034.
- 43.** Haršány M, Kadlecová P, Švigelj V, Kőrv J, Kes VB, Vilionskis A, Krespi Y, Mikulík R; SITS-EAST Investigators. **Factors influencing door-to-imaging time: analysis of the safe implementation of treatments in Stroke-EAST registry.** *J Stroke Cerebrovasc Dis.* 2014 Sep;23(8):2122-9. doi: 10.1016/j.jstrokecerebrovasdis.2014.03.019.
- 42.** Flint AC, Gupta R, Smith WS, Kamel H, Faigeles BS, Cullen SP, Rao VA, Bath PM, Wahlgren N, Ahmed N, Donnan GA; SITS International and VISTA-plus investigators. **The THRIVE score predicts symptomatic intracerebral hemorrhage after intravenous tPA administration in SITS-MOST.** *Int J Stroke.* 2014 Aug;9(6):705-10. doi: 10.1111/ijjs.12335.
- 41.** Mazya MV, Ahmed N, Ford GA, Hobohm C, Mikulík R, Nunes AP, Wahlgren N; **Remote or extraischemic intracerebral hemorrhage—an uncommon complication of stroke thrombolysis: results from the Safe Implementation of Treatments in Stroke-International stroke thrombolysis register.** *Stroke.* 2014 Jun;45(6):1657-63. doi: 10.1161/STROKEAHA.114.004923.
- 40.** Karlinski M, Kobayashi A, Czlonkowska A, Mikulík R, Vaclavik D, Brozman M, Svigelj V, Csiba L, Fekete K, Kőrv J, Demarin V, Vilionskis A, Jatuzis D, Krespi Y, Ahmed N, Wahlgren N; **Safe Implementation of Treatments in Stroke–Eastern Europe (SITS-EAST) Investigators.** **Role of preexisting disability in patients treated with intravenous thrombolysis for ischemic stroke.** *Stroke.* 2014 Feb 4.

- 39.** Lorenzano S, Ahmed N, Tatlisumak T, Gomis M, Dávalos A, Mikulík R, Sevcik P, Ollikainen J, Wahlgren N, Toni D; **SITS Investigators Within-day and weekly variations of thrombolysis in acute Ischemic stroke: results from Safe Implementation of Treatments in Stroke-International stroke thrombolysis register.** Stroke. 2014 Jan;45(1):176-84. doi: 10.1161/STROKEAHA.113.002133.
- 38.** Lorenzano S, Ahmed N, Falcou A, Mikulík R, Tatlisumak T, Roffe C, Wahlgren N, Toni D; SITS Investigators. **Does sex influence the response to Intravenous Thrombolysis in ischemic stroke?: Answers from Safe Implementation of Treatments in Stroke-International Stroke Thrombolysis Register.** Stroke. 2013 Dec;44(12):3401-6. doi: 10.1161/STROKEAHA.113.002908.
- 37.** Kőrv J, Vibo R, Kadlecová P, Kobayashi A, Czlonkowska A, Brozman M, Svigelj V, Csiba L, Fekete K, Demarin V, Vilionskis A, Jatuzis D, Krespi Y, Ahmed N, Mikulík R; for the Safe Implementation of Treatments in Stroke – East (SITS-EAST) Registry Investigators. **Benefit of thrombolysis for stroke is maintained around the clock: results from the SITS-EAST Registry** Eur J Neurol. 2013 Sep 16. doi: 10.1111/ene.12257.
- 36.** Kharitonova TV, Castillo J, Wahlgren N; SITS investigators. **Importance of cerebral artery recanalization in patients with stroke with and without neurological improvement after Intravenous Thrombolysis Stroke.** 2013 Sep;44(9):2513-8. doi: 10.1161/STROKEAHA.111.000048.
- 35.** Mazya MV, Lees KR, Markus R, Roine RO, Seet RC, Wahlgren N, Ahmed N; for the SITS investigators. **Safety of IV thrombolysis for ischemic stroke in patients treated with Warfarin.** Ann Neurol. 2013 Jun 6. doi: 10.1002/ana.23924.
- 34.** Ahmed N, Kellert L, Lees KR, Mikulík R, Tatlisumak T, Toni D; for the SITS Investigators. **Results of Intravenous Thrombolysis Within 4.5 to 6 Hours and Updated Results Within 3 to 4.5 Hours of Onset of Acute Ischemic Stroke Recorded in the Safe Implementation of Treatment in Stroke International Stroke Thrombolysis Register (SITS-ISTR): An Observational Study.** JAMA Neurol. 2013 May 20:1-8. doi: 10.1001/jamaneurol.2013.406.
- 33.** Mazya MV, Bovi P, Castillo J, Jatuzis D, Kobayashi A, Wahlgren N, Ahmed N; **External Validation of the SEDAN Score for Prediction of Intracerebral Hemorrhage in Stroke Thrombolysis.** Stroke. 2013 Jun;44(6):1595-600. doi: 10.1161/STROKEAHA.113.000794. Epub 2013 Apr 30. PMID: 23632975
- 32.** Cappellari M, Bovi P, Moretto G, Zini A, Nencini P, Sessa M, Furlan M, Pezzini A, Orlandi G, Paciaroni M, Tassinari T, Procaccianti G, Di Lazzaro V, Bettoni L, Gandolfo C, Silvestrelli G, Rasura M, Martini G, Melis M, Calloni MV, Chiodo-Grandi F, Beretta S, Guarino M, Altavista MC, Marcheselli S, Galletti G, Adobbati L, Del Sette M, Mancini A, Orrico D, Monaco S, Cavallini A, Sciolla R, Federico F, Scoditti U, Brusaferri F, Grassa C, Specchio L, Bongioanni MR, Sparaco M, Zampolini M, Greco G, Colombo R, Passarella B, Adami A, Consoli D, Toni D. **The THRombolysis and STatins (THRaST) study.** Neurology. 2013 Feb 12;80(7):655-61.
- 31.** Rha JH, Shrivastava VP, Wang Y, Lee KE, Ahmed N, Bluhmki E, Hermansson K, Wahlgren N; for the SITS investigators. **Thrombolysis for acute ischemic stroke with alteplase in an Asian population: results of the multicenter, multinational, Safe Implementation of Thrombolysis in Stroke-Non European Union World (SITS-NEW).** In J Stroke 2012, Epub 2012 Sep 18
- 30.** Strbian D, Ahmed N, Wahlgren N, Kaste M, Tatlisumak T; for SITS investigators. **Intravenous thrombolysis in ischemic stroke patients with isolated homonymous hemianopia: analysis of Safe Implementation of Thrombolysis in Stroke - International Stroke Thrombolysis Register (SITS-ISTR).** Stroke 2012; 43: 2695-2698, Epub 2012 Jul 17

- 29.** Mazya M, Egido J, Ford G, Lees K, Mikulík R, Toni D, Wahlgren N, Ahmed N; For the SITS investigators. **Predicting the Risk of Symptomatic Intracerebral Hemorrhage in Ischemic Stroke Treated With Intravenous Alteplase: Safe Implementation of Treatments in Stroke (SITS) Symptomatic Intracerebral Hemorrhage Risk Score.** Stroke 2012; 43:1524-1531, Epub 2012 March 22
- 28.** Mikulík R, Kadlecová P, Czlonkowska A, Kobayashi A, Brozman M, Svilgelj V, Csiba L, Fekete K, Körv J, Demarin V, Vilionskis A, Jatuzis D, Krespi Y, Ahmed N; for the Safe Implementation of Treatments in Stroke-East Registry (SITS-EAST) Investigators. **Factors Influencing In-Hospital Delay in Treatment With Intravenous Thrombolysis.** Stroke. 2012 Mar 15 [Epub ahead of print]
- 27.** Karlinski M, Kobayashi A, Mikulík R, Sanak D, Wahlgren N, Czlonkowska A. **Intravenous alteplase in ischemic stroke patients not fully adhering to the current drug license in Central and Eastern Europe.** Int J Stroke. 2012 Feb 7.
- 26.** Toni D, Ahmed N, Anzini A, Lorenzano S, Brozman M, Kaste M, Mikulík R, Putaala J, Wahlgren N; For the SITS investigators. **Intravenous thrombolysis in young stroke patients: Results from the SITS-ISTR.** Neurology. 2012 Mar 7.
- 25.** Mishra NK, Ahmed N, Davalos A, Iversen HK, Melo T, Soinne L, Wahlgren N, Lees KR; SITS and VISTA collaborators. **Thrombolysis outcomes in acute ischemic stroke patients with prior stroke and diabetes mellitus.** Neurology. 2011 Nov 22;77(21):1866-72. Epub 2011 Nov 16. PMID: 22094479
- 24.** Zinkstok SM, Vergouwen MD, Engelter ST, Lyrer PA, Bonati LH, Arnold M, Mattle HP, Fischer U, Sarikaya H, Baumgartner RW, Georgiadis D, Odier C, Michel P, Putaala J, Griebe M, Wahlgren N, Ahmed N, van Geloven N, de Haan RJ, Nederkoorn PJ. **Safety and functional outcome of thrombolysis in dissection-related ischemic stroke: a meta-analysis of individual patient data.** Stroke. 2011 Sep;42(9):2515-20. Epub 2011 Jul 28. Review.
- 23.** Kharitonova T, Mikulík R, Roine RO, Soinne L, Ahmed N, Wahlgren N; for the Safe Implementation of Thrombolysis in Stroke (SITS) Investigators. **Association of Early National Institutes of Health Stroke Scale Improvement With Vessel Recanalization and Functional Outcome After Intravenous Thrombolysis in Ischemic Stroke.** Stroke. 2011 Jun;42(6):1638-43. Epub 2011 Apr 21
- 22.** Diedler J, Ahmed N, Glahn J, Grond M, Lorenzano S, Brozman M, Sykora M, Ringleb P; **Is the Maximum Dose of 90 mg Alteplase Sufficient for Patients With Ischemic Stroke Weighing > 100 kg?** Stroke. 2011 Jun;42(6):1615-20. Epub 2011 Apr
- 21.** Topakian R, Brainin M, Eckhardt R, Kiechl S, Ahmed N, Ferrari J, Iglseder B, Wahlgren NG, Lang W, Fazekas F, Willeit J, Aichner FT; for the SITS-Austria group. **Thrombolytic therapy for acute stroke in Austria: data from the Safe Implementation of Thrombolysis in Stroke (SITS) register.** Eur J Neurol. 2011 Feb;18(2):306-11.
- 20.** Mishra, NK, Ahmed N, Andersen G, Egido J, Lindsberg P, Ringleb PA, Wahlgren N, Lees KR; for the VISTA and SITS collaborators. **Thrombolysis in the very elderly: controlled comparison of SITS International Stroke Thrombolysis Registry and Virtual International Stroke Trials Archive.** BMJ. 2010 Nov 23;341:c6046.
- 19.** Ford GA, Ahmed N, Azevedo E, Grond M, Larrue V, Lindsberg P, Toni D, Wahlgren N. **Intravenous alteplase for stroke in those older than 80 years old.** Stroke. 2010 Nov;41(11):2568-74. Epub 2010 Oct 7

- 18.** Ahmed N, Wahlgren N, Grond M, Hennerici M, Lees KR, Mikulík R, Parsons M, Roine RO, Toni D, Ringleb P; for the SITS Investigators. **Implementation and outcome of thrombolysis with alteplase 3-4.5 h after an acute stroke: an updated analysis from SITS-ISTR.** Lancet Neurol 2010; 9; 866-74
- 17.** Ahmed N, Dávalos A, Eriksson N, Ford GA, Glahn J, Hennerici M, Mikulík R, Kaste M, Lees KR, Lindsberg P, Toni D; for the SITS Investigators. **Association of admission blood glucose and outcome in patients treated with intravenous thrombolysis** Arch Neurol 201; 67(9): 1123-1130.
- 16.** Diedler J, Ahmed N, Sykora M, Uyttenboogaart M, Overgaard K, Luijckx G-J, Soinne L, Ford GA, Lees KR, Wahlgren N, Ringleb P; **Safety of intravenous thrombolysis for acute ischemic stroke in patients receiving antiplatelet therapy at stroke onset.** Stroke. 2010 Feb;41(2):288-94. Epub 2010 Jan 7.
- 15.** Simpson MA, Dewey HM, Churilov L, Ahmed N, Bladin CF, Schultz D, Mrkus R, Stur JW, Levi CR, Blacker DJ, Jannes J, Lindley RI, Parsons MW; **Thrombolysis for acute stroke in Australia: outcomes from the Safe Implementation of Thrombolysis in Stroke registry (2002-2008).** Med J Aust 2010 Oct 18;193(8):439-43.
- 14.** Vanacker P, Thijs V, Peeters A, BruneelB, Laloux P, Druwé P, De DeynP, Ahmed N, Wahlgren N, Vanhooren G; Belgian SITS-collaboration group. **The Belgian experience with intravenous thrombolysis for acute ischemic stroke.** Acta Neurol Belg. 2010 Jun;110(2):157-62.
- 13.** Wahlgren N; **Systemic thrombolysis in clinical practice: what have we learned after the Safe Implementation of Thrombolysis in Stroke Monitoring Study?** Cerebrovasc Dis. 2009;27 Suppl 1:168-76. Epub 2009 Apr 3. Review.
- 12.** Kharitonova T, Ahmed N, Thoren M, et al. **Hyperdense middle cerebral artery sign on admission CT scan - prognostic significance for ischaemic stroke patients treated with intravenous thrombolysis in the safe implementation of thrombolysis in Stroke.** International Stroke Thrombolysis Register. Cerebrovasc Dis. 2009;27(1):51-9.
- 11.** Mikulík R, Václavík D, Sanák D, Bar M, Sevcík P, Kalita Z, Wahlgren N; **A nationwide study on topography and efficacy of the stroke treatment network in the Czech republic.** J Neurol. 2010 Jan;257(1):31-7. Epub 2009 Jul 23.
- 10.** Kharitonova T, Thorén M, Ahmed N, Wardlaw JM, von Kummer R, Thomassen L, Wahlgren N; for the SITS investigators. **Disappearing Hyperdense Middle Cerebral Artery Sign in ischemic stroke patients treated.** J Neurol Neurosurg Psychiatry. 2009 Mar;80(3):248. Epub 2008 Oct 17.
- 09.** Kobayashi A, Czlonkowska A, Ahmed N, Romanowicz S, Glonek M, Nyka WM, Opala G, Wahlgren N; for the SITS Poland Collaborative Group. **Intravenous recombinant tissue plasminogen activator for acute stroke in Poland: an analysis based on the Safe Implementation of Thrombolysis in Stroke (SITS) Registry.** Acta Neurol Scand. 2010 Oct;122(4):229-36.
- 08.** Roje-Bedeković M, Vargek-Solter V, Corić L, Sabolek K, Breitenfeld T, Supanc V, Demarin V; **Thrombolysis for acute ischemic stroke-our experiences as part of SITS-MOST.** Acta Clin Croat. 2009 Sep;48(3):287-93.
- 07.** Ahmed N, Wahlgren N, Brainin M, et al. **Relationship of blood pressure, antihypertensive therapy, and outcome in ischemic stroke treated with intravenous thrombolysis: retrospective analysis from Safe Implementation of Thrombolysis in Stroke – International Stroke Thrombolysis Register (SITS-ISTR).** 2009 Jul;40(7):2442-9. Epub 2009 May 21.

- 06.** Rodríguez-Yáñez M, Alvarez-Sabín J, Dávalos A, Díez-Tejedor E, Castillo J; **Thrombolytic therapy for acute ischemic stroke. Experience of SITS (Safe Implementation of Thrombolysis in Stroke) register.** Neurologia. 2009 Jun;24(5):288-91. Spanish.*
- 05.** Lorenzano S, Ahmed N, Rosselli A, Marcello N, Inzitari D, Sterzi R, Wahlgren N, Prencipe M, Toni D; **Safe implementation of thrombolysis in stroke-monitoring study in Italy.** Eur J Neurol. 2010 Jan;17(1):163-7.Jun 15.
- 04.** Wahlgren N, Ahmed N, Dávalos A, Hacke W, Millán M, Muir K, Roine RO, Toni D, Lees KR; **Thrombolysis with alteplase 3-4.5 h after acute ischaemic stroke (SITS-ISTR): an observational study.** Lancet 2008; 372: 1303-1309.
- 03.** Lees KR, Ford GA, Muir KW, Ahmed N, Dyker AG, Atula S, Kalra L, Warburton EA, Baron JC, Jenkinson DF, Wahlgren NG, Walters MR; SITS-UK Group. **Thrombolytic therapy for acute stroke in the United Kingdom: experience from the safe implementation of thrombolysis in stroke (SITS) register.** QJM. 2008 Nov;101(11):863-9. Epub 2008 Aug 11
- 02.** Wahlgren N, Ahmed A, Eriksson N, Aichner F, Bluhmki E, Dávalos A, Erilä T, Ford GA, Grond M, Hacke W, Hennerici M, Kaste M, Köhrmann M, Larrue V, Lees KR, Machnig T, Roine RO, Toni D, Vanhooren G; for the SITS-MOST investigators. **Multivariable analysis of outcome predictors and adjustment of main outcome results to baseline data profile in randomized controlled trials; Safe Implementation of Thrombolysis in Stroke Monitoring Study (SITS-MOST).** Stroke 2008; 39: 3316-3322.
- 01.** Wahlgren N, Ahmed N, Dávalos A, Ford GA, Grond M, Hacke W, Hennerici MG, Kaste M, Külkens S, Larrue V, Lees KR, Roine RO, Soinne L, Toni D, Vanhooren G; **Thrombolysis with alteplase for acute ischaemic stroke in the Safe Implementation of Thrombolysis in Stroke-Monitoring Study (SITS-MOST): an observational study.** Lancet 2007;369:275-282.

List with centres contributing with data to the SITS Registry between December 25, 2002 and December 31, 2019.

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Albania	9		Bankstown-Lidcombe		Fintan O'Rourke
National Coordinator: To be appointed			Bendigo Health		Peter Disler
Mother Theresa University Hospital Center	Olsi Taka		Box Hill Hospital		Christopher Bladin
Algeria	124		Concord Hospital		
National Coordinator: Selma Kesraoui			Flinders Medical Centre		Andrew Lee
CHU Benbadis Hospital Frantz Fanon	Fekraoui Boubekeur Saddik		Frankston Hospital		
Argentina	1172		Fremantle Hospital		
National Coordinator: To be appointed			Gold Coast Hospital		Peter Bailey
CEMIC	Marina Romano		Gosford Hospital		Jonathon Sturm
Centro Gallego de Buenos Aires	Claudia Gandolfo		John Hunter Hospital New South Wales		
FLENI			Liverpool Hospital		
Hospital Cordoba	Maria Elena Masih		Lyell McEwin Hospital		Jordie Caulfield
Hospital Privado Santa Clara de Asís	Facundo Enrique Tomas Gustavo Herrera		Monash Medical Centre		Thanh Phan
Instituto Cardiovascular de Rosario	Hernan Gomez		Nambour General Hospital		Rohan Grimley
Policlinico Neuquen	Elsa Pérez		Northern Health		Douglas Crompton
Ramos Mejia	Raul Rey		Royal Adelaide Hospital		
Sanatorio Nuestra Senora del Rosario	Pablo Clementti		Sir Charles Gardiner Hospital		
Sanatorio Parque	Lorena Jure		South West Healthcare		
Armenia	1		St Vincent's Hospital		Romesh Markus
National Coordinator: To be appointed			Tamworth Hospital		James Hughes
Erebouni Medical Centre	Nune Nune Yeghiazaryan		The Queen Elizabeth Hospital		Jim Jannes
Australia	4071		The Townsville Hospital		Richard White
National Coordinator: Romesh Markus			Wagga Wagga Base Hospital		
Austin Health	Helen Dewey		Westmead Hospital		Andrew Evans Peter Landau
			Austria	1319	
			National Coordinator: To be appointed		
			Christian-Doppler-Klinik Salzburg		Johannes Sebastian Mutzenbach
			Ii. Neurolog. Abteilung Rosenhügel Wien		
			Kepler University Hospital, Med Campus III		Milan Vosko
			Kepler Universitätsklinikum Neuromed Campus		Gerhard Traxler
			KH der Barmherzigen Schwestern Linz		
			KH Vöcklabruck		
			Klinikum Wels-Grieskirchen		Birgit Hoermanseder
			Krankenanstalt Rudolfstiftung		
			Krankenhaus der Barmherzigen Brüder Linz		Christof Bocksrucker

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Krankenhaus der Barmherzigen Brüder Wien			AZ Sint Lucas - Brugge		Peter Vanacker
Landesklinikum Tulln		Peter Bosak	AZ Sint Maarten - Duffel		Jen Maes
Landesnervenklinik Sigmund Freud Graz			AZ Sint Rembert - Torhout		
LKH Steyr			AZ Sint Vincentius - Antwerpen		
Mostviertelklinikum Amstetten			AZ Sint-Lucas - Gent		Robert de Potter
Neurologisches Zentrum Rosenhügel			AZ Sint-Maria Halle		Elke Haest Sylvie Antoine
Neuromed Campus, Kepler Universitätsklinikum			AZ Turnhout		Katreine Dierckx
Otto-Wagner-Spital Wien			AZ Vezalius - Tongeren		
Univ.-Klinikum Graz			AZ Virga Jesse Ziekenhuis - Hasselt		
University Hospital Innsbruck		Elke Gizewski	AZ Waasland - Sint Niklaas		
Waldviertelklinikum Horn			AZ West		Penka Kirilova
Weinviertelklinikum Mistelbach			Centre Hospitalier Peltzer Verviers		
Wilhelminenspital			CH du Bois de l'Abbaye		
Wr Neustadt			CH Reine Fabiola, Montignies		
Zentralklinikum St. Pölten			CHA Libramont		
Belgium	7333		CHR Tournai		
National Coordinator:			CHU Brugmann		Raphael Hourez
Geert Vanhooren & Patrice Laloux			CHU Hopital Erasme - Bruxelles		
ACZA Stuivenberg - Antwerpen			CHU St. Luc - Woluwe		Andre Peeters
ASZ Geraardsbergen		Michiel Marchau	CHU Tivoli		Patricia Redondo
AZ Algemeen Ziekenhuis - Aalst			Clinique Saint-Jean, Bruxelles		
AZ Alma - Eeklo/Sijsele		Wim Wissaert	Clinique St. Joseph - St. Vith		Peter Heinen
AZ Damiaan - Oostende			Danny Decoo		Jean-Marc Raymackers
AZ Delta			Valerie de Smet		
AZ Groeninge			Marie-Christine Hasenbroekx		
AZ Jan Palfijn - Gent			Bart Bruneel		
AZ Jan Portaels			Cliniques de l'Europe		
AZ Jan Ypermanziekenhuis - Leper			Coordination Belgium		
AZ Klinika - Brasschaat			GZA Hospital		
AZ Maria Middelares - Gent			Laurence Peeters		William Van Landegem
AZ Middelheim - Antwerpen			Johan Van Cauwenbergh		Charlotte Swinnen
AZ Monica			Fran Couvreur		
AZ Nikolaas			Imeldaziekenhuis - Bonheiden		
AZ Onze-Lieve-Vrouw - Aalst			Jessy Hospital		
AZ Rivierenland			Yannick Van Ael		
AZ Sint Blasius - Dendermonde			Massimiliano Montagna		
AZ Sint Jan Brugge-Oostende			Miriam Bouckaert		
AZ Sint Jozef - Malle			RZ Tienen		
			Sabine Magerman		
			Geert Vanhooren		
			Patrick de Wit		
			UZ Antwerpen - Antwerpen		
			UZ Brussel		

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Uz Gasthuisberg - Leuven			Hospital Municipal São José		Carla Moro
UZ Gent - Gent			Hospital Municipal Souza Aguiar		Simone Lindemayer Fernandes
Bermuda	*		Hospital Odilon Behrens		Leonardo Cunha
National Coordinator: Francene Gayle			Hospital Paulistano		Luciano Magalhaes Melo
Bolivia	14		Hospital Regional do Cariri		Gustavo Vieira Rafael
National Coordinator: To be appointed			Hospital Regional do Sertao Central		Alan Alves de Lima Cidrao
Hospital Materno Infantil		Omar Victor Ramos Valencia	Hospital Santa Isabel		Fabio Siquineli
			Hospital Santa Lúcia Sul		Thais Martins
Bosnia and Herzegovina	70		Hospital Sao Lucas PUCRS		
National Coordinator: Sinisa Miljkovic			Hospital Universitário de Santa Maria		Fábio Pascotto de Oliveira
University Clinical center of Republic of Srpska		Sinisa Miljkovic	Hospital Universitario Maria Aparecida Pedrossian		Gabriel Braga
University Hospital Mostar		Sandra Lakicevic	Hospital Vita		Hudson Fameli
Brazil	3995		Instituto Cardiopulmonar		Murilo Souza
International Regional Coordinator: Sheila Martins			Santa Casa de Ituverava		Luiz Monteiro de Barros
National Coordinator: Octávio Pontes Neto, Jamary Oliveira-Filho & Sheila Martins			Santa Casa de Misericordia de Porto Alegre		Daiane Piccolotto Carvalho Camargo
Centro Hospitalar Unimed		Norberto Cabral	São Lucas Hospital		Andrea Garcia de Almeida
Centro Medico de Campinas		Alessandro Sousa	Bulgaria	4362	
Hospital Alianca		Jamary Oliveira-Filho	National Coordinator: Silva Andonova		
Hospital Carlos Fernando Malzoni		Cesar Minelli	MBAL "St.Anna"		Gabriela Antonova
Hospital das Clinicas de Ribeirao Preto		Octávio Pontes Neto	MHAT Medika		Iskra Ivanova-Ezhova
Hospital de Base de Bauru		Marcia Alves Moura Polin	MHAT-Dobrich		Boryana Ilcheva
Hospital de Clinicas da UFPR		Viviane Flumignan Zetola	MHAT-Plovdiv		Alexandar Geritliev
Hospital de Clínicas de Porto Alegre		Sheila Martins	MHAT-Shumen		Nikolai Nikolov
Hospital de Clinicas de Uberlandia		Jullyanna Sabrysna Morais Shinosaki	MHAT-Silistra		Rusanka Slavova
Hospital de Força Aérea do Galeão		Raissa Lapa	Multi-profile Hospital for Active Treatment		Tania Miteva
Hospital Espanhol			Sveta Marina Varna		Evgeniya Kalevska
Hospital Estadual Central		Jose Fiorot	University Multiprofile Hospital for Active Treatment "St. Anna" Sofia		Rosen Kalpachki
Hospital Governador Celso Ramos		Gladys Lentz Martins	Chile	1595	
Hospital Lucio Rebelo		Luiz Antonio Freitas de Oliveira	National Coordinator: Arnold Hoppe		
Hospital Mãe de Deus		Maurício Andre Gheller Friedrich	Clinica Alemana de Santiago		Arnold Hoppe
Hospital Meridional (IVT)		Jose Antonio Fiorot	Clinica Alemana de Temuco		Rodrigo Rivas
Hospital Moinhos de Vento		Alexandre Maulaz	Clinica Renaca		Ludwig Codjambassis
Hospital Municipal do Campo Limpo		Vinicio Garcia de Vitro	Hernan Henriquez Aravena		Alvaro Soto Venegas
Hospital Municipal Dr Arthur de Riberiro Saboya		José Ferrero	Hospital Carlos Van Buren		Juan P. Gigoux

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Hospital Fach		Carlos Aguilera	Clinica Universitaria Universidad Nacional De Colombia		
Hospital Naval Almirante Nef		Pablo Araya	Fundacion Santa Fe De Bogota		
Hospital San Pablo de Coquimbo		Fernando Molt	Hospital El Tunal		Juan Camilo Vargas
China	260		Hospital Universitario San Ignacio		Juliana Coral
National Coordinator: To be appointed			Costa Rica	38	
1St Affiliated Guangzhou Medical College			National Coordinator: Miguel Barboza		
1St Affiliated Hospital Jinan University			Hospital San Juan de Dios		
1St Municipal Peoples Hospital Guangzhou					
An Zhen Hospital			Croatia	1584	
Anhui Provincial Hospital			National Coordinator: Vanja Bašić Kes		
Beijing Military General Hospital			County Hospital Varazdin		
Beijing Tiantan Hospital			General Hospital "Dr. Josip Bencevic"		Marinko Dikanovic
Beijing Tsinghua Changgung Hospital		Jian Wu Ye Wang	General Hospital Dubrovnik		Maro Vodopić
Da Ping Hospital		Jing Mei	General Hospital Vukovar		Sanja Svalina
Haidian Hospital Beijing City		Yan-Jiang Wang	KBC Rijeka		Sinisa Dunatov
Hua Shan Hospital			Opća bolnica Karlovac		Jasna Bozic
Hubei Zhongshan Hospital		Du Min	Opća bolnica Šibenik		Anka Aleksić Shihabi
No. 411 Hospital		Yingqi Zhou	Osijek Clinical Hospital Centre		Mihael Mišir
Shanghai Sixth Peoples Hospital			Sestre Milosrdnice University Hospital		Vesna Vargek Solter
Shanxidaiy Hospital		Yaqin Yu	University Hospital Center Split		Ivo Lusic
The Branch Of Shanghai First Hospital			University Hospital Center Zagreb		Branko Malojcic
The First Affiliated Hospital of GuangZhou University of Chinese Medicine		Zhibing Wu	University Hospital Dubrava		Vladimira Vuletic
The First Affiliated Hospital of Zhengzhou University		Bo Song	University Hospital Sveti Duh		Hrvoje Budincevic
Third Hospital Of Sun Yat-Sen University			Virovitica General Hospital		Boris Bencina
Xinhua Hospital Affliated to Shanghai Jiaotong University School of Medicine		Jiafu Liu	Czech Republic	33118	
Xuanwu Hospital Capital Medical University		Haiqing Song	National Coordinator: Robert Miklik		
Zhongshan Hospital Fudan University		Wei Fan	Cheb Nemocnice		
Colombia	71		Chrudim Nemocnice		
National Coordinator: Mario Munoz-Collazos			Fakultni Thomayerova nemocnice		David Hlinovsky
Clinica de Marly		Mario Munoz-Collazos	FN Brno		Stanislav Peska
Clinica Misael Pastrana			FN Bulovka		Peter Vasko
Clinica Shaio			FN Hradec Kralove		Eva Vitkova
			FN Kralovske Vinohrady		Tomas Peisker
			FN Motol		Ivana Šarbochová
			FN Olomouc		Daniel Sanak
			FN Ostrava		Eva Hurtikova
			FN Plzen		Petr Sevcik
			FN u sv Anny v Brne		Lenka Kouřilová

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Frydek-Mistek Nem			Nemocnice Trutnov		Michal Bednar
Havirov			Nemocnice Uherske Hradiste		Emanuela Habrovanská
Jicin nemocnice			Nemocnice Usti nad Labem		Alena Lapáčková
Karvinska Hornicka Nemocnice		Henryk Brzežański	Nemocnice Usti nad Orlici		Květa Chotěnovská
Krajska nemocnice Liberec		Lubomir Jurak	Nemocnice Vítkovice		Katerina Blejcharova
Kyjov nemocnice		Pavel Zichacek	Nemocnice Vyskov		Jana Kadlcikova
Nemocnice Benesov		Zdenek Waller	Nemocnice Zlin		Petr Procházka
Nemocnice Blansko		Jana Jankovych	Nemocnice Znojmo		Vladislav Kopecky
Nemocnice Breclav		Zdena Bajková	Okresni Nemocnice Tabor		
Nemocnice Ceska Lipa		Alan Treuchel Ondrej Koci	Praha - Nemocnice Na Frantisku		
Nemocnice Ceske Budejovice		Miroslava Nevšímalová	Prerov Nemocnice		Vladimir Sigut
Nemocnice Chomutov		Jiri Neumann	SZZ Krnov		Roman Havlíček
Nemocnice Decin		Jan Novák	Ustredni vojenska nemocnice		Ctirad Lakomy
Nemocnice Havlickuv Brod		Jaroslav Říman	VFN Neurol.kl.1.LF a UK		Jan Fiksa
Nemocnice Jihlava		Marek Pernicka	Vojenska nemocnice Brno		Jiri Stehlík
Nemocnice Jindrichuv Hradec		Jiri Loucka	Denmark	2375	
Nemocnice Karlovy Vary		Igor Karpowicz	National Coordinator: Hanne Christensen		
Nemocnice Kladno		Petra Kešnerová	Aalborg Hospital		Karsten Vestergaard
Nemocnice Kolin		Richard Brzezny	Bornholms Central Sygehus		
Nemocnice Litomerice		Barbora Čečáková	Holstebro		Karin Geisler
Nemocnice Litomysl		Ludmila Bláhová	Odense University Hospital		Elzbieta Bjerager
Nemocnice Melnik			Roskilde Sygehus		Troels Wienecke
Nemocnice Mlada Boleslav		Martin Koutny	Sydvestjysk Hospital Esbjerg		
Nemocnice Most		Stanislav Slavík	University Hospital Of Cph At Bispebjerg		Hanne Christensen
Nemocnice Na Homolce		Martin Kovar	University Hospital Of Cph At Gentofte		
Nemocnice Nachod		Petr Stepan	University Hospital of Cph at Glostrup		Helle Klingenberg Iversen
Nemocnice Nove Mesto na Morave		Květoslava Večeřová	Århus Hospital, Århus University Hospital		
Nemocnice Nový Jičín		Petr Kuba	Dominican Republic	449	
Nemocnice Opava		Martin Krobot	National Coordinator: To be appointed		
Nemocnice Ostrava		Lukas Klecka	Hospital Juan Pablo Pina		Margarita Cerdá
Nemocnice Pardubice		Petr Geier			
Nemocnice Pisek		Robert Rezek			
Nemocnice Pribram		Jan Kábrt			
Nemocnice Prostejov		Vojtěch Mrňka			
Nemocnice Rychnov nad Kneznou		Jan Fajstauer	Ecuador	424	
Nemocnice Sokolov		Aleš Novák			
Nemocnice Strakonice		Pavel Houška			
Nemocnice Teplice		Martin Vančura			
Nemocnice Trinec Sosna		Mateusz Mrózek			

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
National Coordinator: To be appointed			Ethiopia	*	
Carlos Andrade Marín Hospital		Braulio Martínez Burbano	National Coordinator: Yared Yifru		
Eugenio Espejo Hospital		Dannys Rivero Rodriguez	Finland	4107	
Hospital Metropolitano		Patricio Abad Armendariz Immer	National Coordinator: Daniel Strbian		
Hospital Teodoro Maldonado Carbo		Tomas Alarcon G	Regional Coordinator: Minna Hälinen		
Egypt	4932		Central Hospital Of Central Finland		
National Coordinator: Hany Aref			Central Hospital Of Kainuu		
Regional Coordinator: Husam Mourad			Central Hospital Of Lapland		
Ain Shams Specialized Hospital			Etelä-Karjalan Keskussairaala		
Ain Shams Universities		Ramez Moustafa Ramez Reda	Helsinki University Central Hospital		Lauri Soinne
Al-azhar University Hospitals		Ahmed Essmat	Kanta-Häme Central Hospital		
Alexandria University (Stroke Center)		Ossama Mansour	Kuopio University Hospital		Pekka Jäkälä
Assiut University Hospital		Mohamed Ahmed	Kuusankoski District Hospital		
Aswan University Hospitals		Ahmed Abdelwarith	Kymenlaakso Central Hospital		
Cairo University Hospitals		Husam Mourad Mohammad Farrag	Länsi-Pohja Central Hospital		
Mansoura University Hospital		Hossam Egila	Mikkeli Central Hospital		
Menofia University Hospital		Khaled Afifi	Oulu University Hospital		Vesa Karttunen
Misr International Hospital		Sandra Ahmed	Pohjois-Karjalan Keskussairaala		
Nasser Institute Hospital		Tarik Ibrahim Menecie	Päijät-Häme Hospital District		
Sohag University		Mohamed Khodery	Satakunta Central Hospital		
Tanta University Hospital		Azza Ghali	Savonlinna Central Hospital		
Zagazig University		May Selim	Seinäjoki Central Hospital		
El Salvador	39		Tampere University Hospital		Jyrki Ollikainen
National Coordinator: To be appointed			Turku University Central Hospital		Susanna Roine
HMQ ISSS		Hector Orrego Castellanos	Ålands Centralsjukhus		
Hospital Diagnostico Escalon		William Arias Sifontes	France	354	
Hospital Nacional Rosales		Ericka Lopez	National Coordinator: To be appointed		
Estonia	4359		Angouleme		
National Coordinator: Janika Körv			Bordeaux		
East-Tallinn Central Hospital		Viktor Jefremov	Bourg En Bresse		
LTKH		Katrin Gross-Paju	Centre Hospitalier Belfort Montbeliard		
North Estonia Medical Centre		Viiu-Marika Rand	Dijon		
Tartu University Hospital		Janika Körv	Hopital Emile Muller		
			Lille		Didier Leys
			Montpellier		
			Nancy		
			Nice		

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Perpignan			University Hospital Jena		Albrecht Guenther
Purpan Hospital			University Hospital of Heidelberg		Peter Ringleb
Rangueil			University Medicine Greifswald		Soenke Langner
Sainte Anne Paris			University of Leipzig		Dominik Michalski
Tenon			University Tübingen		Sven Poli Till-Karsten Hauser
Tours			Universitätsklinik Knappschaftskrankenhaus		Jens Eyding
Germany	7824		Universitätsklinik Münster		
National Coordinator:			Universitätsklinikum Bonn		Gabor Petzold
Peter Ringleb			Universitätsklinikum Gießen		
Carl-Thiem-Klinikum		Antje Herwig	Universitätsklinikum Schleswig-Holstein Campus Kiel		Olav Jansen
Charité - Campus Benjamin Franklin			Westpfalz-Klinikum GmbH		Martin Morgenthaler
Diakonissenkrankenhaus Flensburg		Stefan Müller-Hülsbeck	Zentralklinikum Augsburg		
Herz-Jesu-Krankenhaus		Michael Ohms	Greece	1443	
JWK Minden		Joerg Glahn	National Coordinator:		
KatharinenHospital			Georgios Tsivgoulis,		
Katholisches Klinikum Koblenz			Panayiotis Mitsias, Jobst Rudolf & Kostas Vemmos (not active)		
Brüderhaus			"St. Panaleimon" General State Hospital of Piraeus		Ioannis Markakis
Klinikum Bremen Mitte			"Tzaneio" General Hospital of Piraeus		Andromachi Roussopoulou
Klinikum Dortmund gGmbH			251 Hellenic Air Force General Staff Hospital		Antonios Kodounis
Klinikum Frankfurt / Oder		Axel Hamann Andreas Hartmann	Agios Pavlos		Nikolaos Michalis
Klinikum Ludwigsburg		Georg Pawlik Frauke Schnieder	AHEPA University Hospital		Theodoros Karapanayiotides
Klinikum Ludwigshafen			Athens Medical Center		Klimentini Karageorgiou
Klinikum Mittelbaden			Athens Naval Hospital		Triantafyllos Doskas
Klinikum Osnabrueck		Lars Krause	Attikon University Hospital		Konstantinos Voumourakis
Klinikum Villingen-Schwennen			Euroclinic		Vaso Zisiopoulos
Krankenhaus Nordwest			Evaggelismos General Hospital		Antonios Tavernarakis
Krankenhaus Schwabing			G.Papanikolaou Hospital		Ourania Argyropoulou-Raka
Kreisklinik Mindelheim			General Hospital of Athens		Maria Gryllia
Kreisklinikum Siegen			General Hospital Of Imathia		Georgios Georgakoudas
Landesklinik Teupitz			General Hospital of Rethymnon		Athanasia Patousi
Neurologische Universitätslinik Koeln			General Hospital of Rhodes, Andreas Papandreou		George Karlis
Ruppiner Kliniken GmbH			Korgialenio-Benakio Greek Red Cross General Hospital of Athens		Thomas Thomaidis
St. Bonifatius Hospital			Larisa Regional General Hospital		
Städt.Krankenhaus München-Harlaching					
Tu Munich					
Univ.Hospital Mannheim					
University Clinic Essen		Christian Weimar			
University Hospital Düsseldorf		Dorothea Reichelt Bastian Kraus			

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Mediterraneo Hospital		Nikolaos Tsamopoulos	Javorszky Odon		Ferenc Nagy
Metropolitan		Eleftherios Staboulis			Anett Tóta
Metropolitan General		Konstantinos Takis	Josa Andras Oktatokorhaz		Tamas Kokovay
Papageorgiou General Hospital		Jobst Rudolf	Egeszsegugyi Szolgaltato Nonprofit Kft.		
Thriassio Hospital		Teresa Acquaviva	Kanizsai Dorottya Korhaz		Marianna Gottschál
University Hospital Of Alexandroupolis			Pandy Kalman Korhaz		
University Hospital of Heraklion		Panayiotis Mitsias	Peterfy Sandor u. Korhaz		Gyula Panczel
University Hospital of Ioannina		Sotirios Giannopoulos	Semmelweis University		
University Hospital of Larissa		Efthimios Dardiotis	State Health Centre		
University Hospital of Patras		Yiannis Ellul	Szent Borbala		Ferenc Nagy
			Szent Rokus Hospital		
Guatemala	89		University of Debrecen		István Fekete
National Coordinator:			University Of Pecs Medical School		László Csiba
To be appointed					
Hospital General San Juan de Dios		Arla Stokes	Iceland	8	
		Edgar Avalos Herrera			
		Otoniel Gramajo	National Coordinator:		
Hospital Herrera Llerandi		Luis Salguero	To be appointed		
Hospital Roosevelt		Ligia Rodas	Landspitali University Hospital		
Honduras	22				
National Coordinator:			India	7074	
Marco T. Medina			National Coordinator:		
Hospital Escuela		Adda Sirias	Dheeraj Khurana		
		Alex Medina	All India Institute of Medical Sciences		M.V.Padma
Hospital Nacional Dr. Mario Catarino Rivas		Arnold Rene Thompson			Rohit Bhatia
Institituto de Neurociencias			AMRI Hospitals		
			AMRI Hospitals, Institute of Neurosciences, Mukundapur		Jayanta Roy
Hong Kong	24		Apollo Gleneagles Hospitals		Jayanta Roy
National Coordinator:			Apollo Hospitals Hyderabad		
Thomas Wai Hong Leung			Baby Memorial Hospital		
Prince of Wales Hospital		Vincent Ip	Care Hospital		
			Christian Medical College Hospital		Sanjith Aaron
Hungary	2049		Christian Medical College Hospital, Patiala		Khushvinder Sherry
National Coordinator:			Civil Hospital Jalandhar		Tarsem Lal
Klára Fekete			Civil Hospital Ludhiana		Gurmeet Singh Purba
Aladar Petz County Hospital		Gergely Toth	Civil Hospital Sangrur		Rahul Gupta
B.-A.-Z. County Hospital		Erika Barna	Fortis Hospital		Neetu Ramrakhiani
Bajcsy Zsilinszky Korhaz		Balázs Czigler	Gleneagles Global Health City		Halprashanth D.S.
Dr Kenessey Albert Hospital		Csaba Óvary	Hiranandani Hospital		Pawan Ojha
Fejer Megyei Szent Gyorgy Korhaz		Levente Kerenyi	Jehangir Hospital Apollo Hospitals Group		
Felso Szabolcsi Korhaz		Félix Bencsik	Kokilaben Dhirubhai Ambani Hospital and Medical Research Institute		Shirish Hastak
Flor Ferenc Hospital					

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Lalitha Super Speciality Hospital			Mater Misericordiae University Hospital		
Lilavati Hospital and Research Centre		Amrita Kiki	St James Hospital		
Little Flower Hospital - Research Centre			St Vincent's University Hospital		Tim Cassidy
Lourdes Hospital Neurology					
Maharishi Markandeshwar Institute of Medical Sciences and Research		Ankush Sharma	Israel	297	
Max Hospital Shalimar Bagh		Manoj Khanal	National Coordinator: Roni Eichel		
Medanta the Medicity		Arun Garg	Barzilay Hospital		
N. M. Virani Wockhardt Hospital		Nirav Sanghani	Bnai-Zion Medical Centre		
NH Mazumdar Shaw Medical center		Vikram Huded	Hadassah Ein-Kerem	Roni Eichel	
Nizams Institute Of Medical Sciences			Hadassah University Hospital	Roni Eichel	
Pondicherry Institute of Medical Sciences		Venugopalan Vishnu	Hillel Yaffe Medical Center	Sergiu Sabetay	
Postgraduate Institute of Medical Education & Research		Dheeraj Khurana	Makassed Islamic Charitable Hospital	Anis Naser	
Ruby Hall Clinic		Sushma Gurav	Sheba Medical Center		
Wockhardt Hospital Nagpur		Ankur Jain	Tel-Aviv Sourasky Medical Center		
Wockhardt Hospital Nashik		Dhananjay Duberkar			
Wockhardt Hospitals Ltd, Unit- Adams Wylie Memorial		Shirish Madhav Hastak			
Iran	6023		Italy	56259	
National Coordinator: Mehdi Farhoudi			National Coordinator: Danilo Toni		
Ali-Ebn-Abitalib Hospital		Alireza Vakilian	Regional Coordinator: Rosa Musolino, Marzia Baldereschi, Marcello Naccarato, Domenico Consoli, Andrea Zini, Simona Sacco, Maurizio Balestrino, Donata Guidetti, Paolo Cerrato, Maurizio Melis & Francesco Federico		
Alzahra		Mohammad Saadatnia	"Giuseppe Mazzini" Teramo	Maurizio Assetta	
Bu Ali Sina		Nasim Tabrizi	"Luigi Sacco" Hospital	Pierluigi Bertora	
Firoozgar general Hospital		Masoud Mehrpour	"Santa Chiara" Hospital	Leonardo Pantoni	
Ghaem		Kavian Ghandehari	A.O. "G. Rummo"	Michelangelo Mancuso	
Golestan		Bahador Asadi Khansari	A.O. Spedali Civili di Brescia	Michele Feleppa	
Golestan Hospital		Shahram Rafie	A.O.U. Policlinico G. Martino Messina	Mauro Magoni	
Imam Husain Hospital		Behnam Mansouri	A.O.U. San Giovanni di Dio e Ruggi d'Aragona	Rosa Napoletano	
Imam Reza		Elyar Sadeghi-Hokmabadi	A.S.O. S. Croce e carle	Piero Meineri	
Imam Reza Kermanshah		Payam Sariaslani	Antonio Perrino	Cecilia Nozzoli	
Nemazeey Hospital		Afshin Borhani-Haghghi	AO "S.G. MOSCATI"	Florindo D'Onofrio	
shahid Beheshti		Ehsan Sharifipour	AO di Lodi	Maurizio Riva	
Shohada Tajrish		Soroor Advani	AOR San Carlo Potenza	Antonio Matera	
Valiasr Hospital		Abdoreza Ghoreishi	Arcispedale Santa Maria Nuova	Giovanni Malferrari	
Ireland	57		ARNAS Garibaldi	Norina Marcello	
National Coordinator: To be appointed			ASST Mantova, Carlo Poma	Antonino Pavone	
			Augusto Murri	Giorgio Silvestrelli	
			Az.Ospedaliera "Bianchi-Melacrino-Morelli"	Patrizio Cardinali	
				Luciano Arcudi	

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Azienda Ospedaliera Cannizzaro		Pennisi Maria Giovanna	INRCA		Giuseppe Pelliccioni Maurizio Del Gobbo Osvaldo Scarpino
Azienda Ospedaliera di Cosenza		Alfredo Petrone	IRCCS Centro Neurolesi Bonino Pulejo Ospedale Piemonte		Paola Santalucia
Azienda Ospedaliera G.Salvini		Maria Grazia Riggio	IRCCS Policlinico San Matteo-Casimiro Mondino		Anna Cavallini
Azienda Ospedaliera Pugliese-Ciaccio		Umberto Cannistrà	Istituto Clinico Città Studi		Carlo Sebastiano Tadeo
Azienda Ospedaliera s. Maria Degli Angeli Pordenone		Paolo Passadore	Istituto Clinico Humanitas		Simona Marcheselli
Azienda Ospedaliera S. Maria Terni		Franco Costantini	Istituto Scientifico Ospedale San Luca (Istituto Auxologico Italiano)		Laura Adobbati
Azienda Ospedaliera Universitaria Integrata Verona		Manuel Cappellari	Jazzolino		
Azienda Ospedaliera Universitaria Policlinico Paolo Giaccone di Palermo		Paolo Aridon	Livorno		Mauro Pratesi Paolo Pennati Alessio Bertini
Azienda Ospedaliera Universitaria Senese		Tassi Rossana	Salvatore Creta		Roberto Gobbato
Azienda Ospedaliera Valtellina e Valchiavenna			Madonna del Soccorso Hospital		Lorenzo Coppo
Azienda Ospedaliero - Universitaria di Parma		Umberto Scoditti	Maggiore della Carità Novara		Michelangelo Turazzini
Azienda Ospedaliero-Universitaria "Ospedali Riuniti" di Foggia			Mater Salutis Hospital		Simonetta Morresi Anna Maria Mauro
B. Ramazzini		Mario Baratti	Maurizio Bufalini		
Belcolle		Nicola Falcone	Molinette		Giacomo Giuseppe Bezzi
Buccheri La Ferla		Armando Bilello	Morelli Sondalo		
Cà Foncello		Bruno Giometto	Neuromed		Antonio Sparano
Careggi			O.C. Renzetti		Antonio Giusti
Casa Di Cura "Dott. Pederzoli S.P.A."		Domenico Idone	Osedali Riuniti Ancona		Leandro Provinciali
Cattinara			Osp Circolo Busto Arsizio		Luigia Irene Neromante
Cazzavillan		Michele Morra	Ospedale "S. Maria delle Croci"		Gabriele Ciucci
Ceppo		Stefano Bartolini	Ospedale "San Pio da Pietrelcina"		Stefano Viola
Civil Hospital, Macerata		Katiuscia Nardi	Ospedale A Manzoni Lecco		Davide Sangalli
Crema		Tommaso Riccardi	Ospedale Antonio Cardarelli		Paolo Candelaresi
E.O. Ospedali Galliera		Daria Bianchini	Ospedale Brotzu Cagliari		
Fabrizio Spaziani		Antonia Nucera	Ospedale Cardinal Massaia		Marco Aguggia Alessandra Lentini
Felice Lotti . P.O. Pontedera (Pisa)-AUSLToscana Nordovest		Gianna Gambaccini Chiara Pecori	Ospedale Ciriè		Diego Maria Papurello
Ferdinando Veneziale		Nicola Iorio	Ospedale Civico Di Chivasso		
Fond Poliambulanza Brescia		Paolo Invernizzi	Ospedale Civico Palermo		Serena Monaco
Fondazione Ca' Granda Maggiore Milano		Giuseppe Torgano	Ospedale Civile "S.Agostino-Estense" - Azienda Ospedaliera Universitaria di Modena		Guido Bigliardi
G B Morgagni L Pierantoni Forli		Matteo Paolucci	Ospedale Civile Cittadella		Giampietro Ruzza
General Hospital		Manrico Gentile	Ospedale Civile di Conegliano (Treviso)		Anna Gaudenzi
Gradenigo Hospital		Pietro Pignatta	Ospedale Civile Di Ivrea		
Guglielmo Da Saliceto					
Hospital ASST West Milanese		Maria Vittoria Calloni			
Hospital Villa Sofia		Antonio Gasparro			

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Ospedale Civile Mirano		Luigi Bartolomei Carlo Fattorello Salimbeni	Ospedale S. Maria della Scaletta Ospedale S. Maria Misericordia Udine		Maria Chiara Cantarini Simone Lorenzut
Ospedale Civile Spirito Santo Pescara		Francesco di Blasio	Ospedale San Bassiano		Emanuele Turinese
Ospedale Civile Venezia, U.O.C. Neurologia		Francesco Paladin	Ospedale San Bortolo		Francesco Perini
Ospedale Degli Infermi		Graziano Gusmaroli Simone Vidale	Ospedale San Gerardo		Simone Beretta
Ospedale del Mugello		Maria Ciliberti	Ospedale San Giovanni Battista		Pierluigi Brustenghi
Ospedale dell'Angelo		Adriana Critelli	Ospedale San Lazzaro - Alba		Marco Giraudo
Ospedale della Misericordia		Roberto Marconi	Ospedale San Luca		Alessandro Napolitano
Ospedale della Murgia "F. Perinei"		Bonaventura Ardito	Ospedale San Salvatore-L'Aquila		Carmine Marini
Ospedale della Versilia		Paolo Del Dotto	Ospedale Santa Corona		Tiziana Tassinari
Ospedale delle Apuane		Alberto Chiti	Ospedale Santa Maria Annunziata		Germana Ruggiano
Ospedale Desio		Ignazio Michele Santilli	Ospedale Santa Maria della Misericordia di Rovigo		Monia Russo
Ospedale di Circolo e Fondazione Macchi Varese		Maria Luisa Delodovici	Ospedale Santo Spirito - Rome		Monica Carfora
Ospedale di Città di Castello		Silvia Cenciarelli	Ospedale Santo Spirito Casale Monferrato		Eugenio Rota
Ospedale di Fidenza (Parma)		Letizia Concari	Ospedale SS Filippo e Nicola		
Ospedale di Saronno			Ospedale Umberto I Siracusa		Enzo Sanzaro
Ospedale di Stato		Mirco Volpini	Ospedale Valduce Como		
Ospedale di Treviglio		Edgard Matta	Ospedali Riuniti Di Foggia		Tommaso Martino
Ospedale di Vimercate		Paola Bazzi	Ospedaliero Santa Croce di Fano		Giancarlo Francolini
Ospedale Edoardo Agnelli		Carmela Palmieri	OspSacro Cuore Negrar VR		Alessandro Adami
Ospedale G.B. Grassi - ASL Roma 3		Giovanni Pauletti	P.O Gravina e Santo Pietro di Caltagirone		Franz La Greca
Ospedale Imperia		Mauro Furlan	P.O. "R.GUZZARDI"		Francesco Iemolo
Ospedale Infermi		Marco Galletti	P.O. San Francesco		Maria Valeria Saddi
Ospedale Lavagna		Rinaldo Colombo	P.O.M Villa Scassi ASL3 Genova		Paola Perfumo
Ospedale Maggiore		Andrea Zini	PO Vizzolo		Carla Zanferrari
Ospedale Maria Vittoria Torino		Fabio Melis Carlo Buffa	Policlinico Bari		Marco Petruzzellis
Ospedale Martini Torino		Maria Roberta Bongioanni	Policlinico Gemelli		Vincenzo di Lazzaro
Ospedale Mauriziano Torino			Policlinico San Marco		Massimo Camerlingo
Ospedale Niguarda Ca' Granda		Ignazio Santilli	Policlinico San MATTEO		Alessandra Martignoni
Ospedale Novi Ligure		Eugenio Rota	Policlinico tor Vergata		Fabrizio Sallustio Paolo Stanzione
Ospedale Papa Giovanni XXIII		Bruno Censori	Policlinico Umberto I - University La Sapienza		Danilo Toni
Ospedale Provinciale di Bolzano		Roberto Currò Dossi	Policlinico Universitario Padova		
Ospedale Regionale della valle d'Aosta		Guido Giardini	Policlinico Universitario Padova Neurol		Claudio Baracchini
Ospedale Regionale Miulli		Giovanni Manobianca	Presidio Ospedaliero Cremona		Alessia Giossi Maria Sessa
Ospedale S. Donato Arezzo		Giovanni Iannelli	Presidio Ospedaliero Sant'Andrea La Spezia		Antonio Mannironi
Ospedale S. Eugenio		Letizia Maria Cupini			
Ospedale S. Maria del Prato		Giorgio Caneve			

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
R. Dimiccoli		Vincenzo Lucivero	SanTommaso dei Battuti		Antonio Baldi
Regina Elena		Emanuele Medici	Santoro Alto Vicentino		Flavio Sanson
		Elvio Giaccaglini	Scientific Institute San Raffaele Hospital		Luisa Roveri
Rivoli		Salvatore Amarù			
S.Anna Hospital		Alessandro de Vito	SS. Annunziata		Antonio Manca
S.Elia		Maria Giovanna Randisi	SS. Annunziata - Taranto		Angelica Tinelli
S.Orsola-Malpighi		Maria Guarino	SS. Annunziata		Maria de Angelis
Saint Antonio Abate Sicily		Luigi Sicurella	SSCosma e Damiano		Grazia Panigada
San Biagio		Angelo Villani	ULSS17 - Monselice Hospital		Sandro Guzzon
San Camillo-Forlanini		Claudio Pozzessere	Universita degli Studi di Perugia		Maurizio Paciaroni
San Carlo Borromeo		Patrizia Lattuada	University of Genova		Giancarlo Agnelli
San Filippo Neri		Maria Concetta Altavista	Vito Fazzi		Leonardo Barbarini
San Giacomo Apostolo		Marzia Ottina	Japan	75	
San Giovanni Addolorato		Antonio Salerno	National Coordinator: To be appointed		
San Giovanni Bosco		Roberto Cavallo	Shonan Kamakura General Hospital		Takahisa Mori
San Giovanni di Dio		Alberto Fortini Gabriele Nenci			
San Giovanni di Dio Agrigento		Daniela Graci	Kazakhstan	108	
San Giovanni di Dio Hospital. ASP Crotone		Demetrio Messina	National Coordinator: Sholpan Nurmanova		
San Giuseppe		Pietro Bassi	GKP na PKHV Gorodskaya bol'nitsa №1		Aygul Kaysarbekova
San Leopoldo Mandic		Manuela Vaccaro	Regional Hospital Atyrau city		Marta Ismailova
San Luigi Gonzaga		Rossella Sciolla	Shymkent city Regional Hospital		Nazira Zharkinbekova
San Martino Genova		Laura Malfatto			
San Paolo		Fabio Bandini	Kenya	*	
Sandro Pertini Hospital		Anna Maria Cipriani	National Coordinator: Dilray Sokhi		
Sant'Andrea		Maurizia Rasura	Kyrgyzstan	1479	
Sant'Anna		Lucia Tancredi	National Coordinator: Inna Lutsenko		
Sant'Anna e San Sebastiano Caserta		Gioacchino Martusciello	Bishkek City Civil Clinic 1		Inna Lutsenko
Sant'Antonio Hospital		Anna Maria Basile	Chui Regional Clinic		Aishoola Sultanova
Santa Chiara Hospital		Laura Cucurachi			
Santa Croce Moncalieri Maggiore di Chier		Marco de Mattei	Lebanon	142	
Santa Maria alla Gruccia		Alberto Cuccuini	National Coordinator: Souheil Gebeily		
Santa Maria Nuova Hospital		Francesco Prosperi Iovi	Bellevue Medical Center		Ghassan Kiwan
Santi Antonio e Biagio		Luigi Ruiz	The Lebanese Hospital		
Santissima Annunziata		Mara Rosso			
Santo Stefano Prato		Alba Caruso	Libya	6	

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
National Coordinator: Husen Abdulrahman Benghazi Medical Centre		Husen Abdulrahman	Institute of Emergency Medicine Institute of Neurology and Neurosurgery		Igor Crivorucica Elena Manole
Lithuania	3946		Morocco	1215	
National Coordinator: Aleksandras Vilionskis & Dalius Jatuzis Hospital of Lithuanian University of Health Sciences Kaunas Clinics		Antanas Vaitkus Ramune Kavalaiuskiene	HASSAN II university Hospital Ibn Rochd University Hospital		Belahsen Faouzi Neurologie Ibn Rochd
Klaipeda Seamen's Hospital		Egle Martinkute Olga Knokneriené			
Klaipeda University Hospital			Netherlands	217	
Regional Hospital of Panevezys		Linas Masiliūnas	Atrium Medical Center		
Republican Siauliai Hospital		Sigla Scepaviciute	Groningen University Medical Centre		
Republican Vilnius University Hospital		Aleksandras Vilionskis	Sint Anna		
Telsiu Hospital		Saulius Taroza	University Hospital Maastricht		
Vilnius Uni Hospital Santariskiu Clinics		Dalius Jatuzis	New Zealand	175	
Malta	*		National Coordinator: To be appointed		
National Coordinator: Maria Mallia			Christchurch Hospital		John Fink
Mexico	1047		Palmerston North Hospital		Annemarei Ranta
National Coordinator: Fernando Gongora-Rivera & Antonio Arauz Gongora Hospital Angeles de Queretaro		Fernando Barinagarrementeria	Wellington Regional Hospital		Jeremiah Lanford
Hospital Civil de Guadalajara		Jose Luis Ruiz- Sandoval	Nicaragua	25	
Hospital General de Culiacan		Jorge Villarreal	National Coordinator: Jorge Martinez Cerrato		
Hospital General de Mexico O.D.		Rosalia Vazquez	Hospital Metropolitano		
Hospital Regional ISSSTE Monterrey		Francisco Flores			Patricio Abad Armendariz Immer
Hospital Universitario UANL		Fernando Gongora- Rivera	Nigeria	3	
Instituto Nacional de Neurologia y Neurocirugia		Antonio Arauz Gongora	National Coordinator: Njideka Okubadejo		
Instituto Panvascular de Occidente		Luis Murillo-Bonilla	North Macedonia	173	
Médica Sur		Juan Alberto Nader Kawachi Carlos Pla	National Coordinator: Anita Arsovská		
Regional de ISSSTE "Dr. Valentín Gómez Farías"		Carolina León Jiménez	Clinical Hospital Tetovo		Danijela Vojtikiv Samoilovska
San José/Zambrano Helion		Luis Espinosa Primo Delgado	University Clinic Of Neurology		Anita Arsovská
Moldova	1441		Norway	2152	
National Coordinator: Stanislav Groppa			National Coordinator: Anne Hege Aamodt & Arnstein Tveiten		
			Aker University Hospital		Ole Morten Ronning
			Akershus University Hospital		Karl-Friedrich Amthor
			Buskerud Hospital		
			Flekkefjord Sykehus		

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Forde Sentralsjukehus			Complejo Hospitalario Metropolitano Dr. Arnulfo Arias/Caja de Seguro Social		Arón Benzadón
Haraldsplass Diakonale Sykehus			Hospital Dr Luis Chicho Fabrega		Jose Escartin
Haugesund Sjukehus		Piotr Burzynski	Hospital Dr. Gustavo Nelson Collado		Jose Escartin
Haukeland University Hospital		Titto Idicula	Hospital Nacional		David Dondis
Helgelandssykehuset Mo I Rana			Pacifica Salud - Hospital Punta Pacifica		Nelson Novarro
Helgelandssykehuset Mosjøen			Hospital San Fernando		
Hospital of Asker and Bærum		Gro Vik Knutsen			
Laerdal Sjukehus Helse Forde Hf					
Molde Hospital		Åse Hagen Morsund			
Nordlandssykehuset					
Rikshospitalet, Oslo University Hospital		Anne Hege Aamodt			
Ringerike Sykehus			Hospital Central de Policia "Rigoberto Caballero"		Donoband Melgarejo Fariña
Sandnessjøen Hospital			Hospital Central del Instituto de Previsión Social		Aurora Olmedo
Sentralsjukehuset i Rogaland		Stein Roalsø	Hospital de Clinicas, Facultad de Ciencias Medicas Universidad Nacional de Asuncion		Alan Flores
St. Olavs Hospital Medicine					
Stord Sjukehus					
Sykehuset i Vestfold		Reidar Kloster			
Sykehuset Innlandet Hf Kongsvinger					
Sykehuset Innlandet Lillehammer			Hospital Alberto Sabogal Sologuren		Luis Alberto Huaroto Casquillas
Sykehuset Namsos		Stephan Schuler	Hospital Belen de Trujillo		Isolina Villanueva Pomacónedor
Sykehuset Østfold		Trine Almås	Hospital II Angamos Essalud		Luis Miguel Uchuya Cornejo
Sørlandet Sykehus Arendal			Hospital Jorge Reategui Delgado		Jose Cruz
Sørlandet Sykehus Kristiansand		Arnstein Tveiten	Hospital Nacional Almanzor Aguinaga Asenjo		Luis Sandoval
Telemark Hospital Skien			Hospital Nacional Arzobispo Loayza		Juan Barreto-Montalvo
Trondheim University Hospital			Hospital Nacional Carlos Alberto Seguin Escobedo		Antero Peralta
Ullevaal University Hospital Neurology		Antje Reichenbach Kristin Gran Olsen	Hospital Nacional Edgardo Rebagliati Martins		Jorge Martín Gavidia Chucán
University Hospital North Norway			Instituto Nacional de Ciencias Neurológicas		Carlos Abanto
Oman	4		Maria Auxiliadora		
National Coordinator: Amal Al-Hashmi					
Royal Hospital Muscat		Amal Al-Hashmi			
Pakistan	15				
National Coordinator: Husnain Hashim (2020)					
Shifa International Hospital		Wasim Malik			
Panama	181				
National Coordinator: Nelson Novarro					
Centro Medico Paitilla		Fernando Gracia			
Paraguay	173				
National Coordinator: Gloria Meza Rojas					
Complejo Hospitalario Metropolitano Dr. Arnulfo Arias/Caja de Seguro Social					
Hospital Dr Luis Chicho Fabrega					
Hospital Dr. Gustavo Nelson Collado					
Hospital Nacional					
Pacifica Salud - Hospital Punta Pacifica					
Hospital San Fernando					
Peru	2291				
National Coordinator: Carlos Abanto					
Hospital Alberto Sabogal Sologuren					
Hospital Belen de Trujillo					
Hospital II Angamos Essalud					
Hospital Jorge Reategui Delgado					
Hospital Nacional Almanzor Aguinaga Asenjo					
Hospital Nacional Arzobispo Loayza					
Hospital Nacional Carlos Alberto Seguin Escobedo					
Hospital Nacional Edgardo Rebagliati Martins					
Instituto Nacional de Ciencias Neurológicas					
Maria Auxiliadora					
Philippines	157				
National Coordinator: To be appointed					
Community General Hospital of San Pablo City, Inc.					
Davao Regional Medical Center					
Las Pinas Doctors Hospital					
Mt. Carmel Diocesan General Hospital					

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Perpetual Succour Hospital		Jarungchai Vatanagul	Szpital Kolejowy w Pruszkowie Sp. z o.o.		Aleksandra Nabialek
Poland	7964		Szpital Krosno		Rafal Jucha
National Coordinator: Michał Karlinski, Adam Kobayashi & Anna Czlonkowska			Szpital Powiatowy Skarżysko-Kamienna		Jan Stoiński
107th Military Hospital with Polyclinic		Marcin Rogoziewicz	Szpital Powiatowy w Kraśniku		Hanna Basista
Bizieli's Hospital		Violetta Palacz-Duda	Szpital Powiatowy w Siedziszowie Małopolskim		Marcin Zieba
Central University Hospital			Szpital Powiatowy Zespół Opieki Zdrowotnej w Przeworsku		Anna Kozak-Sykała
Clinical Hospital Nr 4 w Lublinie		Piotr Luchowski	Szpital Specjalistyczny im. H. Klimontowicza w Gorlicach		Jarosław Borowicz
Copernicus Hospital		Bożena Adamkiewicz	Szpital Specjalistyczny w Końskich		Małgorzata Fudala
CSK, MSWiA		Małgorzata Dorobek	Szpital Wolski		Arleta Kuczyńska-Zardziewała
Hospital in Radzyń Podlaski		Daniel Bzowski	Szpital Zachodni im. Św Jana Pawła II		Marta Bilik
Hospital of Florian Ceynowy in Wejherowo		Agnieszka Wysocka	Univeristy Hospital No 1 Bydgoszcz A. Jurasza		Grzegorz Kozera
Institute of Psychiatry and Neurology		Michał Karlinski	Uniwersytecki Szpital Kliniczny		Alina Kułakowska
Koscierzyna Hospital			Uppersilesian Medical Centre		
Marciniak Memorial Hospital			Wojewódzki Specjalistyczny Zespół Opieki		
Mazowiecki Szpital Wojewódzki		Agata Włodek	Wojewódzki Specjalistyczny Zespół Neuropsychiatryczny		Slawomir Romanowicz
Medical University Of Gdańsk			Wojewódzki Szpital Specjalistyczny		Monika Pędracka
Medical University Of Warsaw					Paweł Kwiatkowski
Military Medical Institute		Jacek Staszewski			Grzegorz Dalek
Pomorskie Centrum Traumatologii im.M.Kopernika		Waldemar Fryze			Adrian Filipczak
Poviat Hospital		Artur Węsek			
Poznan - Province Hospital					
Radomsko Szpital Powiatowy		Jacek Hubner	Portugal	5671	
Samodzielnny Publiczny Szpital Wojewódzki im. Papieża Jana Pawła II		Kajetan Mazurek	National Coordinator: Teresa Pinho E Melo		
Specialist Hospital		Małgorzata Wiszniewska	Centro Hospitalar de Gaia		Luis Miguel Galo Veloso
Specialist Hospital in Jasło		Stanisław Kosiek	Centro Hospitalar de Setúbal		Rui Guerreiro
Specialized Hospital		Anna Smołka	Centro Hospitalar de Tras-os-montes e Alto Douro		Andreia Veiga
SPSK im. Orlowskiego		Witold Palasik	Centro Hospitalar Lisboa Ocidental		Miguel Viana Baptista
SPZOZ Działdowo		Marek Zalisz	Dr. Nélio Mendonça Funchal		Rafael Freitas
SPZOZ Lubartów		Mirosław Miazga	Hospitais da Universidade de Coimbra		Cristina Machado Maria Antónia Ferro
SPZZOZ Sandomierz		Piotr Sobolewski	Hospital de Braga		Carla Ferreira
St. Adalbert Hospital, Copernicus		Wiesława Holub-Kucharska	Hospital de Egas Moniz		
St. Queen Jadwiga Clinical Regional Hospital no. 2 in Rzeszów		Rafał Kaczorowski	Hospital de Faro		Sílvia Castro
Szpital Kolejowy SP ZOZ		Jarosław Pniewski			

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Hospital de São Sebastião		José Mário Roriz	Mariinsky Hospital		
Hospital Garcia de Orta		Miguel Rodrigues	Medical Military academy		Alexey Polushin
Hospital Geral do Centro Hospitalar e Universitário de Coimbra		José Grilo Gonçalves	MMBU GKBNº 1 Pirogov		Tatiana Lokshtanova
Hospital Pedro Hispano, Unidade Local de Saúde de Matosinhos		Vitor Tedim Cruz	Murmansk Regional Clinical Hospital P.A.Bajadin		Artem Timofeev
Hospital S Bernardo			Naberezhnye Chelny BSMP Tatarstan		Shamil Musin
Hospital Santo António		Rui Felgueiras	National Pirogov Centre		Oleg Vinogradov
Hospital São João		Elsa Azevedo	Nikolaevskaya Hospital		Liudmila Roshkovskaya
Hospital Sao Jose - CHLC		Ana Paiva Nunes	Novokuznetsk Municipal Clinical Hospital #1		Sergey Borzykin
HPP Hospital de Cascais - Dr. José de Almeida		Cátia Carmona	Novosibirsk City Clinical Hospital No1		Dmitriy Layvin
Santa Maria		Teresa Pinho E Melo	Nrcerm Emercom		Irina Lomova
Qatar	2998		Orenburg City Clinical Hospital		Vadim Ershov
National Coordinator: To be appointed			Research Center of Neurology of Russian Academy of Medical Sciences		Maxim Domashenko
Hamad General Hospital		Naveed Akhtar	Rostov District Clinical Hospital		Aleksey Hripun
Romania	60		Russian State Medical University		Nikolay Shamalov
National Coordinator: Dafin Fior Muresanu			SPb GBUZ Gorodskaya bolnitsa No 26		Aleksei Shmonin
Clinical Emergency County Hospital Oradea		Monica Sabau	St-Petersburg "Elizavetinskaya" Hospital		Tatyana Sergeeva
County Emergency Hospital Timisoara		Dragos Catalin Jianu	St. Joasaph Belgorod Regional Clinical Hospital		Yury Lykov
Emergency County Hospital		Adina Dora Stan	State Healthcare Institution of Kaluga Region «City Clinical Hospital #2» "Sosnovaya roscha"		Maksim Holopov
Emergency Hospital "Dr. N. Oblu" Lasi		Dan Iulia Cuciureanu	Sverdlovsk Clinical Regional Hospital #1		Elena Prazdnichkova
Mures County Clinical Emergency Hospital		Rodica Bălașa	Vladivostok Hospital №1		Evgeny Shestopalov
Russian Federation	4547		Saudi Arabia	160	
National Coordinator: Tatiana Kharitonova			National Coordinator: Adel Alhazzani		
Alexandrovskaia Hospital		Vitaliy Novikov	King Abdulaziz Hospital		Abdulrahman Almalki
Buz ur "1 RCB MZ UR"		Nataliya Komissarova	King Abdulaziz University		Omar Ayoub Mohammed Almekhlafi
BUZOO "OKB"		Anton Bort	King Fahad Hospital of the University		Aishah Albakr
Citi Clinical Hospital #20 named after A.K. Ermishancev		Ketevana Meshkova	King Fahad Medical City		Nof Mansour
City Clinical Hospital No 67 named L.A.Vorobiova Moscow Health Department		Mark Loskutnikov			
City Clinical Hospital No.20 DM		Artem Tolmachev	Serbia	2	
I.V.Davidovsky Moscow City Hospital		Alexandra Botsina	National Coordinator: Dejana Jovanovic		
ICDC		Timur Demin	Neurology Clinic, Clinical Center Of Serbia		Predrag Stanarcevic
Krasnodar City Clinical Emergency Hospital		Nadezhda Ermachenko			
Krasnoyarsk Regional Hospital		Nataliya Halo	Singapore	325	

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
National Coordinator: To be appointed			UVN SNP Ružomberok		Oto Hanus
National Neuroscience Institute-TTSH campus		Rajinder Singh	VNsP Levoča		Ladislav Gurčík
National University Hospital			Vranovska nemocnica, n.o.		Katarína Potocká
Singapore General Hospital		Deidre de Silva			
Slovakia	6555		Slovenia	1645	
National Coordinator: Zuzana Gdovinova			National Coordinator: Viktor Svilj		
CINRE		Jana Thurzova	General Hospital Celje		Marija Sostaric Podlesnik
Faculty Hospital F.D. Roosevelt, Banska Bystrica		Dusan Kanat	Murska Sobota General Hospital		
Faculty Hospital J.A.Reimana		Adrian Rynik	SB Jesenice		Tomaž Šavli
Faculty Hospital Nitra		Miroslav Brozman	Sb Nova Gorica		
Faculty Hospital Trnava		Georgi Krastev	Splosna bolnišnica Novo mesto		Matej Kolenc
Fakultna Nemocnica Trencin		Marek Bojda	University Clinic		Marija Menih
FNsP Nove Zamky		Adriana Horvathova	University Medical Center Ljubljana		Senta Frol
FNsP Skalica a.s.		Patrícia Palenčárová			
Forlife n.o.		Katarina Pasztoova	South Korea	665	
Hospital and polyclinics Spisska Nova Ves a.s.		Eva Hanáčková	National Coordinator: Joung-Ho Rha		
Hospital Svidník		Miloslav Dvorak	Ajou University Hospital		
Liptovská nemocnica s poliklinikou MUDr.Ivana Stodolu		Anna Kravecova	Asan Medical Center		
Ľubovnianska nemocnica n.o.		Anna Jarošová	Bundang Seoul National Uni Hospital		
National Institute of Cardiovascular Diseases		Lucia Rokytová	Cheju National University Hospital		
Nemocnica A. Lená, Humenné		Martin Kucharík	Chonbuk National University Hospital		
Nemocnica Košice-Šaca a.s		Danica Gossanyiova	Chonnam National University Hospital		
Nemocnica Poprad a.s.		Eva Rozpravkova	Dong-A University Hospital		
Nemocnica s poliklinikou Dunajská Streda		Ľubica Snopeková	Dongguk Uni International Hospital		
Nemocnica s poliklinikou Povazska Bystrica		Marta Feketeová	Dongsan Medical Center Keiymung Uni		
Nemocnica s poliklinikou Sväteho Lukáša Galanta		Igor Pruzinec	Eulji General Hospital		
NsP Brezno n.o.		Oto Petrik	Eulji University Hospital		
NsP Stefana Kukuru v Michalovciach n o		Ivan Dropa	Gil Medical Center Gachon University		
NsP Sv. Jakuba, Bardejov		Martina Kolibášová	Hallym University Sacred Heart Hospital		
NsP sv.Barbory Rožňava		Pavol Kantor	Ilsan Paik Hospital		
Svet Zdravia, a.s., Vseobecna nemocnica Rimavská Sobota		Igor Balušík	Inha University Hospital		Joung-Ho Rha
University Hospital in Martin		Martin Bachnak	Kangbuk Samsung Hospital		
University Hospital of Bratislava		Vladimir Nosál	Konkuk University Hospital		
University Hospital of L. Pasteur		Matej Nový	Nat Health Insurance Corp Ilsan Hospital		
		Gabriela Timarová	Paik Hospital Pusan		
		Norbert Leško	Samsung Medical Center		

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Seoul National Uni Boramae Hospital			Hospital Ramón Y Cajal		
Seoul National University Hospital			Hospital Sagrat Cor		
Soonchunhyang University Hospital			Hospital San Carlos		Jose Egido
Ulsan University Hospital			Hospital Son Dureta		
Wonju Christian Hospital			Hospital Txagorritxu		
Yeungnam University Medical Center			Hospital Univ Central De Asturias		
Yonsei University College Of Medicine			Hospital Universitari Germans Trias i Pujol		Laura Dorado
Spain	4820		Hospital Universitari Girona		
National Coordinator:			Hospital Universitario De Canarias		
Jose Egido			Hospital Universitario de la Princesa		
Basurto		M. Mar Freijo	Hospital Universitario La Fe		Lago Aida
Clinica Universitaria De Navarra			Hospital Universitario La Paz		Exuperio Díez-Tejedor
Hospital General De Castellón			Hospital Universitario Principe De Astur		
Hospital Clínico Universitario		Miguel Blanco González	Hospital Universitario Vall D Hebron		
Hospital Clinico Universitario Dr Lozano Blesa		Carlos Tejero-Juste	Hospital Universitario Virgen del Rocio		Francisco Moniche
Hospital de Bellvitge			Hospital Universitario Virgen Macarena		Miguel Angel Gamero
Hospital de Cruces			Hospital Valme		
Hospital de Donostia			Hospital Virgen De La Salud		
Hospital de La Santa Cruz Y San Pablo			Nuestra Señora De La Candelaria		
Hospital de Leon			University Hospital Doce De Octubre		
Hospital de Navarra			Virgen de las Nieves		Jose F. Maestre-Moreno
Hospital de Torrecárdenes					
Hospital del Mar			Sri Lanka	1325	
Hospital Galdakano			National Coordinator:		
Hospital General de Albacete		Tomás Segura	Udaya Ranawaka		
Hospital General Doctor Negrín			Colombo North Teaching Hospital, Ragama		Udaya Ranawaka
Hospital General La Mancha Centro		Enrique Botía Paniagua	Sri Jayewardenepura General Hospital		Harsha Gunasekara
Hospital General Universitario de Alicante		Ana Pampliega			
Hospital General Universitario- Valencia			Sweden	10808	
Hospital General Yagüe			National Coordinator:		
Hospital Gregorio Marañón			Michael Mazya		
Hospital Insular De Gran Canaria			Alingsås lasarett		
Hospital Meixoeiro (Vigo)			Arvika Sjukhus		
Hospital Miguel Servet			Blekingesjukhuset		
Hospital Nuestra Señora del Rosario		Francisco Gilo	Capio St Görans sjukhus		Gabriella Strandberg
Hospital Parc Taulí			Centrallasarettet Västerås		
			Danderyd Hospital		
			Falu lasarett		
			Gällivare Sjukhus		

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Gävle-Sandvikenssjukhus			Skene Hospital		
Helsingborgs Lasarett			Sollefteå Sjukhus		
Karlskoga Hospital			Södersjukhuset		Mihaela Oana Romanitan
Karlstad centralsjukhus					
Karolinska University Hospital-Solna	Tiago Moreira		Södertälje sjukhus		
Karolinska University Sjukhuset-Huddinge			Södra Älvborgs Sjukhus		
Kiruna sjukhus			Torsby sjukhus		
Kristianstad centralsjukhus			Trelleborgs Sjukhus		
Kullbergska sjukhuset	Yerasmin Tahera		Uddevalla Sjukhus		
Kungälvs sjukhus			Universitetssjukhuset Linköping		
Kärnsjukhuset Skövde			Uppsala Akademiska sjukhus		
Köping Hospital	Jan Saaf		Varbergs sjukhus		
Lasarettet i Enköping	Mikael Wiklund		Visby Lasarett		
Lasarettet i Motala			Västerviks Sjukhus		
Lasarettet i Ystad			Ängelholms Sjukhus		
Lidköping Hospital			Örebro Sjukhus		
Lindesbergs Lasarett					
Lund - Skånes Universitetssjukhus	Per Undréen Gunnar Andsberg		Switzerland	57	
Lycksele			National Coordinator: To be appointed		
Länssjukhuset Halmstad			GHOL		Olivier Bill
Länssjukhuset Kalmar					
Malmö - Skånes Universitetssjukhus			Thailand	915	
Malmö Allmänna Sjukhus			National Coordinator: To be appointed		
Mora Lasarett	Jörg Teichert		King Chulalongkorn Memorial Hospital		Aurauma Chutinet
Mälarsjukhuset Eskilstuna	Bo Danielsson		Phyathai 1 Hospital		Surat Boonyakarnkul
Norrköping lasarett					
Norrlands universitetssjukhus			Tunisia	3192	
Norrtälje sjukhus			National Coordinator: Faycal Bentati		
Nyköpings lasarett	Jonas Lindeberg		Institut National Mongi ben Hamida de Neurologie		Faycal Bentati
Oskarshamns Sjukhus	Elmar Keppel		Polyclinique Taoufik		Souheil Marrak
Piteå Älvdals sjukhus					
Ryhovs Länssjukhus			Turkey	2449	
Sahlgrenska Universitetssjukhus	Jan-Erik Karlsson		National Coordinator: Mehmet Akif Topcuoglu (2019), Atilla Özcan Özdemir (2020)		
Sjukhuset i Hässleholm			Steering Committee (2019): Yakup Krespi, Serefur Ozturk & Atilla Özcan Özdemir		
Skellefteå Lasarett			Antalya Education and Research Hospital		Elif Sarıönder Gencer
			Avrupa Hastanesi Neurology Department		
			Bezmialem Vakif University Medicine Faculty Hospital		Talip Asil
			Dokuz Eylül Medical Faculty		

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Erciyes University Medical Faculty Hospital			United Kingdom	26716	
Eskişehir Osmangazi University Medical Faculty			National Coordinator: Christine Roffe & Mary Joan Macleod		
Fethiye Dilek Orken			Associate National Coordinator: Azmil Abdul-Rahim		
Florence Nightingale		Fethiye Dilek Orken	Regional Coordinator: Sally Baird, Angela Welch, Matthew Walters, Keith Muir, Tracey Baird & Belinda Manak		
GOP Medical Park Hospital		Aysenur Onalan			
Hacettepe University Hospital		Mehmet Topcuoglu			
Inonu University, Turgut Ozal Medical Center		Yuksel Kablan	Aberdeen Royal Infirmary		Mary Joan Macleod
Istanbul		Nilufer Yesilot	Addenbrookes Hospital		Liz Warburton
Istanbul Aydin University Florya Medicalpark Hospital		Arsida Bajrami	Aintree University Hospital		
Istanbul University Cerrahpasa School of Medicine		Derya Uğurlu Uludüz	Airedale General Hospital		Matthew Smith Andrew Catto
Istinye University Liv Hospital		Pelin Nar Senol	Altnagelvin Area Hospital		John Charles
Memorial Hizmet Hospital		Bahar Koyuncu	Antrim area Hospital		Djamil Vahidassr
Trakya University Faculty Of Medicine			Arrowe Park Hospital		
VM Medicalpark Pendik Hospital		Ahmet Yabalak	Ashford and St Peters NHS Trust		
Yeditepe University Hospital			Ayr Hospital		
Özel Ege Saglik Hastanesi			Barnsley Hospital NHS Foundation Trust		Mohammad Albazzaz
Ukraine	177		Basildon Hospital		Udayaraj Umasankar
National Coordinator: Sergii Moskovko			Bedford Hospital		Abdul Elmarimi
Feofania		Gennadiy Pasichnyk	Belfast HSC Trust		Ivan Wiggam
Ivano-Frankivsk Regional Clinical Hospital		Marta Grynovska	Birmingham Heartlands Hospital		
Kyiv Region Clinical Hospital		Natalia Chemer	Blackpool Victoria Hospital		Jim McIlmoyle
Municipal City Clinical Hospital of the Emergency Medical Care		Ivanna Melnichek	Bradford Royal Infirmary		Chris Patterson
Odessa City Hospital		Serhii Fernandez de Rives	Bristol Royal Infirmary		Peter Murphy
Vinnitsa Regional Psychoneurological Hospital Name Academician Of O.I. Yshenko		Sergii Moskovko	Bronglais		Claire West Philip Jones
			Broomfield Hospital		George Zachariah
			Buckinghamshire Hospitals Nhs Trust		
			Calderdale and Huddersfield NHS Foundation Trust		Anand Nair
			Causeway Hospital		Fergal Tracey
			Charing Cross Hospital		
United Arab Emirates	1761		City Hospital Campus Nuh Nhs Trust		
International Regional Coordinator: Suhail AlRukn			City Hospital, Birmingham		Shahid Kausar
National Coordinator: Maria Khan			Colchester Hospital University NHS Foundation Trust		Rajesh Saksena
Mafraq Hospital		Udugama Goonetilleke	Conquest Hospital		Mjh Rahmani
Rashid Hospital		Maria Khan	Countess of Chester		Kausik Chatterjee
Sheikh Shakhbout Medical City		Josef Alawneh	Coventry & Warwickshire University Hosp		
Sheikh Khalifa Medical City		Isam Salih	Craigavon Area Hospital		Patricia McCaffrey
			Cumberland Infirmary		David Paul Davies

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Daisy Hill Hospital		Michael Mccormick	Newcastle upon Tyne Hospitals NHS Foundation Trust		Anand Dixit
Darent Valley Hospital		Senussi Hussein	Ninewells Hospital Dundee		Ronald Macwalter
Diana Princess of Wales Hospital		Asem Ali	Nobles Hospital		John Thomas
Doncaster Royal Infirmary		Dinesh Chadha	Norfolk and Norwich University Hospital		Nisal Gange
Dorset County Hospital		Harald Proschel	North Cheshire Hospitals Trust		
East and North Hertfordshire NHS Trust Lister		Aparna Pusalkar	North Hampshire Hospital	Elio Giallombardo	
East Surrey Hospital		Youssif Abousleiman	North Tyneside General Hospital	Richard Curless	
Edinburgh Western General			Northampton General Hospital	Angela Kannan	
Epsom General Hospital		Brendan Affley	Northwick Park Hospital	David Cohen	
Erne Hospital/SWAH		James Kelly	Peterborough City Hospital	Peter Owusu-Agyei	
Fairfield General Hospital		Khalil Kawafi	Pilgrim Hospital	David Mangion	
Forth Valley Royal Hospital		Anthony Byrne	Poole Hospital	Suzanne Ragab	
Glangwili General Hospital		Surendra Gupta	Prince Philip Hospital	Granville Morris	
Glasgow Royal Infirmary		Peter Langhorne	Princess of Wales Hospital	Harish Bhat	
Gloucestershire Royal Hospital		Dipankar Dutta	Princess Royal Hopital		
Harrogate District Hospital		Sean Brotheridge	Princess Royal Hospital Haywards Heath	Khalid Ali	
Hope Hospital, Manchester			QEQM Hospital	George Thomas	
Hull Royal Infirmary		Ahmed Abdul-Hamid	Queen Alexandra Hospital	David Jarrett	
Imperial College Healthcare NHS Trust		Arindam Kar Kyriakos Lobotesis	Queen Elizabeth Hospital Birmingham	Don Sims	
Ipswich Hospital NHS Trust		Peter Phillips	Queen Elizabeth Hospital, Gateshead		
James Cook University Hospital		Gavin Young	Queen S Medical Centre		
James Paget University Hospital			Queens Hospital Burton Foundation Nhs Tr		
John Radcliffe Hospital		Alastair Buchan	Rotherham General Hospital	James Okwera Jeanette Harris	
Kent and Canterbury Hospital		Ilse Burger	Royal Blackburn Hospital	Nicholas Roberts	
King S College Hospital Nhs Trust			Royal bournemouth and Christchurch Hospital	Damian Jenkinson	
Leeds General Infirmary		Peter Wanklyn	Royal Cornwall Hospital	Katja Adie	
Lincoln County Hospital		Ibrahim Wahishi	Royal Derby Hospital	Peter Gorman	
Luton & Dunstable NHSFT Hospital		Lakshmanan Sekaran	Royal Devon & Exeter Hospital		
Macclesfield Districe General Hospital		Moe Sein	Royal Free Hampstead Nhs Trust		
Manchester Royal Infirmary			Royal Glamorgan Hospital	Richard Dewar	
Mater Hospital		Mark Magorrian	Royal Gwent Hospital		
Mayday University Hospital			Royal Hallamshire Hospital	Catrin Blank	
Medical specialist Group		Steve Evans	Royal Hampshire County Hospital	Nigel Smyth	
Medway Maritime Hospital		Maam Mamun	Royal Liverpool & Broadgreen University Hospital (NHS) Trust	Shankar Loharuka	
Mid Yorkshire Hospitals NHS Trust		Michael Carpenter	Royal London Hospital	Patrick Gompertz	
Morriston		Manju Krishnan	Royal Preston Hospital	Hedley Emsley	
Musgrove Park Hospital		Robert Whiting			
National Hospital for Neurology					
Nevill Hall Hospital		Bella Richard			

Country and Hospital	Patients	Local Coordinator	Country and Hospital	Patients	Local Coordinator
Royal Surrey County Hospital		Kath Pasco	Tunbridge Wells Hospital in Pembury		Mahendra Pattanshetti
Royal Sussex County Hospital		Nicola Gainsborough	Ulster Hospital Belfast		Kevin Dynan
Royal United Hospital Bath		Louise Shaw	University Hospital Coventry		Anthony Kenton
Russells Hall Hospital			University Hospital North Staffordshire		Christine Roffe
Salford Royal Foundation Trust		Jane Wainwright	University Hospital of North Durham		
Salisbury District Hospital		David Walters	University Hospital of Wales		Yogish Joshi Thomas Hughes
Sandwell and West Birmingham NHS Trust			University Hospital Southampton		Nicolas Weir
Scarborough General Hospital			University Hospitals Leicester NHS Trust		David Eveson Debra Magorian
Scunthorpe General Hospital		Amit Banerjee	University Hospitals of North Tees & Hartlepool		Helen Skinner
Shrewsbury and Telford Hospital Trust		Robert Campbell	University Hospitals Plymouth NHS Trust		Azlisham Mohd Nor
South Glasgow University Hospital – QEUH			Victoria Hospital Kirkcaldy		Vera Cvoro
South Tyneside NHS Foundation Trust		Jon Scott	Walsall Manor Hospital		
Southampton General Hospital			Walton Centre NHS Foundation Trust		Alakendu Sekhar
Southend Hospital		Paul Christopher Guyler	Warrington and Halton Hospitals		Olayiwola Otaiku
Southern General Hospital			Watford General Hospital		David Collas
Southmead Hospital		Philip Clatworthy	West Cumberland Hospital		Enoch Orugun
Southport and Ormskirk NHS Trust		Patrick McDonald	Western Infirmary		Kennedy Lees
St Helens And Knowsley Teaching Hospital			William Harvey Hospital		David Hargroves
St John's Hospital		Scott Ramsay	Wishaw General Hospital		
St Thomas Hospital			Worcestershire Acute Hospital		Ana Garcia
St. George's Hospital		Liqun Zhang Anthony Pereira	Worthing		
St. Richard's Hospital		Simone Ivatts	Wrexham maelor Hospital		Emad Abood
Stockport NHS Foundation trust		Shivakumar Krishnamoorthy	Yeovil District Hospital		Khalid Rashed
Sunderland Royal Hospital		Min Myint	York Hospital		John Coyle
The Great Western Hospital NHS Foundation Trust		Richard O'Brien	Uruguay	51	
The Maidstone Hospital		Shivaprasad Arekalludoddi Siddegowda	National Coordinator: Claudia Camejo		
The Princess Alexandra Hospital		Christine Wright	Hospital de Clínicas		Andrés Gaye Saavedra Li Min Li
The Queen Elizabeth Hospital Kings Lynn NHS TRUST		Syed Mansoor	Medica Uuguaya		Roberto Crosa
The Royal Wolverhampton Hospital Trust		Raj Shekhar	Venezuela	2060	
Torbay		Kenneth Fotherby	National Coordinator: Mario de Bastos		
		Biju Bhaskaran	Clinica La Piramide		Negman Alvarado
			Hospital Univ de Maracaibo		Digna Parra
			Hospital Universitario de Caracas		Mario de Bastos
			Instituto Autonomo Hospital Universitario de Los Andes		Gabriela Molina

Country and Hospital	Patients	Local Coordinator
Vietnam	503	
National Coordinator:		
Luc Tran Viet		
108 Military Central Hospital Stroke Unit		Ngoc Nguyen Hoang
Bach Mai Emergency		Anh Nguyen Dat
Bach Mai Neurology		Thinh Le Van
Benh vien da khoa huu nghu Viet Tiep		Huyen Nguyen Thi Thu
Benh vien Thong Nhat		Thanh Le Dinh
Benh vien Trung Uong Hue		Nguyen Tran Thua
Cho Ray Hospital		Tai Nguyen Anh
General Friendship Hospital of Nghe An		Thanh Long Nguyen
HCMC Univesity Medical Center		Thang Ba Nguyen
Military Hospital 103		Nguyen Minh Hien
National Hospital of Geriatry		Luc Tran Viet
Nhan Dan Gia Dinh		Van Tan Vo
Thai Nguyen general Hospital		Tuan Tran Van
Thanh Nhan		Thang Dinh
Thanhhoa General Hospital		Sam Nguyenhoanh
The People '115 Hospital		Thang Huy Nguyen
Trung Vuong		Minh Nguyen

*Not yet recruiting

Some of these names are user admitted

