

# **Supplemental Material**

**Table S1. Demographic and clinical characteristics between patients in the study population and those excluded from analysis\***

Characteristic	Study population (N=10706)	Patients excluded (N=10399)	Standardized Difference (%)
Age, years, (mean $\pm$ SD)	70.6 $\pm$ 9.5	70.6 $\pm$ 9.3	0.8
Male	61.4	62.4	2.0
Previous use of vitamin K antagonist	59.1	58.8	0.5
[Diabetes mellitus	36.7	35.5	2.4
Dyslipidemia	55.1	49.6	11.1
Hypertension	94.9	92.3	10.8
Prior MI	11.6	11.5	0.3
Prior Stroke	18.3	19.0	1.9
Prior transient ischemic attack	12.4	10.9	4.7
Prior PAD	4.3	3.7	3.2
Congestive heart failure	59.5	55.4	8.2
Prior CAD	34.1	32.5	3.4
Prior CABG	8.0	5.8	8.6
History of ICH bleed	0.1	0.2	1.6
History of non-ICH bleed	9.9	9.8	0.2
History of gastrointestinal bleed	3.2	2.8	8.1
Creatinine clearance in mg/dL, (mean $\pm$ SD)	78.6 $\pm$ 32.4	74.9 $\pm$ 30.4	11.8
CHADS2 score (0-6) , (mean $\pm$ SD)	2.9 $\pm$ 1.0	2.8 $\pm$ 0.9	10.2

\*All results are % of patients unless otherwise specified.

GI indicates gastrointestinal; CRNM, clinically relevant non-major, SD, standard deviation; PAD, peripheral arterial disease; CAD, coronary artery disease; CABG, coronary artery bypass graft; ICH intracranial hemorrhage, CHADS2, scoring system for the long-term risk of stroke in atrial fibrillation, acronym stands for Congestive heart failure, Hypertension, Age>75, Diabetes mellitus, and prior Stroke

**Table S2. Quality of life compliance by bleeding status**

Time (month)	Major GI bleeding			Major non-GI bleeding			CRNM bleeding			Minor bleeding		
	Event (N=207)	No event* (N=9801)	p-value	Event (N=152)	No event* (N=9836)	p-value	Event (N=1419)	No event* (N=8874)	p-value	Event (N=714)	No event* (N=9418)	p-value
3	100.0	100.0	1.000	100.0	100.0	1.000	100.0	100.0	1.000	100.0	100.0	1.000
6	86.5	93.9	< 0.001	93.4	93.8	0.811	94.3	93.4	0.192	95.4	93.7	0.069
9	86.8	93.4	< 0.001	91.3	93.4	0.311	94.7	93.0	0.020	93.9	93.3	0.481
12	89.7	93.8	0.015	93.2	93.8	0.748	93.8	93.6	0.743	94.5	93.7	0.405
15	90.6	93.8	0.059	95.2	93.8	0.498	94.8	93.5	0.071	93.3	93.8	0.607
18	90.9	94.2	0.051	95.1	94.2	0.634	93.7	94.1	0.559	93.7	94.2	0.608
21	90.8	94.1	0.054	91.5	94.1	0.190	94.2	94.0	0.713	93.9	94.0	0.941
24	89.7	94.4	0.005	90.8	94.4	0.065	94.7	94.1	0.381	93.3	94.3	0.278
27	92.6	94.8	0.195	95.0	94.8	0.910	93.9	94.8	0.188	94.3	94.7	0.622
30	89.7	94.6	0.008	94.7	94.6	0.941	94.4	94.5	0.884	94.7	94.5	0.897
33	87.3	95.4	< 0.001	95.2	95.3	0.797	94.7	95.4	0.436	95.5	95.3	0.838
36	90.5	96.0	0.030	95.6	96.0	0.700	94.7	96.1	0.163	96.7	95.9	0.540
39	85.7	95.5	0.022	100.0	95.3	1.000	94.3	95.7	0.345	96.6	95.2	0.453
42	88.2	93.4	0.321	100.0	93.5	1.000	93.8	93.6	0.937	93.1	93.7	0.776
45	100.0	94.3	1.000	100.0	94.5	1.000	93.9	94.0	1.000	95.0	94.7	1.000
48	100.0	84.6	1.000		85.7	NA	100.0	80.0	0.523	100.0	84.6	1.000

\* the sample sizes for the “no event” categories differ according to the category of bleed due to censoring at the time of events. All results are % of patients.

GI indicates gastrointestinal, CRNM, clinically relevant non-major

## Appendix

The members of the Operations, Executive, Steering, Data Monitoring, Clinical Events Committees, countries, participating centers, Principal Investigators, and Primary Study Coordinators of the ENGAGE AF-TIMI 48 trial were as follows:

**Operations Committee:** *TI MI Study Group, Brigham and Women's Hospital, Boston, MA* – E. Braunwald (Study Chair), E.M. Antman (Principal Investigator), R.P. Giugliano (Co-Principal Investigator), C.T. Ruff (Investigator), S.E. Morin (Director), E.B. Hoffman (Lead Biostatistician), S.A. Murphy (Biostatistician), N. Deenadayalu (Biostatistician), L. Grip (Project Director); *Sponsor – Daiichi Sankyo Pharma Development, Edison, NJ* – M. Mercuri (Vice President, Clinical Development), H. Lanz (Executive Director, Clinical Development), I. Patel (Executive Director, Clinical Development), V. Curt (Senior Director, Clinical Development), A. Duggal (Senior Director, Clinical Development), J. Hanyok (Senior Director, Clinical Development), J. Davé (Associate Director, Clinical Development), D. Morgan (Executive Director, Regulatory Affairs), Y. Choi (Senior Director, Clinical Safety), M. Shi (Senior Director, Biostatistics), J. Jin (Senior Biostatistician), J. Xie (Biostatistician); *W. Crerand (Senior Director, Data Management)*; *J. Kappelhof (Senior Director, Project Management)*, W. Maxwell (Associate Director, Project Management); *Contract Research Organization – Quintiles, Research Triangle Park, NC* – M. Skinner (Global Operations Head), S. Patel (Project Director) J. Betcher (Biostatistician), G. Selicato (Biostatistician), C. Otto Jr. (Project Manager), C. Reissner (Clinical Director), K. Smith (Project Manager), J. Ostroske (Project Manager), A. Ron (Project Manager).

**Executive Committee:** *TI MI Study Group, Brigham and Women's Hospital, Boston, MA* – E. Braunwald, E.M. Antman, R. P. Giugliano; *Daiichi Sankyo* – M. Mercuri; *Canada* – S. Connolly; *United Kingdom* – J. Camm; *United States* – M. Ezekowitz, J. Halperin, A. Waldo.

**Steering Committee:** *Argentina* – E. Paolasso (deceased); *Australia* – P. Aylward; *Belgium* – H. Heidbuchel; *Brazil* – J.C. Nicolau; *Bulgaria* – A. Goudev; *Canada* – D. Roy, J. Weitz; *Chile* – R. Corbalán; *China* – Y. Yang; *Colombia* – R. Botero; *Croatia* – M. Bergovec; *Czech Republic* – J. Špinar; *Denmark* – P. Grande, C. Hassager; *Estonia* – J. Voitk; *Finland* – H. Huikuri, M. Nieminen; *France* – J.J. Blanc, J.Y. LeHeuzey; *Germany* – V. Mitrovic; *Greece* – D. Alexopoulos; *Guatemala* – G. Sotomora; *Hungary* – R. Kiss; *India* – B. SomaRaju; *Israel* – B. Lewis; *Italy* – P. Merlini, M. Metra; *Japan* – Y. Koretsune, T. Yamashita; *Mexico* – A. García-Castillo; *Netherlands* – T. Oude Ophuis; *New Zealand* – H. White; *Norway* – D. Atar; *Peru* – M. Horna; *Philippines* – N. Babilonia; *Poland* – W. Ruzylo; *Portugal* – J. Morais; *Romania* – M. Dorobantu; *Russian Federation* – M. Ruda; *Serbia* – M. Ostojic; *Slovakia* – T. Duris; *South Africa* – A. Dalby; *South Korea* – N. Chung; *Spain* – J.L. Zamorano; *Sweden* – S. Juul-Möller; *Switzerland* – T. Moccetti; *Taiwan* – S.A. Chen; *Thailand* – P. Sritara; *Turkey* – A. Oto; *Ukraine* – A. Parkhomenko; *United Kingdom* – R. Senior.

**Data Monitoring Committee:** F. Verheugt (Chair), A. Skene (Statistician), J. Anderson, K. Bauer, J.D. Easton, S. Goto.

**Clinical Events Committee:** S. Wiviott (Chair), C. Lowe (Director), E. Awtry, C.J. Berger, K. Croce, A. Desai, E. Gelfand, W. Goessling, N.J. Greenberger, C. Ho, D.E. Leeman, M.S. Link, A.D. Norden, A. Pande, N. Rost, F. Ruberg, S. Silverman, A. Singhal, J.A. Vita.

## **Participating Countries, Centers, and Investigators (National Lead Investigator in Bold)**

### **Argentina- 1059 subjects 58 centers**

O Vogelmann, C Gonzalez, Hospital de Alta Complejidad Presidente Juan Domingo Peron, Formosa, FOR; R Ahuad Guerrero, M Rodriguez, Corporación Médica de Gral. San Martín S.A., San Martin, BUE; J Albisu, E Rosales, Instituto Cardiovascular de San Luis, San Luis, SLS; O Allall, M Reguero, Hospital Cordoba, Cordoba, CRD; C Alvarez, M Garcia, Hospital Italiano Regional del Sur, Bahia Blanca, BUE; S Ameriso, P Ameriso, Instituto de Investigaciones Neurologicas Raul Carrea FLENI, Capital Federal, BUE; M Amuchastegui, M Caceres, Hospital Privado Centro Médico de Córdoba, Cordoba, CRD; J Beloscar, J Petrucci, Hospital Provincial del Centenario, Rosario, SFE; M Berli, M Berli, Cedir, Santa Fe, SFE; N Budassi, M Valle, Hospital Interzonal General de Agudos Dr Jose Penna, Bahia Blanca, BUE; G Bustamante Labarta, M Saravia, Sanatorio Nuestra Señora del Rosario, San Salvador de Jujuy, JUJ; A Caccavo, V Fracaro, Clinica Coronel Suarez, Coronel Suarez, BUE; L Cartasegna, V Novas, Hospital Italiano de La Plata, La Plata, BUE; O Caruso, R Saa Zarandon, Hospital Central Mendoza, Mendoza, MEN; H Colombo, M Morandini, Clinica Colombo, Cordoba, CRD; J Cuello, M Rosell, Instituto de Investigaciones Clinicas - Bahia Blanca, Bahia Blanca, BUE; C Cuneo, M Bocanera, Hospital San Bernardo, Salta, SAL; A D'Amico, G Cendali, Cedim Clínica Privada, Ramos Mejia, BUE; R Dran, V Moreno, Centro de Salud Norte, Munro, Buenos Aires, BUE; C Estol, M Davolos, STAT Research, Ciudad Autonoma de Bs. As., CBA; A Facello, M Facello, Centro Privado de Tomografia Computada Cordoba S.A., Cordoba, CRD; E Falu, M Iriarte, Sanatorio del Carmen, Salta; F Femenia, M Arrieta, Hospital Español de Mendoza, Godoy Cruz, MEN; J Fuselli, A Zanotti, Cemic Saavedra, Ciudad Autonoma de Bs. As., CBA; J Gant Lopez, F Meiller, Hospital Aleman, Ciudad Autonoma de Bs. As., CBA; R Garcia Duran, D Perlo, Instituto de Investigaciones Clinicas San Nicolas, San Nicolas, BUE; M Garrido, C Ceirano, Clínica Privada Provincial S.A., Merlo Buenos Aires, BUE; G Giacomi, M Eden, Unidad de Cardiologia Clinica, Mar del Plata, BUE; R Giannaula, M Huerta, Hospital Español, Buenos Aires, CBA; R Goicoechea, M von Wulffen, Hospital Jose Maria Ramos Mejia, Capital Federal, BUE; M Hominal, M Bianchini, Centro de Investigaciones Clínicas del Litoral SRL, Santa Fe, SFE; H Jure, D Jure, Clinica Chutro SRL, Cordoba, CRD; R Kevorkian, F Monaco, Hospital General de Agudos Donacion Francisco Santojanni, Capital Federal, CBA; G Lanternier, M Belcuore, Azira Clinical Research, Pergamino, BUE; G Liniado, M Iglesias, ALPI-Inst. de Rehabilitacion Marcelo Fitte, C.A.B.A., BUE; B Litvak, A Nigro, Servicios Hospitalarios San Justo S.A., Buenos Aires, BUE; J Llanos, S Vignau, Instituto de Investigaciones Clinicas de Rosario, Rosario, SFE; C Lorente, K Shatsky, Sanatorio Julio Corzo, Rosario, SJN; J Lotti, G Raimondi, Sanatorio Plaza, Rosario, SFE; I Mackinnon, M Carne, Instituto de Investigaciones Clínicas-Mar del Plata, Mar del Plata, BUE; O Manuale, M Calderon, Hospital Britanico de Buenos Aires, Capital Federal, CBA; J Marino, I Funes, Centro Medico Alcorta, Ciudad Autonoma de Bs. As., CBA; J Muntaner, H Gandur, Centro Mod de Cardiologia, San Miguel de Tucuman; D Nul, E Verdini, Clinica Constituyentes, Moron, BUE; D Piskorz, A Tommasi, Sanatorio Britanico S.A., Rosario, SFE; G Povedano, E Casares, Complejo Medico de la PFA Churruga Vizca, CABA, CBA; D Pozzer, E Fernandez, Inst. de Cardiología de Corrientes Juana Francisca Cabral, Corrientes, COR; A Prado, C Venturini, Inves Clinicas Tucuman, San Miguel de Tucuman, TUC; H Ramos, S Navarrete, Clinica Privada Caraffa, Cordoba, CRD; M Rodriguez, M Alvarez, Clinica y Maternidad Colon SA, Mar del Plata, BUE; A Sanchez, L Bowen, Instituto Investigaciones Clínicas Cipolletti, Cipolletti, RIO; M Sanjurjo, O Codutti, Cordis-Instituto del Corazón, Resistencia, CHA; S Saravia Toledo, I Formoso, Instituto de Medicina Cenesa, Salta, SAL; J Schmidberg, A Goloboulicz, Instituto

Medico Aguero, Moron, BUE; P Schygiel, C Buzzetti, Clinica Instituto Medico Adrogue, Adrogue, BUE; P Severino, P Morara, Clinica Independencia, Munro, BUE; M Sosa Liprandi, M Teves, Sanatorio Guemes, Ciudad Autonoma de Bs As, BUE; M Vico, Y Morell, Instituto Investigaciones Clinicas Zarate, Zarate, BUE.

**Australia- 102 subjects 13 centers**

C Anderson, T Paraskevaidis, Royal Prince Alfred Hospital, Camperdown NSW, NSW; M Arstall, B Hoffmann, Lyell McEwin Hospital, Elizabeth Vale, SA; D Colquhoun, S Price-Smith, Core Research Group, Milton, QLD; D Crimmins, A Slattery, Central Coast Neuroscience Research, East Gosford, NSW; A Dart, S Kay, Baker Heart Research Institute, Melbourne, VIC; S Davis, G Silver, Royal Melbourne Hospital, Parkville, VIC; S Flecknoe-Brown, J Roberts, Broken Hill Hospital, Broken Hill, NSW; P Gates, S Jones, Geelong Hospital, Geelong, VIC; R Lehman, H Morrison, Adelaide Medical Research, Ashford, SA; M McKeirnan, J Li, Brisbane South Clinical Research Centre, Carina Heights, QLD; V Paul, C Batta, Royal Perth Hospital, Perth, WA; P Purnell, L Perrett, Joondalup Cardiovascular Trials Foundation, Joondalup, WA; G Szto, V O'Shea, Peninsula Private Hospital, Frankston, VIC.

**Belgium- 149 subjects 15 centers**

L Capiau, F Banaeian, Wetteren; J De Bleecker, K de Koning, AZ Sint-Lucas, Gent; M De Tollenaere, L De Bruyne, Sint Augustinuskliek, Veurne; P Desfontaines, G Tincani, CHC - Cliniques de l'Espérance, Montegnée; **H Heidbuchel**, K Meeusen, UZ Leuven, Leuven; J Herzet, D Malmendier, Centre Hospitalier Régional de la Citadelle (Psychiatry), Liege; G Mairesse, M Raepers, Clinique Saint-Joseph, Arlon; J Parqué, N Clinckemaille, Parqué Jean-Luc, Mouscron; C Scavée, D Huyberechts, Cliniques Universitaires Saint-Luc, Bruxelles; D Stockman, C Jacobs, ZNA Middelheim, Antwerpen; Y Vandekerckhove, K Derycker, A.Z St. Jan, Brugge; J Vanwelden, J van Welden, A.Z Jan Palfijn, Merksem; G Vervoort, I Mestdagh, AZ Sint-Maarten - Campus Leopoldstraat, Mechelen; M Vrolix, C Beerts, Z.O.L - Campus St. Jan, Genk; B Wollaert, D Denie, ZNA Stuivenberg, Antwerpen.

**Brazil- 707 patients 37 centers**

A Amato Vincenzo de Paola, E Coutinho, Universidad Federal de Sao Paulo - UNIFESP, Sao Paulo, SP; P Andrade Lotufo, R Ferreira de Melo, Hospital Universitário da FMUSP, Sao Paulo, SP; J Atie, C Motta, SMO Brazil, Rio de Janeiro, RJ; F Augusto Alves da Costa, R Franchin Ferraz, FGM Clin Paulista de Doenças Cardiov LTDA, São Paulo, SP; D Bertolim Precoma, E Sehnem, Hospital Angelina Caron, Campina Grande do Sul, PR; R Botelho, S Cunha, Instituto do Coração do Triângulo Mineiro, Uberlândia, MG; R Brondani, N Fleck, Hospital das Clinicas de Porto Alegre, Porto Alegre, RS; H Chaves Junior, J Silva, Hospital as Clinicas da Universidade Federal de Pernambuco, Recife, PE; C Costantini, D Barroso, Hospital Cardiologico Costantini, Curitiba, PR; M De Patta, V Pereira, Instituto de Cardiologia de Santa Catarina, San Jose, SC; N Duda, R Laimer, Hospital Sao Vicente de Paulo, Passo Fundo, RS; O Dutra, S Morgado, Instituto de Cardiologia do Rio Grande do Sul, Porto Alegre, RS; W Faustino Saporito, M Seroqui, Hospital Estadual Mario Covas- SP, Santo Andre, SP; L Ferreira, E Araújo, Instituto de Cardiologia do Distrito Federal, Brasilia, DF; H Finimundi, C Daitz, Instituto de Pesquisa de Estudos Multicentricos, Caxias do Sul, RS; R Gagliardi, G Pereira, Santa Casa de Misericordia de Sao Paulo, Sao Paulo, SP; M Gomes, A Gomes, Clinicor - Hospital do Coracao de Alagoas, Maceio, AL; A Guimarães, L Ninho, Hospital Geral de Bonsucceso, Rio de Janeiro, RJ; C Jaeger, L Pereira, Hospital Mae de Deus, Porto Alegre, RS; J Jorge, C Cury, Santa Casa de Misericordia de Curitiba - PUCPR, Curitiba, PR; S Kaiser, A Almeida, CCBR Brasil, Rio de Janeiro, RJ.

Janeiro, RJ; C Kalil, G Radaelli, Hospital Sao Lucas - PUCRS, Porto Alegre, RS; W Kunz Sebba Barroso de Souza, K Morales, Via Médica - Centro Clinico, Goiania, GO; P Leaes, R Osorio Luiz, Santa Casa de Porto Alegre, Porto Alegre; J Pimenta Almeida, A Gozalo, Hospital do Servidor Publico Estadual de Sao Paulo, Sao Paulo, SP; G Reis, K Avellar, Santa Casa de Misericordia de Belo Horizonte, Belo Horizonte, MG; L Reis Katz Weiand, J Leipelt, Hospital Bruno Born, Lajeado, RS; J Rocha, R Barros, Hospital Centro Medico de Campinas, Campinas, SP; L Rodrigues, M Rubia Rocha, Encore Cardiologia e Radiologia Intervencionista, Aparecida de Goiânia, GO; A Rodrigues, D Rodrigues, ICM - Instituto do Coracao de Marilia, Marilia, SP; F Rossi dos Santos, L Goncalves Pagnan, Loema - Instituto de Pesquisa Clinica, Campinas, SP; R Sampaio, R do Val, Instituto do Coracao - Incor, Sao Paulo, SP; J Saraiva, C Vicente, Hospital e Maternidade Dr. Celso Pierro - PUC Campinas, Campinas, SP; M Simoes, A Carraro, Hospital das Clinicas da FMRP, Ribeirao Preto, SP; D Sobral Filho, E Lustosa, PS de Cardiologia de Pernambuco (PROCAPE) Univ de Pernambuco, Recife, PE; F Villas Boas, M Almeida, Hospital Espanhol, Salvador, BA; S Zimmermann, E Bürger Zimmermann, Clinica Procardio, Blumenau, SC.

**Bulgaria- 520 patients 17 centers**

B Chompalova, G Parishev, MHAT - Plovdiv AD, Plovdiv; S Denchev, N Milcheva, UMHAT Alexandrovska EAD, Sofia; T Donova, V Gergova, UMHAT Alexandrovska EAD, Sofia; B Georgiev, E Kostova, MHAT-National Heart Hospital EAD, Sofia; A Goudev, E Kinova, UMHAT Tzaritza Yoanna - ISUL EAD, Sofia; V Hergeldjieva, P Kamenova, MHAT - Ruse AD, Ruse; A Manolova, I Vasilev, MHAT - Haskovo AD, Haskovo; A Mihov, B Miteva, MHAT Sveta Ekaterina EOOD, Dimitrovgrad; V Mincheva, V Stoyanovski, UNMTHAT Tzar Boris III - Sofia, Sofia; F Nikolov, D Vasilev, UMHAT Sv. Georgi EAD, Plovdiv; G Pencheva, K Kostov, Fourth MHAT- Sofia AD, Sofia; S Petranov, T Milusheva, MHAT – Burgas AD, Burgas; A Popov, I Vasilev, Diagnostic Consultative Center Sveti Georgi EOOD, Haskovo; A Staneva, D Momchilova- Lozeva, Central Clinical Base-Medical Institute-MI, Sofia; G Todorov, M Nyagina, Second MHAT- Sofia AD, Sofia; H Tumbev, D Tumbeva, DCC Chaika EOOD, Varna; M Tzekova, M Kitova, E Manoylov, UMHAT Dr. Georgi Stranski EAD, Pleven.

**Canada- 774 patients 54 centers**

J Archibald, S Antle, Pharmaceutical Integrated Research Company, Halifax, NS; R Bhargava, C Stafford, Heart Care Research, Oshawa, ON; S Bose, M Hundseth, Dr. S. Bose Medical Profession Corporation, North Saskatoon, SK; J Cha, J Otis, Oshawa Medical Arts Building, Oshawa, ON; R Chehayeb, C Lepage, Greenfield Park, QC; M Chilvers, L Vansickle, Sarnia Research Institute, Sarnia, ON; D Cleveland, S Valley, Penticton Regional Hospital, Penticton, BC; C Constance, M Gauthier, Clinique Santé Cardio MC, Montreal, QC; P Costi, C Masson, CSSS du Sud de Lanaudière- Hôpital Pierre-Le Gardeur, Terrebonne, QC; B Coutu, I Denis, CHUM- Hôtel-Dieu, Montréal, QC; M du Preez, A Kubanska, The Medical Arts Health Research Group, Kamloops, BC; M Dufresne, J Krider, Trainyards Health and Wellness Center, Ottawa, ON; J Eikelboom, M Zondag, Hamilton General Hospital, Hamilton, ON; C Fortin, C Viau, Neufort Incorporated, Saint-Lambert, QC; M Green, D Houbraken, University of Ottawa Heart Institute, Ottawa, ON; R Hatheway, J Mabee, Pharmaceutical Integrated Research Company, Bridgewater, NS; J Heath, L Scott, Alder Medical Centre, Campbell River, BC; K Ho, V Ho, Chilliwack, BC; G Hoag, R Standring, Discovery Clinical Services Limited, Victoria, BC; T Huynh, L Perkins, The Montreal General Hospital, Montreal, QC; S Kouz, M Roy, Centre Hospitalier Régional de Lanaudière, St.-Charles-Borromée, QC; R Labonte, C Dewar, Dr. R Labonté Professional Medicine Corporation, Sudbury, ON; A Lainesse, L St-Germain, Centre

d'investigation clinique de la Mauricie, Trois-Rivières, QC; S Lam, H Lam, Calgary West Medical Centre, Calgary, AB; T Lichtenstein, P Roberts, The Medical Arts Health Research Group, Kelowna, BC; R Luton, S Douglas, London, ON; P Ma, M Seib, Heart Health Institute, Calgary, AB; C MacCallum, J Matthews, Eastern Health, St. John's, NL; P Malette, T Vaillancourt, Medicor Research Incorporated, Sudbury, ON; C Maranda, E Studenikow, Cardiology and Research, Westmount, QC; A Mawji, A Morely, Pharmaceutical Integrated Research Company, London, ON; D Morrison, M Roth, Beamsville Medical Centre, Beamsville, ON; M Mucha, J Krider, Trainyards Health and Wellness Center, Ottawa, ON; A Najarali, U Lamoureux, PIRC Research Office- Brampton, Brampton, ON; R Nicholson, A Morely, Pharmaceutical Integrated Research Company, Kitchener, ON; G O'Hara, P Banville, Quebec Heart Institute, Quebec City, QC; W O'Mahony, R Bolton, Corunna Medical Research Center, Corunna, ON; R Parkash, L Carroll, Queen Elizabeth II Health Sciences Centre, Halifax, NS; Y Pesant, V Sardin, Recherche Médicale St-Jérôme Incorporated, St-Jérôme, QC; P Polasek, L Turri, Kelowna Cardiology Research, Kelowna, BC; A Qureshi, C Nethercott, PIRC Research Office- Brampton, Listowel, ON; J Ricci, B Bozek, Scarborough Cardiology Research, Scarborough, ON; D Rupka, C Marchand, Fraser Clinical Trials Incorporated, New Westminster, BC; D Shu, G Silverio, Gain Medical Centre, Coquitlam, BC; R St-Hilaire, A Morissette, Centre Hospitalier Beauce-Etchemin, Saint-Georges, QC; J Sussman, P Kailey, Toronto, ON; G Syan, C Bobbie, G.S. Cardiac Lab Medicine Professional Corp., Sudbury, ON; M Talajic, D David, Montreal Heart Institute, Montreal, QC; P Talbot, M Tremblay, Centre de Recherche Clinique de Québec, Québec, QC; I Teitelbaum, J Teitelbaum, JJ Dig Research, Toronto, ON; G Velthuysen, L Giesbrecht, Holley Clinic, Quesnel, BC; R Wahby, A Morley, Dorchester Medical Center, Dorchester, ON; S Wharton, T Caterini, The Wharton Medical Clinic Clinical Trials, Hamilton, ON; T Woodford, J Mabee, Pharmaceutical Integrated Research Company, Liverpool, NS.

#### **Chile- 254 patients 14 centers**

W Balboa, L Retamal Matus, Hospital Victoria, Victoria; C Bugueño, P Mondaca Mondaca, Hospital San Juan de Dios La Serena, La Serena; J Cobos, C Obreque, Hospital El Pino, Santiago; **R Corbalan**, A Parada, Hospital Clinico Pontificia Universidad Catolica de Chile, Santiago; F Florenzano, P Arratia Diaz, Hospital del Salvador, Santiago; M Lopetegui, C Rebolledo, Hospital San Borja Arriaran, Santiago; L Manriquez, L Manríquez Silva, Hospital Regional de Rancagua, Rancagua; D Martinez, R Romero Llamas, Clinica Iquique, Iquique; M Opazo, M Carmona Pérez, Hospital Naval Almirante Nef, Viña del Mar; C Pincetti, G Torres Carrasco, Centro de Investigacion Clinica del Sur, Temuco; S Potthoff, J Zapata Staub, Corporacion de Beneficencia Osorno, Osorno; M Rodriguez, Y Campisto, Hospital Dr. Sotero del Rio, Santiago; B Stockins, C Lara Lara, Hospital Dr. Hernan Henriquez Aravena, Temuco; P Yovaniniz, M Grandon Azua, Hospital Barros Luco Trudeau, Santiago.

#### **China- 469 patients 33 centers**

F Bai, GL Xu, The Second Hospital of Lanzhou University, Lanzhou; JZ Chen, XD Xie, The First Affiliated Hospital of College of Medicine, Zhejiang University, Hangzhou; XP Chen, X Zhang, West China Hospital, Sichuan University, Chengdu; YG Dong, C Feng, The First Affiliated Hospital of Sun Yat-sen University, Guangzhou; GS Fu, P Zhang, Sir Run Run Shaw Hospital, School of Medicine, Zhejiang University, Hangzhou; K Hong, ZG You, The Second Affiliated Hospital of Nanchang University, Nanchang; L Hong, Y Qiu, Renmin Hospital of Jiang Xi Province, Nanchang; XJ Jiang, Z Qu, Ren Min Hospital of Wu Han University, Wuhan; L Li, H Liu, The First Affiliated Hospital of Guangxi Medical University, Nanning; TF Li, YQ Kong, The Affiliated Hospital of Hainan Medical College, Haikou; WM Li, B Liu, The

1st Affiliated Hospital of Harbin Medical University, Harbin; ZQ Li, Y Liu, People's Hospital of Liaoning Province, Shenyang; DN Liao, XJ Gu, Changzheng Hospital, The Second Military Medical University, Shanghai; L Liu, ZH Lu, The People's Hospital of Guangxi Zhuang Autonomous Region, Nanning; SM Ma, ZY Yang, Shengjing Hospital of China Medical University, Shenyang; DM Wang, SY Qi, Bethune International Peace Hospital, Shijiazhuang; GP Wang, XJ Shi, The First Hospital Affiliated to Liaoning Medical College, Jinzhou; M Wei, D Huang, Shanghai No.6 People's Hospital, Shanghai; SL Wu, YE Li, Guangdong Provincial People's Hospital, Guangzhou; JH Xu, JY Gu, Tong Ji Hospital of Tongji University, Shanghai; YM Xu, YZ Liang, The 2nd Hospital of Tianjin Medical University, Tianjin; K Yang, AY Li, The Third Xiangya Hospital of Central South University, Changsha; **YJ Yang**, X Zheng, Cardiovascular Institute & Fuwai Hospital Chinese Academy of Medical Sciences, Beijing; Y Zheng, M Gao, The First Hospital of Jilin University, Changchun; YH Yin, YP Xu, The Second Affiliated Hospital of Chongqing Medical University, Chongqing; B Yu, LL Li, The 2nd Affiliated Hospital of Harbin Medical University, Harbin; ZY Yuan, H Qiang, The 1st Hospital Affiliated to Xi'an Medical University, Xian; HQ Zhang, YN Lin, The 1st Affiliated Hospital of Wenzhou Medical College, Wenzhou; Z Zhang, H Kang, The 1st Hospital Affiliated to Lanzhou University, Lanzhou; RP Zhao, RJ Han, Baotou Central Hospital, Baotou; XL Zhao, JQ Wang, Beijing Tong Ren Hospital Affiliated to Capital Medical University, Beijing; ZQ Zheng, BG Li, The First Affiliated Hospital of NanChang University, Nanchang; SX Zhou, YL Zhang, The Second Affiliated Hospital of Zhongshan University, Guangzhou.

**Colombia- 141 patients 11 centers**

J Accini, M Accini, Consultorio Privado-Jose Luis Accini, Baranquilla; N Cano, L León Pineda, Hospital Santa Sofia, Manizales; J Delgado Restrepo, C Arroyave, Instituto Corbic, Medellín; R Fernández Ruiz, I Aldana Diaz, Clinica Cardiovascular Santa Maria, Medellin; H Hernandez, P Delgado, Instituto Corazon de Bucaramanga, Bucaramanga; C Jaramillo Muñoz, A Builes, Promotora Medica Las Americas SA, Medellin; F Manzur, E Rivera Rodriguez, Centro de diagnostico cardiologico Ltda, Cartagena; M Moncada Corredor, D Lopez Giraldo, Fundacion Centro de Investigacion Clinica CIC, Medellín; L Orozco Linares, J Fonseca, Foqus LTDA, Bogotá Cundinamarca; A Quintero, C Gonzales, Fundación del Caribe para la Investigación Biomédica, Barranquilla; G Sanchez Vallejo, I Perdomo Mejia, Centro de Estudios Clinicos del Quindio, Armenia.

**Croatia- 127 patients 11 centers**

J Bagatin, V Carevic, Clinical Hospital Centre Split, Split; S Car, M Jeric, General Hospital Varazdin, Varazdin; N Ciglenecki, S Tusek, Special Hospital for Medical Rehabilitation, Krapinske Toplice; J Ferri Certic, I Romic, General Hospital Dubrovnik, Dubrovnik; I Francetic, K Makar Ausperger, University Hospital Center Zagreb, Zagreb; V Jelic, S Jaksic Jurinjak, General Hospital Karlovac, Karlovac; A Knezevic, B Buksa, General Hospital Zadar, Zadar; P Samardzic, K Cvitkusic Lukenda, General Hospital Dr. J. Bencevic, Slavonski Brod; R Steiner, D Kirner, Clinical Hospital Osijek, Osijek; K Sutalo, Z Bakliza, General Hospital Dr.Tomislav Bardek, Koprivnica; H Vrazic, **M Bergovec**, T Lucijanic, University Hospital Dubrava, Zagreb.

**Czech Republic- 1173 patients 39 centers**

M Bar, P Brodova, Neurologicka ambulance Bormed, Ostrava- Trebovice; L Berka, V Kunkelova, Ordinace pro choroby srdce a cev, Jindrichuv Hradec; M Brtko, M Brtko, Fakultni nemocnice Hradec Kralove, Hradec Kralove; H Burianova, H Burianova, Poliklinika Humanitas, Bilovec; O Cermak, O Cermak, Nemocnice Slany, Slany; L Elbl, L Elbl, Kardiologicka

ordinace, Brno- Lesna; R Ferkl, R Ferkl, Interni ambulance, Trutnov; J Florian, J Florian, Nemocnice Cesky Krumlov, Cesky Krumlov; L Francek, L Francek, Kromerizska nemocnice a.s., Kromeriz; L Golan, L Golan, Kardiologie, Revnice; P Gregor, P Gregor, Fakultni nemocnice Kralovske Vinohrady, Praha; M Honkova, M Honkova, Kardiologicka a interni ambulance, Praha 1; J Hubac, J Hubac, Interni ambulance, Chrudim; J Jandik, J Jandik, Oblastni nemocnice Nachod, Nachod; P Jarkovsky, P Jarkovsky, Ustredni vojenska nemocnice Praha, Praha 6; Z Jelinek, Z Jelinek, Nemocnice Hranice a.s., Hranice; O Jerabek, O Jerabek, Poliklinika RAVAK, Pribram 8; R Jirmar, R Jirmar, Poliklinika Malešice, Praha 10; R Kobza, R Kobza, Mediscan s.r.o., Praha 11; M Kochrt, G Kostkova, Interni ordinace, Teplice; Z Kosek, Z Kosek, Kardiologicka ambulance, Mlada Boleslav; P Kovar, P Kovar, Poliklinika Modrany, Praha 4; R Kuchar, R Kuchar, INNera s.r.o., Benesov; J Kvasnicka, J Kvasnicka, Kardiologicka ambulance, Praha 10; O Ludka, O Ludka PhD., Privatni interni ambulance, Brno; V Machova, E Krocova, InterKardioML s.r.o., Marianske Lazne; M Melichar, M Melichar, Interni ambulance, Pardubice; R Nechanicky, R Nechanicky, Nemocnice s poliklinikou Semily, Semily; J Olsr, J Olsr, General practitioner s.r.o., Ostrava; K Peterka, K Peterka, Nemocnice Havlickuv Brod p.o., Havlickuv Brod; I Petrova, I Havlova, Kardiologicka ambulance, Usti nad Labem; J Pisova, J Pisova, Kardiologicka ambulance, Hradec Kralove; P Podrazil, E Jirsova, Interni ambulance, Praha 6; P Reichert, P Reichert, Krajska zdravotni a.s. Nemocnice Teplice p.o., Teplice; J Slaby, J Slaby, Oblastni nemocnice Kolin, Kolin; R Spacek, R Spacek, Nemocnice Na Frantisku, Praha 1; **J Spinar**, R Labrova, FN Brno- Bohunice, Brno; P Vodnansky, D Samkova, Kardiologicka ordinace, Pardubice; E Zidkova, E Zidkova, Ordinace interniho lekarstvi, Praha 5.

#### **Denmark-**

#### **219 patients 11 centers**

K Dodt, Horsens Sygehus, Horsens; H Christensen, L Christensen, Bispebjerg Hospital, København NV; C Hassager, A Loof, Rigshospitalet, København Ø; H Ibsen, H Madsen, Holbæk Sygehus, Holbæk; H Iversen, T Veng-Olsen, Glostrup Hospital, Glostrup; H Nielsen, R Olsen, Bispebjerg Hospital, København NV; K Overgaard, V Petrovic, Herlev Hospital, Herlev; I Raymond, D Raae, Frederiksberg Hospital, Fredriksberg; N Sand, A Svenningsen, Sydvestjyds Sygehus Esbjerg, Esbjerg; C Torp-Pedersen, U Jakobsen, Gentofte Hospital, Hellerup; H Wiggers, K Serup-Hansen, Skejby Sygehus- Aarhus University Hospital, Aarhus N.

#### **Estonia-**

#### **191 patients 6 centers**

J Kaik, A Stern, Fertilitas AS, Haabneeme; R Kolk, R Kolk, Tartu University Hospital, Tartu; E Laane, L Rivis, Orthopaedic and Clinical Research Center, Tartu; M Paumets, **J Voitk**, M Laheäär, North Estonia Medical Centre Foundation, Tallinn; A Rosenthal, R Rajasalu, Tallinn; V Vahula, E Ratnik, Pärnu Hospital, Pärnu.

#### **Finland-**

#### **42 patients 7 centers**

H Huikuri, S Kaarleenkaski, Oulun yliopistollinen sairaala, Oulu; E Hussi, S Valpas, Etelä-Karjalan keskussairaala, Lappeenranta; P Jäkälä, T Lappalainen, Itä-Suomen yliopisto Kuopion kampus Kliininen tutkimuskesk, Kuopio; A Mäenpää, J Viitaniemi, Seinäjoen keskussairaala, Seinäjoki; K Nyman, T Sankari, Keski-Suomen keskussairaala, Jyväskylä; H Rasi, O Salminen, Terveystalo Tampere, Tampere; V Virtanen, H Nappila, Finn-Medi 1, Tampere.

#### **France-**

#### **110 patients 14 centers**

J Le Heuzey, Hôpital Européen Georges Pompidou, Paris, 75; B Agraou, F El Jarroudi, Centre Hospitalier Général, Valenciennes, 59; P Amarenco, P Bourdin, Hopital Bichat, Paris, 75; D Babuty, M Boyer, Hopital Troussseau, Tours Cedex, 37; A Belhassane, F El Jarroudi, Centre

Hospitalier de Cambrai, Cambrai, 59; H Berbari, H Berbari, Hopital d'Instruction des Armees Percy, Clamart Cedex, 92; **J Blanc**, P Dias, Chu de Brest- Hôpital de la Cavale Blanche, Brest Cedex, 29; D Coisne, N Berger, Chu Poitiers- Hôpital de la Milètrie, Poitiers, 86; E Decoulx, M El Jarroudi, CH Chatiliez Tourcoing, Tourcoing, 59; S Dinanian, M Arfaoui, Hopital Antoine Beclere, Clamart, 92; J Hermida, E Deruche, Centre Hospitalier Sud, Amiens, 80; S Kacet, S Corbut, Hospital Cardiologique Chru Lille, Lille Cedex, 59; J Poulard, S Leparree, Centre Hospitalier d'Abbeville, Abbeville, 80; R Roudaut, C Duprat, Hôpital du Haut l'Eveque (Cardiologie), Pessac, 33.

**Germany- 913 patients 55 centers**

A Al-Zoebi, A Wurow, Kardiologische Praxis, Wermsdorf, SN; P Bernhardt, U Dichristin, Universitaetsklinikum Ulm, Ulm, BW; J Berrouschot, S Vierbeck, Klinikum Altenburger Land, Altenburg, TH; J Beyer-Westendorf, B Sehr, Universitaetsklinikum Dresden, Dresden, SN; M Bouzo, P Schnelzer, Muenchen, BY; R Braun, K Ladenburger, Unterschneidheim, BW; M Buhr, D Weihrauch, Kardiologische Praxen im Spreebogen, Berlin, BE; C Contzen, M Kara, Synexus ClinPharm International GmbH, Frankfurt, HE; W Daut, D Ayasse, Kallstadt, RP; E Degtyareva, P Kranz, Synexus ClinPharm International GmbH, Leipzig, SN; T Drescher, B Herfurth, Gemeinschaftspraxis, Stuhr, HB; M Faghih, M Faghih, Hausarztzentrum, Essen, NW; K Forck-Boedeker, K Schneider, pro scientia med, Luebeck, SH; R Fuchs, W Manuela, Orgamed System Fuchs & Partner KG, Giengen, BW; C Grigat, A Otto, Clinical Research Hamburg GmbH, Hamburg, HH; A Hartmann, M Peitz, Klinikum St. Georg Leipzig, Leipzig, SN; H Heuer, U Dieckheuer, St. Johannes Hospital- PS, Dortmund, NW; U Hoffmann, S Dorn, Universitaetsklinikum Mannheim, Mannheim, BW; S Hoffmann, M Schuppe, Vivantes Klinikum im Friedrichshain, Berlin, BE; T Horacek, P Fink, Evangelisches Krankenhaus, Witten, NW; J Junggeburth, S Schmid, Bad Woerrishofen, BY; W Jungmair, B Schoen, Kardiologische Praxis, Bad Homburg, HE; U Kleinecke-Pohl, P Meusel, Gemeinschaftspraxis Kleinecke-Pohl Kirsch Benner-Hemsen, Koeln, NW; H Koenig, F Bauch, Synexus Clinical Research GmbH, Berlin, BE; H Koenig, F Bauch, Synexus ClinPharm International GmbH, Potsdam, BR; I Lohrbaecher-Kozak, B Grosse, Synexus Clinical Research GmbH, Dresden, SN; S Lueders, U Venneklaas, St. Josefs-Hospital, Cloppenburg, NI; M Luttermann, M Wulf, Wardenburg, NI; O Maus, K Hoefer, Innomed Leipzig GmbH, Leipzig, SN; G Meissner, U Braemer, Synexus ClinPharm International GmbH, Magdeburg, ST; U Meyer-Pannwitt, E Frahm, Mare Klinikum, Kiel, SH; **V Mitrovic**, S Vogt, Kerckhoff Klinik GmbH, Bad Nauheim, HE; A Muegge, S Barbera, St. Josef-Hospital- PS, Bochum, NW; M Mueller-Glamann, K Raddatz, Gemeinschaftspraxis Drs. Krohn/Mueller-Glamann, Hamburg, HH; R Piechatzek, D Lewinsky, Synexus ClinPharm International GmbH, Goerlitz, SN; W Pohl, W Pohl, Gemeinschaftspraxis Dr. Al-Nakkash Dr. W. Pohl Dr. C Pohl, Dresden, SN; N Proskynitopoulos, M Kuhlmann, Gemeinschaftspraxis, Nienburg, NI; K Rack, H Pilipenko, Internistische Praxis, Augsburg, BY; A Rinke, A Kühlenborg, Synexus ClinPharm International GmbH, Bochum, NW; A Schaefer, N Szymanowski, Essen, NW; S Schellong, R Frommhold, Staedtisches Klinikum Dresden-Friedrichstadt, Dresden, SN; I Schenkenberger, T Finsterbusch, K Dreykluft, Klinische Forschung Berlin, Berlin, BE; C Schiewe, C Schiewe, Hamburg, HH; A Schmidt, M Schmidt, Offenbach, HE; A Schreckenberg, J Hellmers, Internistische Praxisgemeinschaft, Weyhe, NI; H Seibert, G Gold, Kassel, HE; H Sohn, M Baylacher, Ludwig-Maximilians-Universitaet, Muenchen, BY; S Spitzer, K Bonin, Facharztzentrum Dresden-Neustadt GBR, Dresden-Neustadt, SN; R Stoehring, R Stoehring, Kardiologische Praxis, Bad Homburg, HE; J Taggeselle, C Zarpentin, Markkleeberg, SN; R Veltkamp, I Ludwig, Universitaetsklinikum Heidelberg, Heidelberg, BW; Voehringer, M Buchholz, DRK Kliniken

Berlin Westend, Berlin, BE; K Weyland, Ingelheim, RP; B Winkelmann, B Buelow-Johansen, ClinPhenomics GmbH & Co. KG, Frankfurt, HE; C Wolde, K Winter, Heidelberg, BW.

**Greece- 51 patients 7 centers**

**D Alexopoulos**, E Mavronasiou, Patras University Hospital, Patra; P Bourlios, A Tziortziotis, General Prefectural Hospital of Trikala, Trikala; C Karamitsos, E Exarchou, General Hospital of Larissa, Larissa; K Kifnidis, A Daskalaki, General Hospital of Athens Asklepio Voulas, Athens; N Moschos, K Dimitra, General Hospital of Rhodes, Rhodes; C Olympios, E Kartsagkoulis, General Hospital of Elefsina Attikis Thriasio, Athens; V Pyrgakis, K Korantanis, General Hospital of Athens G. Gennimatas, Athens.

**Guatemala- 136 patients 7 centers**

O Ayau Milla, V de Leon Ramirez, Zacapa; I Guzman Melgar, T Jimenez, Edificio Plaza Dorada, Guatemala City; A Ovando Lavagnino, S Guevara, Liga del Corazon, Guatemala City; M Rodas Estrada, T Jimenez, Clinica Privada Dr. Rodas Estrada, Guatemala City; M Sanchez, J Mayen Pozuelos, CardioQuetzal, Quetzaltenango; C Sanchez Samayoa, L Guerra, Clinicas Hospital Centro Medico, Guatemala City; L Velasquez Camas, S Padilla Almaraz, Unicar, Guatemala.

**Hungary- 464 patients 21 centers**

P Dioszeghy, E Muskoczki, Josa Andras Oktatokorhaz Egeszsegugyi Szolg. Nonprofit Kft., Nyiregyhaza; I Edes, J Szatmari, Debreceni Egyetem Orvos- es Egeszsegstudomanyi Centrum, Debrecen; J Fiok, A Varga, Sopron Medical SMO Erzsebet Korhaz, Sopron; N Kanakaridisz, M Kosztyu, UNO Medical Trials Kft., Budapest; E Kis, J Felfoldine Feil, Tolna Megyei Onkormanyzat Balassa Janos Korhaza, Szekszard; **R Kiss**, A Jakal, Honvedelmi Miniszterium Allami Egeszsegugyi Kozpont, Budapest; M Koczka, M Koczka, Mako; I Kovacs, M Baranyai, Vas Megyei Markusovszky Korhaz Nonprofit Zrt, Szombathely; Z Kovacs, Z Kovacs, Bajai Szent Rokus Korhaz, Baja; G Lupkovics, H Horvathne Karakai, Zala Megyei Korhaz, Zalaegerszeg; A Matoltsy, T Kiss, Kanizsai Dorottya Korhaz, Nagykanizsa; M Medvegy, K Kiss, Pest Megyei Flor Ferenc Korhaz, Kistarcsa; B Merkely, E Kolumban, Semmelweis Egyetem, Budapest; A Nagy, A Nagy, Bacs-Kiskun Megyei Onkormanyzat Korhaza, Kecskemet; A Palinkas, S Rostasne Toth, Erzsebet Korhaz-Rendelointezet, Hodmezovasarhely; A Sayour, A Bognar, Magyar Imre Korhaz, Ajka; T Simor, D Ruzsa, Pecsi Tudomanyegyetem Altalanos Orvostudomanyi Kar, Pecs; T Sipos, T Sipos, Rethy Pal Korhaz, Bekescsaba; I Szakal, I Szakal, Selye Janos Korhaz, Komarom; J Tomcsanyi, A Marosi, Budai Irgalmasrendi Korhaz, Budapest; A Vertes, M Kincses, Fov.Onk.Egyesitett Szt. Istvan es Szt Laszlo Korh.-Rend.Int., Budapest.

**India- 690 patients 65 centers**

S Malhan, Sheth Vadilal Sarabhai Hospital and Municipal Medical Colleg, Ahmedabad, Gujarat; J Abdullakutty, N.H., Lissie Hospital, Cochin, Kerala; D Agarwal, R Ranka, S. P. Medical College & Associated Group of Hospitals, Bikaner, Rajasthan; J Arneja, A Memon, Arneja Heart Institute, Nagpur, Mahara; V Arora, R Shree, Max Devki Devi Heart & Vascular Institute, New Delhi, Delhi; G Avvaru, A Shaikh, Yashoda Hospital, Hyderabad, Andhra Pradesh; P Babu, B Rao, Dr. Ramesh Cardiac and Multi Speciality Hospital Ltd., Vijayawada, Andhra Pradesh; R Babu, J Reddy, Medwin Hospital, Hyderabad, Andhra Pradesh; D Bunker, T Sheth, Bunker's Heart Institute, Vadodara, Gujarat; P Benjarge, S Surushe, Krishna Hospital & I. C. U., Aurangabad, Mahara; A Bharani, R Solanki, MGM Medical College and MY Hospital, Indore, Madhya Pradesh; V Bhargava,

A Rathi, Care Hospital (Nagpur), Nagpur, Mahara; A Biniwale, M Bhuti, Biniwale Clinic, Pune, Mahara; N Calambur, **B Somaraju**, N Karnwal, Care Hospital, Hyderabad, Andh Prad; M Chopda, N Mali, Chopda Medicare & Research Centre, Nashik, Mahara; N Goyal, A Saini, Speciality Clinic, New Delhi, Delhi; J Gupta, P Singh, S. R. Kalla Memorial General Hospital, Jaipur, Rajasthan; S Hadan, P Savanth, Yenepoya Speciality Hospital, Mangalore, Karna; S Hardas, G Thakor, Ruby Hall Clinic, Pune, Mahara; J Hiremath, A Ghume, Poona Hospital and Research Centre, Pune, Mahara; R Jain, M Pahuja, CHL - Apollo Hospital, Indore, Madh Prad; S Joseph, D Oommen, Little Flower Hospital, Cochin, Kerala; J Joseph, R Thomas, Caritas Hospital, Kottayam, Kerala; H Joshi, Iby, Apollo Hospitals International Ltd., Gandhinagar, Gujarat; V Kale, N Raut, Lokmanya Hospital, Pune, Mahara; B Kandekar, S Kandekar, Nobel Hospital, Ahmednagar, Mahara; R Kishore, H Krishnan, Narayana Hrudayalaya Institute of Medical Sciences, Bangalore, Karna; V Kotiwale, V B, Kles's Dr. Prabhakar Kore Hospital and Med. Res. Centre, Belgaum, Karna; R Kulkarni, M Deokar, Moraya Multispeciality Hospital, Pune, Mahara; G Kulkarni, A Lawande, Shree Hospital, Pune, Mahara; P Kumar, M Karapuram, Osmania General Hospital, Hyderabad, Andh Prad; A Kumar, J Francis, Lakeshore Hospital and Research Centre, Cochin, Kerala; M Kumbla, A Anthony, Omega Hospital, Mangalore, Karna; P Lavhe, M Kale, Avanti Institute of Cardiology, Nagpur, Mahara; H Mardikar, P Bhaskarwar, Spandan Heart Institute, Nagpur, Mahara; A Mathur, P Sharma, Escorts Heart Institute & Research Centre, New Delhi, Delhi; J Menon, V Francis, Mar Augustine Golden Jubilee Hospital, Ernakulam, Kerala; D Namjoshi, S Shelke, Criti Care Hospital, Mumbai, Mahara; J Narendra, P J, S. A. T. Hospital, Shimoga, Karna; S Natarajan, V Francis, G. Kupuswami Naidu Memorial Hospital, Coimbatore, Tamilnadu; A Oomaan, P Gurusamy, Apollo Hospitals, Chennai, Tamilnadu; B P. R., J Angel, Frontier Lifeline & Dr. K.M. Cherian Heart Foundation, Chennai, Tamilnadu; M Padinhare Purayil, S Shams, West Fort Hi-Tech Hospital Ltd., Thrissur, Kerala; U Pandurangi, R Sababathi, Institute of Cardiovascular Diseases Madras Medical Mission, Chennai, Tamilnadu; P Parekh, B Jasani, Care Hospital, Surat, Gujarat; N Patki, A Babbar, Deenanath Mangeshkar Hospital and Research Centre, Pune, Mahara; B Pinto, H Kharalkar, Bandra Holy Family Hospital and Research Center, Mumbai, Mahara; R Premchand, H Jambula, Krishna Institute of Medical Sciences, Hyderabad, Andh Prad; M Rao, A Vuriya, Queen's NRI Hospital, Vishakhapatnam, Andh Prad; A Ravi Shankar, R E R, Mysore Medical College and Research Institute, Mysore, Karna; R Reddy, S Bekal, Mediciti Hospital, Hyderabad, Andh Prad; D Roy, A Barai, Rabindranath Tagore International Institute of Cardiac Scien, Kolkata, W Bengal; D Saha, R Gadepalli, Nizam's Institute of Medical Sciences, Hyderabad, Andh Prad; H Sant, D Jadhav, Medipoint Hospital Pvt Ltd , Pune, Mahara; M Sarna, T Arora, Monilek Hospital and Research Centre, Jaipur, Rajasthan; J Sawhney, R Singh, Dharmavira Heart Centre, New Delhi, Delhi; K Sethi, N Bansal, Delhi Heart and Lung Institute, New Delhi, Delhi; A Sethia, S Sethia, Indore, Madh Prad; G Shetty, R Sudheer, St.John's Medical College and Hospital, Bangalore, Karna; G Singh, R Gupta, Dayanand Medical College and Hospital, Ludhiana, Punjab; A Srinivas, V G, Vikram Hospital & Heart Care, Mysore, Karna; A T.P., L Thankaraj, Sri Gokulam Heart Centre, Trivandrum, Kerala; S Varma, A Kaur, Sadhbhava Medical and Heart Institute, Patiala, Punjab; M Vijan Vinod, B Thakur, Vijan Cardiac Center, Nashik, Mahara; I Zanwar, A Dharmarao, Hardas Heart Centre, Pune, Mahara.

**Israel- 283 patients 20 centers**

S Atar, E Lasri, Western Galilee Hospital- Nahariya, Nahariya; D Dicker, D Marcoviciu, Rabin Medical Center, Petach Tikva; M Elias, G Avraham Ron, HaEmek Medical Center, Afula; a Francis, R Ghantous, Holy Family Hospital, Nazareth; A Goldhaber, M Goldhaber, Shuali Community Clinic- Clalit Health Services, Ra'anana; S Gottlieb, S Rouwaida, Bikur Cholim

Hospital, Jerusalem; E Grossman, T Dagan, Chaim Sheba Medical Center, Tel-Hashomer; Y Hasin, M Roshrosh, Poriya Government Hospital, Tiberias; T Hayek, A Majdoub, Rambam Health Care Campus, Haifa; E Klainman, I Genin, Gefen- Cardiac Center, Givatayim; M Lahav, T Gilat, Rabin Medical Center, Petach Tikva; **B Lewis**, M Ben Ari, The Lady Davis Carmel Medical Center, Haifa; M Lishner, M Karny, Sapir Medical Center Meir Hospital, Kfar Saba; E Ouzan, H Givoni, Hadassah Universtiy Hospital- Ein Kerem, Jerusalem; Y Rozenman, S Logvinenko, Wolfson Medical Center, Holon; E Schiff, J Sterlin, Bnai Zion Medical Center, Haifa; M Shochat, I Aloni, Hillel Yaffe Medical Center, Hadera; M Swissa, V Belatsky, Kaplan Medical Center, Rechovot; D Tsalihin, D Kisos, Ben Yair Community Clinic- Clalit Health Services, Beer-Sheva; D Zeltser, N Platner, Tel-Aviv Sourasky Medical Center, Tel-Aviv.

**Italy- 169 patients 24 centers**

A Berni, F Giovannelli, Azienda Ospedaliera Sant Andrea, Roma, RM; G Boriani, E Cervi, Ospedale S. Orsola- Malpighi, Bologna; G Comi, L Peruzzotti, Fondazione San Raffaele del Monte Tabor, Milano, MI; C Cuccia, C Forgione, Fondazione Poliambulanza Istituto Ospedaliero, Brescia, BS; R De Caterina, D De Pace, Azienda Ospedaliera Universitaria G. D'Annunzio, Chieti, CH; S De Servi, M Mariani, A.O. Ospedale Civile di Legnano, Legnano, MI; A Di Lenarda, C Mazzone, ASS 1 Triestina, Trieste, TS; G Di Pasquale, M Di Niro, Ospedale Maggiore C.A. Pizzardi, Bologna, BO; L Fattore, B Bosco, Ospedale San Giuseppe e Melorio, Santa Maria Capua Vetere, CE; V Grassia, E Murena, Ospedale Santa Maria Delle Grazie, Pozzuoli, NA; Laffi, G Gaggioli, Azienda Ospedaliera Villa Scassi, Genova, GE; G Lo Pinto, F Raggi, Ente Ospedaliero Ospedali Galliera, Genova, GE; P Marino, G Francalacci, A.O. Maggiore della Carità di Novara, Novara, NO; **P Merlini**, M Babbolin, Azienda Ospedaliera Ospedale Niguarda Cà Granda -2, Milano, MI; M Metra, M Bulgari, Spedali Civili di Brescia, Brescia; M Penco, E Lioy, Policlinico Casilino, Roma, RM; P Perrone Filardi, C Marciano, Università degli Studi di Napoli-Federico II, Napoli, NA; S Pirelli, G Paradiso, Azienda Ospedaliera Istituti Ospitalieri di Cremona, Cremona, CR; G Pischeddu, L Fenu, Ospedale Ss. Annunziata Az. USL 1, Sassari, SS; A Raisaro, K Granzow, IRCCS Policlinico San Matteo, Pavia, PV; M Rasura, S Cannoni, Università La Sapienza-Ospedale Sant Andrea, Roma, RM; S Severi, M Breschi, Ospedale della Misericordia, Grosseto, GR; V Toschi, M Gagliano, A.O. Ospedale San Carlo Borromeo, Milano, MI; V Zacà, F Furiozzi, A.O.U. Senese Policlinico Santa Maria alle Scotte, Siena, SI.

**Japan- 1010 patients 99 centers**

T Hirahara, U Akihisa, W Masaki, Kumamoto University Hospital, Kumamoto-shi Kumamoto; M Ajioka, C Matsushita, Tosei General Hospital, Seto-shi Aichi-ken; T Anzai, K Mino, NHO Hakodate National Hospital, Hakodate-shi Hokkaido; S Arakawa, A Tsukimine, JLWHO Kyushu Rosai Hospital, Kitakyusyu-shi Fukuoka; H Endo, M Fujiwara, Clinic Horikawa, Kyoto-shi Kyoto; K Fujii, S Kozeni, Watanabe Igakukai Sakurabashi Watanabe Hospital, Osaka-shi Osaka; E Fujii, M Kotera, Mie University Hospital, Tsu-shi Mie; S Fujimoto, K Omae, Nippon Steel Yawata Memorial Hospital, Kitakyushu-shi Fukuoka; K Fujimoto, Y Ichishita, NHO Kumamoto Medical Center, Kumamoto-shi Kumamoto; T Fujita, Y Ito, Nagaoka Red Cross Hospital, Nagaoka-shi Niigata; S Fukamizu, J Harada, Tokyo Metropolitan Hiroo Hospital, Shibuya-ku Tokyo; N Fukuda, C Fujimoto, NHO Zentsuji National Hospital, Zentsuji-shi Kagawa; T Funazaki, A Yamaguchi, Saiseikai Kawaguchi General Hospital, Kawaguchi-shi Saitama; Y Furukawa, C Kamitake, Kobe City Medical Center General Hospital, Kobe-shi Hyogo; N Hagiwara, M Naganuma, Tokyo Women's Medical University Hospital, Shinjuku-ku Tokyo; S Hara, S Kumagai, Iida Hospital, Iida-shi Nagano; K Harada, Y Fuki,

Tokyo Metropolitan Geriatric Hospital, Itabashi-ku Tokyo; T Haruna, Y Nakahara, TazukeKoufukai Igakukenkyojo Kitano Hospital, Osaka-shi Osaka; Y Hashimoto, Y Shimazu, Tesshokai Kameda Clinic, Kamogawa-shi Chiba; Y Hiasa, Y Oga, Tokushima Red Cross Hospital, Komatsushima-shi Tokushima; T Higashikata, Y Nakagawa, Komatsu Municipal Hospital, Komatsu-shi Ishikawa; A Hirayama, A Kawaguchi, Nihon University Itabashi Hospital, Itabashi-ku Tokyo; Y Iesaka, C Miyamoto, Tsuchiura Kyodo General Hospital, Tsuchiura-shi Ibaraki; T Iijima, K Higuchi, Fujioka General Hospital for outpatient, Fujioka-shi Gunma; H Ino, H Noguchi, Kanazawa University Hospital, Kanazawa-shi Ishikawa; T Inomata, K Nakamura, Kitasato University Hospital, Sagamihara-shi Kanagawa; Y Ishibashi, T Nozaki, Iwate Medical University Hospital, Morioka-shi Iwate; Y Ishii, H Tomita, Asahikawa City Hospital, Asahikawa-shi Hokkaido; S Ishimaru, M Ise, Hokkaido Social Insurance Hospital, Sapporo-shi Hokkaido; K Itamoto, T Ito, Teine Keijinkai Hospital, Sapporo-shi Hokkaido; Y Ito, M Onishi, TOYOTA Memorial Hospital, Toyota-shi Aichi; K Iwade, Y Sakuma, NHO Yokohama Medical Center, Yokohama-shi Kanagawa; T Iwasaki, H Nagatome, Cardiovascular Hospital of Central Japan, Shibukawa-shi Gunma; S Kakinoki, C Adachi, Otaru Kyokai Hospital, Otaru-shi Hokkaido; S Kamakura, F Nakahara, National Cerebral and Cardiovascular Center, Suita-shi Osaka; M Kamijo, S Iida, Chubu Rosai Hospital, Nagoya-shi Nagoya; K Kamiyama, R Fujii, Ijinkai Nakamura Memorial Hospital, Sapporo-shi Hokkaido; K Kato, A Ishida, JLWHO Yokohama Rosai Hospital, Yokohama-shi Kanagawa; Y Kazatani, Y Ichikawa, Ehime Prefectural Central Hospital, Matsuyama-shi Ehime; H Kitazawa, C Igarashi, Tachikawa General Hospital, Nagaoka-shi Niigata; Y Kobayashi, R Kikuchi, Showa University Hospital, Shinagawa-ku Tokyo; M Kohno, S Tamura, Kagawa University Hospital, Kita-gun Kagawa; **Y Koretsune**, I Yumoto, NHO Osaka National Hospital, Osaka-shi Osaka; M Kurabayashi, E Koya, Gunma University Hospital, Maebashi-shi Gunma; T Masuyama, Y Kaneno, Hyogo College of Medicine Hospital, Nishinomiya-shi Hyogo; K Matsuda, E Ebina, MATSUDA Med Clinic, Sapporo-shi Hokkaido; H Meno, M Satake, Japanese Red Cross Fukuoka Hospital, Fukuoka-shi Fukuoka; T Mita, M Takeda, Mita Medical-Cardiovascular Clinic, Sapporo-shi Hokkaido; N Miyamoto, T Kimizu, Saino Clinic, Tokorozawa-shi Saitama; Y Miyauchi, S Sakamoto, Nippon Medical School Hospital, Bunkyo-ku Tokyo; M Munemasa, J Murata, NHO Okayama Medical Center, Okayama-shi Okayama; Y Nagai, Y Sakata, Rinku General Medical Center, Izumisano-shi Osaka; S Naito, H Oyama, Gunma prefectural Cardiovascular Center, Maebashi-shi Gunma; Y Nishi, T Nagase, Seiwakai Nagata Hospital, Yanagawa-shi Fukuoka; J Ochiai, H Junko, Nagoya Ekisaikai Hospital, Nagoya-shi Nagoya; T Ogawa, M Sugeno, Fukushima Koseikai Fukushima Dai Hospital, Fukushima-shi Fukushima; H Oguro, M Tanabe, Shimane University Hospital, Izumo-shi Shimane; K Okada, Y Moriyama, Ohda Municipal Hospital, Ohda-shi Shimane; K Okajima, M Nakashima, Hyogo Brain and Heart Center, Himeji-shi Hyogo; O Okazaki, H Wada, National Center for Global Health and Medicine Hospital, Shinjuku-ku Tokyo; K Okishige, S Kitani, Yokohama City Minato Red Cross Hospital, Yokohama-shi Kanagawa; K Okumura, Y Narita, Hirosaki University School of Medicine & Hospital, Hirosaki-shi Aomori; H Onaka, H Moriyama, Takatsuki Red Cross Hospital, Takatsuki-shi Osaka; Y Ozaki, I Tanikawa, Fujita Health University Hospital, Toyoake-shi Aichi; S Sakagami, A Nakano, Kanazawa Medical Center, Kanazawa-shi Ishikawa; S Sakuragi, N Hayashi, NHO Iwakuni Clinical Center, Iwakuni-shi Yamaguchi; S Sakurai, H Ooki, Aizawa Hospital, Matsumoto-shi Nagano; T Sasaki, N Oosawa, NHO Takasaki General Medical Center, Takasaki-City Gunma; A Satoh, E Fujimoto, Shunkaikai Nagasaki Kita Hospital, Nishisonogi-gun Nagasaki; Y Seino, M Narumi, Nippon Medical School Chiba Hokusoh Hospital, Inzai-shi Chiba; T Shirai, M Shigenari, Tokyo Metropolitan Police Hospital, Nakano-ku Tokyo; Y Shoji, J Ueda, Makabe Hospital, Higashimatsushima-shi Miyagi; K Sugi,

E Miyazaki, Toho University Ohashi Medical Center, Meguro-ku Tokyo ; K Sumii, H Asakura, MAZDA Hospital of MAZDA Co. Lted, Aki-gun Hiroshima; M Takagi, S Mohri, Osaka City University Hospital, Osaka-shi Osaka; W Takahashi, K Yoshida, NHO Shinshu Ueda Medical Center, Ueda-shi Nagano; A Takahashi, N Kishi, Yokosuka Kyosai Hospital, Yokosuka-shi Kanagawa; T Takahashi, Y Sakurai, Yokohama Medical Center, Yokohama-shi Kanagawa; K Takeda, A Yahata, Kagawa Prefectural Central Hospital, Takamatsu-shi Kagawa; T Takenaka, K Yamagishi, NHO Hokkaido Medical Center, Sapporo-shi Hokkaido; S Takeuchi, E Watanabe, Nagaoka Chuo General Hospital, Nagaoka-shi Niigata; K Tanaka, M Uchida, Tokyo Metropolitan Cancer and Infectious diseases Center Kom, Bunkyo-ku Tokyo; J Tanouchi, Y Nishiya, Osaka Rosai Hospital, Sakai-shi Osaka; H Tsuboi, K Yoshida, Ogaki Municipal Hospital, Ogaki-shi Gifu; N Tsuboi, K Terakura, Social Insurance Chukyo Hospital, Nagoya-shi Aichi; M Uematsu, S Yasumoto, Kansai Rosai Hospital, Amagasaki-shi Hyogo; Y Ueyama, M Onishi, Ueyama Clinic, Suita-shi Osaka; K Usuda, Y Sakai, Toyama Prefectural Central Hospital, Toyama-shi Toyama; M Yagi, A Sato, Sendai Cardiovascular Center, Senndai-shi Miyagi; H Yagi, T Kuroda, Koseikai Takeda Hospital, Kyoto-shi Kyoto; H Yamabe, Y Sakamoto, Kumamoto University Hospital, Kumamoto-shi Kumamoto; T Yamada, R Yamano, Osaka General Medical Center (Kyuseiki Sogo Iryo C), Osaka-shi Osaka; T Yamagishi, S Sasaki, Isesaki Municipal Hospital, Isesaki-shi Gunma; Y Yamamoto, Y Ito, Kyoto Second Red Cross Hospital, Kamigyo-ku Kyoto; a Yamashina, M Takiguchi, Tokyo Medical University Hospital, Shinjuku-ku Tokyo; **T Yamashita**, K Matsuda, The Cardiovascular Institute Hospital, Minato-ku Tokyo; T Yonehara, K Tanaka, Saiseikai Kumamoto Hospital, Kumamoto-shi Kumamoto; H Yoshino, H Nomura, Kyorin University Hospital, Mitaka-shi Tokyo; K Yoshioka, Y Fujiwara, Tokai University Hospital, Isehara-shi Kanagawa.

**Mexico- 190 patients 13 centers**

E Bayram Llamas, A Hurtado, Fundacion Cardiovascular de Aguascalientes A.C, Aguascalientes, AGS; C Calvo Vargas, M Cedano Limon, Unidad de Investigacion Medica, Guadalajara, JAL; E Cardona Muñoz, S Hernandez, ICLE S.A., Guadalajara, JAL; J Carrillo, T Delgadillo, Hospital Central Dr. Ignacio Morones Prieto, San Luis Potosi, SLP; M Cásares Ramirez, J Franco Valles, Hospital General de Durango, Durango, DGO; N Garcia, M Alcantara Colin, Hospital Mocel, Mexico City, DF; **A Garcia-Castillo**, A Jaramillo, Cardiolink, Monterrey, NL; J Leiva-Pons, S de la Mora, Hospital Lomas de San Luis, San Luis Potosi, SLP; G Llamas Esperón, A Grajales, Hospital Cardiológica Aguascalientes, Aguascalientes, AGS; G Mendez-Machado, H Avila, Hospital Angeles Xalapa, Xalapa, VER; L Nevárez Ruiz, G Magallanes, Hospital CIMA Chihuahua, Chihuahua, CHIH; C Sánchez Diaz, A Ortiz, Unidad de Investigación Clínica en Medicina S.C., Monterrey, NL; R Velasco Sánchez, E Moran Velazquez, Hospital General Dr. Ángel Leaño, Zapopan, JAL.

**Netherlands- 153 patients 10 centers**

M Alhakim, I van Welsen, Flevoresearch, Almere; T Bruning, A Jones, Maasstad Ziekenhuis Zuider, Rotterdam; C Buiks, C Buiks, Huisartsenpraktijk Buiks, Ewijk; J de Groot, I Radder, Academisch Medisch Centrum, Amsterdam; R de Vos, R de Vos, Huisartsenpraktijk de Vos, Dordrecht; R Hazleger, R Daniels, VieCuri Medisch Centrum Venlo, Venlo; B Ketselaer, L Muijs, Maastricht University Medical Center, Maastricht; H Mannaerts, E Kooiman, Ziekenhuis Amstelland, Amstelveen; H Mevissen, H Mevissen, Huisartsenpraktijk Westerhave, Wildervank; D van der Heijden, H Hofmeyer, Rijnland Ziekenhuis Leiderdorp, Leiderdorp.

**New Zealand- 131 patients 10 centers**

R Anscombe, T O'Meeghan, M Kjentjes, Hutt Valley Health Hospital, Lower Hutt; J Benatar, **H White**, L Borthwick, Auckland City Hospital, Auckland; R Doughty, M Copley, Auckland City Hospital, Auckland; R Fisher, R Monkley, Waikato Hospital, Hamilton; B Green, D Scott, Dunedin Hospital, Dunedin; A Hamer, J Tomlinson, Nelson Hospital, Nelson; H Hart, A Turner, North Shore Hospital, Auckland; D Scott, R Cammell, Middlemore Hospital, Otahuhu; R Troughton, L Skelton, Christchurch Hospital, Christchurch; C Young, K Kennett, P3 Research Limited (Tauranga), Tauranga.

**Norway- 34 patients 4 centers**

**D Atar**, H Claussen, Ullevål universitetssykehus, Oslo; K Hofsøy, R Melbue, Hålogalandssykehuset HF, Harstad; J Sandvik, H Thunhaug, Nordland Hjertesenter AS, Bodø; A Tveit, S Enger, Sykehuset Asker og Bærum Bærum sykehus, Rud.

**Peru- 173 patients 11 centers**

G Bustamante, M Tejada Guillen, Clinica San Borja, Lima 41; J Cabrera, R Esteves Mendoza, Clínica Vesalio, Lima; C Chavez, C Luna, Hospital Nacional Daniel Alcides Carrion, Callao; J Lema, A Carrion, Hospital Nacional Arzobispo Loayza, Lima; N Llerena, S Araoz Bedregal, Consultorio Privado Dr. Nassil Llerena Navarro, Arequipa; F Medina Palomino, J Rodriguez, Clinica Medica Cayetano Heredia, Lima; J Minchola, C Bautista, Clinica San gabriel, Lima; S Negron Miguel, B Honores Armas, Centro Medico Naval Cirujano Mayor Santiago Tavara, San Borja; A Rodriguez, N Romero, Hospital Nacional Alberto Sabogal Sologuren, Callao; P Torres, K Fernandez Rodriguez, Consultorio Privado Dr Pedro Torres, Arequipa; P Yanac Chavez, **M Horna**, S Delgado, Hospital Alberto Sabogal Sologuren, Callao.

**Philippines- 125 patients 8 centers**

**N Babilonia**, CM Sambaz, Philippine Heart Center, Quezon; R Barcina, M Zapanta, Alexian Brothers Health and Wellness Center, Davao; R Coching, M Vallenas, Davao Doctors Hospital, Davao; G Matiga, C Enad, Perpetual Succour Hospital - Cebu, Cebu; G Rogelio, F Joaquin, St. Luke's Medical Center, Quezon; A Roxas Jr., L Gilo, The Medical City, Pasig; R To, M Aquino, The Medical City, Pasig; L Villamor, K Nario, Cebu Doctors' University Hospital, Cebu.

**Poland- 1278 patients 49 centers**

J Adamus, J Korzeniowska-Adamus, Centrum Med. Ostrobramska NZOZ Magodent, Warszawa; J Baszak, J Baszak, NZOZ Przychodnia Specjalistyczna Medica, Lublin; M Bronisz, B Cieslak, Publiczny Specjalistyczny ZOZ w Inowroclawiu, Inowroclaw; B Busz- Papiez, A Krzystolik, Indywidualna Specjalistyczna Praktyka Lekarska B.Busz-Papiez, Szczecin; K Cymerman, K Cymerman, Indywidualna Specjalistyczna Praktyka Lekarska, Gdynia; M Dabrowska, A Ptak, Synexus SCM Sp z o.o Oddzial w Warszawie, Warszawa; B Derlaga, E Laskowska-Derlaga, Spec.Gabinet Lekarski Internistyczno-Kardiologiczny, Tarnow; E Domanska, M Guziewicz, Centrum Medyczne CDS, Wroclaw; A Gieroba, E Zajac, SPZOZ, Lubartow; J Gniot, P Mroczkowski, SPZOZ w Pulawach Szpital Specjalistyczny, Pulawy; A Januszewicz, M Makowiecka-Ciesla, Instytut Kardiologii im. Kardynala St. Wyszynskiego, Warszawa; E Jazwinska- Tarnawska, P Ciezak, Synexus SCM Sp. z o.o., Wroclaw; J Jurowiecki, J Jurowiecki, NZOZ Przychodnia Morena, Gdansk; B Kaczmarek, A Pacholska, NZOZ Polimedica, Lodz; L Kaminski, L Kaminski, SP ZOZ w Przeworsku, Przeworsk; G Kania, K Tymendorf, NZOZ Przychodnia Zdrowia ZADEBIE, Skierniewice; A Karczmarczyk, R Kaliszczak, Indywidualna

Specjalistyczna Praktyka Lekarska, Szczecin; M Konieczny, E Benicka, KO-MED Marek Konieczny, Pulawy; R Korzeniak, W Borowski, NZOZ Specjalistyczna Przychodnia Lekarska Medikard, Plock; W Krzyzanowski, M Muzyk-Osikowicz, SPZZOZ Szpital Powiatowy im. M.Sklodowskiej-Curie, Ostrow Mazowiecka; W Kus, W Kus, Indywidualna Specjalistyczna Praktyka Lekarska, Lodz; J Lesnik, T Wierzykowski, NZOZ Kutnowski Szpital Samorządowy Sp z oo, Kutno; J Lewczuk, M Stopryra-Poczałek, Wojewódzki Szpital Specjalistyczny we Wrocławiu, Wrocław; A Lubinski, K Szymanska, Uniwersytecki Szpital Kliniczny im.WAM-Cen.Szpital.Weteran., Lodz; R Lysek, G Jaguszewska, Lecznice Citomed Sp. z o.o., Toruń; L Matyszczak-Toniak, R Sznajder, R Wnętrzak-Michalska, A Kosmaczewska, Synexus SCM Sp z oo Oddział w Katowicach, Katowice; S Mazur, A Chmielowski, Centrum Medyczne Medyk, Rzeszów; P Miekus, K Kosmalska, NZOZ Pro-Cordis Sopockie Centrum Bad. Kardiolog., Sopot; J Mosiewicz, W Myslinski, Samodzielny Publiczny Szpital Kliniczny nr 1 w Lublinie, Lublin; P Napora, D Biniek, NZOZ Centrum Badan Klinicznych, Wrocław; J Nessler, B Nessler, Specjalistyczny Gabinet Internistyczno- Kardiologiczny, Kraków; K Niezgoda, A Nej, Elblaski Szpital Specjalistyczny z Przychodnia, Elbląg; J Nowak, J Nowak, Gabinet Internistyczno-Kardiologiczny Dr n. med. Jacek Nowak, Libiąż; M Olszewski, M Olszewski, Szpital Praski p.w. Przemienienia Pąskiego, Warszawa; D Podjacka, D Janczewska, NZOZ Kardiomed, Elbląg; H Pogorzelska, H Pogorzelska, Instytut Kardiologii im. Kardynała St. Wyszyńskiego, Warszawa; V Polaszewska-Pulkownik, E Bojanowska, Specjalistyczny Szpital Miejski im M. Kopernika, Toruń; G Raczałk, A Ziencik-Krajka, NZOZ Centrum Medyczne Kardiorytm, Gdańsk; H Rewinska, W Rozmysłowicz-Szermińska, Mazurskie Centrum Zdrowia Pro Medica, Elk; R Ronkowski, R Ronkowski, Regionalny Szpital w Kołobrzegu, Kołobrzeg; **W Ruzyłło**, B Norwa-Otto, Instytut Kardiologii im. Kardynała St. Wyszyńskiego, Warszawa; D Sendrowski, D Sendrowski, Przychodnia Specjalistyczna Falck, Gdańsk; J Spyra, J Spyra, Specjalistyczna Praktyka Lekarska Janusz Spyra, Ruda Śląska; M Szolkiewicz, A Maląńska, NZOZ Eter-Med Sp. z o.o., Gdańsk; R Turbak, R Turbak, NZOZ Zdrowy Checz, Linia; W Wrobel, P Muzalewski, Wielospec.SzpitalMiejski im.DrE.Warmińskiego-SPZOZ, Bydgoszcz; A Wysokinski, J Kudlicki, Samodzielny Publiczny Szpital Kliniczny nr 4 w Lublinie, Lublin; M Zarebinski, R Krauze, NZOZ Starówka, Warszawa; M Zielinski, M Nawrot, Specjalistyczna Praktyka Lekarska, Chojnice.

#### **Portugal- 180 patients 10 centers**

F Matias, Cruz Vermelha Portuguesa- Sociedade de Gestão Hospitalar SA, Lisboa; J Correia, J Correia, Hospital de Santo André EPE, Leiria; V Gil, S Lopes, Hospital Fernando da Fonseca (Amadora Sintra), Amadora; J Madeira, D Maymone, Hospital de São Bernardo, Setúbal; D Martins, E Neves, Hospital do Divino Espírito Santo, Ponta Delgada; P Monteiro, D Oliveira, Hospitais da Universidade de Coimbra, Coimbra; P Monteiro, A Leitao Marques, C Castro, Centro Hospitalar de Coimbra, Coimbra; A Salgado, A Gonçalves, H. São Marcos, Braga; O Santos, L Veiga Pais Nunes, H São Teotonio, Viseu; J Santos, D Soares, Hospital Infante D. Pedro S.A., Aveiro.

#### **Romania- 410 patients 23 centers**

P Albulescu, M Ciortea, Spitalul Clinic Județean de Urgență Ilfov, București; E Apetrei, C Matei, Institutul de Boli Cardiovasculare Prof. Dr. C.C. Iliescu, București; D Bartos, E Badila, Spitalul Clinic de Urgență Floreasca București, București; C Bengus, V Ochean, Spitalul Județean de Urgență Sf. Pantelimon Focșani, Focșani; E Bobescu, B Doka, Spitalul Clinic Județean de Urgență Brasov, Brasov; F Bolohan, F Bolohan, Centrul Clinic de Urgență de Boli Cardiovasculare al Armatiei, București; G Ciobotaru, M Andor, Centrul Medical Privat

Medicali's, Timisoara; I Coman, M Ghinea, Inst. Urgenta Boli Cardiovasculare Prof.Dr.C.C. Iliescu, Bucuresti; M Constantinescu, M Constantinescu, S.C. Medcon S.R.L., Buzau; M Creteanu, M Parasteac, Spitalul Judetean de Urgenta Sf. Ioan cel Nou Suceava, Suceava; M Cristea, M Anciu, Centrul Medical de Diagnostic si Tratament, Bucuresti; D Cris, D Jemna, Consultmed SRL, Iasi; I Dobre, O Voicu, Spitalul Judetean de Urgenta Targoviste, Targoviste; D Dobreanu, I Sirbu, Spitalul Clinic Judetean de Urgenta Tg. Mures, Targu Mures; D Dragomir, S Jurca, CMDTA Dr. Nicolae Kretulescu, Bucuresti; L Iosipescu, L Costache, Spitalul Clinic Judetean de Urgenta Bacau, Bacau; B Minescu, D Serban, Spitalul Judetean de Urgenta Braila, Braila; C Pop, M Cozma, Cabinet Medical Individual de Cardiologie Dr. Calin Pop, Baia Mare; M Popescu, A Ardelean, Spitalul Clinic Judetean de Urgenta Oradea, Oradea; D Sipciu, P Plosca, S.C. Duo Medical S.R.L., Bucuresti; S Stamate, C Spinu, Spitalul Clinic de Urgenta Sf. Pantelimon, Bucuresti; L Topolnitchi, O Topolnitchi, Spitalul Judetean Sf. Gheorghe, Sfantu Gheorghe; M Tudoran, C Tudoran, Spitalul Clinic Judetean de Urgenta Timisoara, Timisoara.

### **Russian Federation- 1151 patients 66 centers**

**M Ruda**, N Zhukova, FSBI Russian Cardiology Research and Production Complex, Moscow; G Arutyunov, T Chernyavskaya, Russian State Medical University, Moscow; M Ballyuzek, L Alexandrova, St-Petersburg Clinical Hospital of Russian Academy of Science, Saint-Petersburg; O Barbarash, A Bashkireva, MIH Kemerovo Cardiology Dispensary, Kemerovo; B Bart, V Larina, SBEU Russia National RMU n.a. N.I. Pirogov of MoH of RF, Moscow; D Belenky, Y Kosolapov, SBIH of Novosibirsk Region Clinical Emergency Hospital 2, Novosibirsk; S Berns, E Yukhno, SI SRI of Complex Problems of Cardio-Vascular Diseases of SB, Kemerovo; I Bokarev, T Khlevchuk, Moscow City Clinical Hospital 20, Moscow; G Chumakova, O Pokutneva, TSIH Altay Territorial Cardiology Dispensary, Barnaul; A Demko, A Masin, Dep. Clin. Hosp. on Station Kemerovo of OAO Russian Railway, Kemerovo; P Dovgalevsky, N Puchinyan, Saratov Institute of Cardiology, Saratov; O Drapkina, E Zyatenkova, First Moscow State Medical University n.a. I.M. Sechenov, Moscow; L Egorova, L Egorova, StP SHI Clinical hospital of St. Luka, Saint-Petersburg; V Esip, N Kirichek, St. Petersburg State Healthcare Institution Diagnostic Cent, St. Petersburg; A Filatov, I Soin, State healthcare facility Tula Regional Hospital, Tula; O Gilinskaya, E Valuyshkikh, SI SRI of Physiology SB RAMS, Novosibirsk; M Glezer, S Valovyeva, SBHI City Clinical Hospital 59 of HD of city of Moscow, Moscow; S Golitsyn, T Kratskina, FSBI Russian Cardiology Research and Production Complex, Moscow; B Goloshchekin, I Laptev, St-Petersburg SIH City Hospital 15, St-Petersburg; N Gratsiansky, O Mazovets, SIH of Moscow City Clinical Hospital 29 n.a. Baymana, Moscow; Y Karpov, V Buza, FSBI Russian Cardiology Research and Production Complex, Moscow; Y Karpov, B Kosenko, Emergency Medical Care Hospital 1, Voronezh; V Khrimanov, I Kireenkov, All-Russian Center of Emergency and Radiation Medicine MCRS, St-Petersburg; A Khokhlov, O Sinitsina, Municipal MI Clinical Hospital 2, Yaroslavl; R Khokhlov, E Tsareva, Voronezh regional clinical hospital 1 Interregional cardio, Voronezh; O Khrustalev, A Khrustalev, Yaroslavl Regional SBHI Regional Clinical Hospital, Yaroslavl; V Kostenko, S Karabaliieva, St. Petersburg SHI City Polyclinic 109, St. Petersburg; N Koziolova, E Polyanskaya, SHI Perm Regional Hospital of War Veteran's, Perm; O Kozyrev, O Kostenko, Smolensk State Medical Academy of Roszdrav, Smolensk; V Kuznetsov, A Rychkov, SRI of Cardiology of SB of RAMS br Tumen cardiology Center, Tumen; O Lavrova, L Tereschenko, Pavlov State Medical University of St.Petersburg, St. Petersburg; S Levashov, E Volkova, SBHI Regional Clinical Hospital 3, Chelyabinsk; R Libis, A Maslova, Orenburg State Medical Academy of RosZdrav, Orenburg; I Libov, Y Moiseeva, City Clinical Hospital named after S.P.Botkin, Moscow; A Lila, L Belousova, SBEI HPE NWSMU n.a.I.I.Mechnikov MoH RF, St.

Petersburg; Y Lukyanov, D Lamden, SEIHPE SPb SMU n.a. Pavlov affiliate 1 of FAHSD, St. Petersburg; K Nikolaev, A Nikolaev, SBIH of Novosibirsk Region City Clinical Hospital 19, Novosibirsk; I Nikolskaya, O Khromova, MBHI of Novosibirsk City Clinical Hospital 25, Novosibirsk; N Novikova, S Patrusheva, Central Clinical Hospital of Siberian branch of RAOS, Novosibirsk; E Panchenko, P Laguta, FSBI Russian Cardiology Research and Production Complex, Moscow; A Panov, R Nilk, FSI FC of Heart Blood and Endocrinology n.a. Almazov, St. Petersburg; E Polkanova, I Matveeva, SHI Center of Occupational Pathology, St-Petersburg; N Poluyanova, N Pikalova, FSI Outpatient Clinic 3 President of RF, Moscow; T Raskina, M Letaeva, SBHI of Kem. Regional Clinical Hospital for War Veterans, Kemerovo; A Rebrov, N Karoli, SEIHPE Saratov State Medical University, Saratov; M Repin, N Rodina, LLC Institute of Medical Investigations, St. Petersburg; I Shaposhnik, E Lebedev, City Hospital 1, Chelyabinsk; Z Shogenov, M Agirov, CityClinicalHospital81, Moscow; B Sidorenko, S Vorontsova, FSD ESMC of GMD of the president of RF Central Clinical Hospital, Moscow; I Sinitina, V Orlov, M Golshmid, RMA of Post Graduate Education of MoH and SD of RF, Moscow; Z Sizova, N Lapidus, State Healthcare Institution of city of Moscow Cardiologic, Moscow; K Sobolev, S Erofeeva, City Clinical Hospital No.61, Moscow; E Suprun, D Dronov, Municipal Healthcare Institution Medicosanitary Unit 9, Omsk; N Tarasov, L Isakov, FGHI MSU of the MoIA of the RF for the Kemerovo Region, Kemerovo; S Tereshenko, I Kositsyna, Moscow State Medico-stomat. University City Hospital 68, Moscow; E Tikhonova, A Solovyev, JSC Med. Scient. Production Association Clinic Dvizhenie, Volgograd; A Timofeev, S Bulygin, MIH City Hospital 1, Barnaul; S Ustyugov, M Rossovskaya, MBHI City Clinical Emergency Hospital n/a N.S. Karpovich, Krasnoyarsk; A Vishnevsky, A Kirgizova, SPb SIH Pokrovskaya City Hospital, St-Petersburg; D Volkov, N Rodina, Medical Institute on Krestovsky, St. Petersburg; V Yakusevich, A Petrochenko, SHI Clinical Hospital for Emergency Medical Care n.a N.V. Solovyev, Yaroslavl; S Yakushin, N Nikulina, Ryazan Regional Clinincal Cardiology Dispensary, Ryazan; D Zateyshchikov, I Zotova, SBHI of city of Moscow City Hospital 17, Moscow; A Zateyshchikova, B Mankhaeva, SBHI City Clinical Hospital 51 of Hd of Moscow city, Moscow; S Zenin, O Kononenko, SBIH Novosibirsk Regional clinical cardiology Dispensary, Novosibirsk; G Zubeeva, I Motylev, Municipal Medicoprophylactic Institution City Hospital 33, Nizhny Novgorod.

#### **Serbia- 277 patients 14 centers**

S Apostolovic, D Djordjevic-Radojkovic, Clinical Center of Nis, Nis; V Celic, A Majstorovic, Clinical Center Dragisa Misovic, Belgrade; N Cemerlic Adjic, M Bjelobrk, Institute of Cardiovascular Diseases Sremska Kamenica, Sremska Kamenica; N Despotovic, P Erceg, Clinical Center Zvezdara, Belgrade; S Ilic, B Ilic, Institute for Treatment and Rehabilitation Niska Banja, Niska Banja; M Krotin, A Djokovic, Clinical Center Bezanijska Kosa, Zemun; V Miloradovic, I Djokic, Clinical Center Kragujevac, Kragujevac; P Otasevic, N Tasic, Dedinje Cardiovascular Institute, Belgrade; T Potpara, M Polovina, Clinical Center of Serbia, Belgrade; B Putnikovic, T Kalezic, Clinical Center Zemun, Zemun; P Seferovic, I Milinkovic, Institute of CV Disease Clinical Center of Serbia, Belgrade; D Tavciovski, Z Davicevic, Military Medical Academy, Belgrade; Z Vasiljevic-Pokrajcic, P Mitrovic, Clinical Center of Serbia, Belgrade; B Vujisic Tesic, **M Ostojic**, M Tesic, Institute of CV Diseases Clinical Center of Serbia, Belgrade.

#### **Slovakia- 405 patients 15 centers**

V Ambrovicova, I Ambrovic, CELL B s.r.o., Levice; A Banikova, A Banikova, Kardiomed s.r.o., Lucenec; A Dukat, V Kosmalova, Univerzitna nemocnica Bratislava Nemocnica Stare Mesto, Bratislava; K Dulkova, T Dulkova, Kardiovaskularne centrum s.r.o., Bratislava; **T Duris**, L

Vankova, FNsP Nove Zamky, Nove Zamky; A Dzupina, M Dzupinova, Alian s.r.o., Bardejov; K Hatalova, R Hatala, Cardioconsult s.r.o., Bratislava; M Hranai, J Hofmanova, Kardiocentrum Nitra s.r.o., Nitra; V Kasperova, A Reptova, Univerzitna nemocnica Bratislava Nemocnica Stare Mesto, Bratislava; J Mazur, J Mazur, Kardioonkologia s.r.o., Dolny Kubin; D Pella, J Fedacko, Cardio D&R s.r.o., Kosice; L Ruffini, J Morsky, Nestatna kardiologicka ambulancia, Rimavska Sobota; M Slanina, J Kmec, FNsP J. A. Reimana, Presov; A Zachar, M Kokles, Univerzitna nemocnica Bratislava Nemocnica ak. L. Derera, Bratislava; P Zareczky, D Bollova, Cardio s.r.o., Galanta.

**South Africa- 277 patients 15 centers**

J Badenhorst, L Erasmus, Unitas Hospital, Lyttelton, Gauteng; M Basson, M Poynton, Tiervlei Trial Centre, Belville, W Cape; **A Dalby**, J Allman, Millpark Hospital, Parktown West, Gauteng; G Ellis, L Botha, Helderberg Clinical Trials, Somerset West Western Cape, W Cape; J Engelbrecht, M Mostert, Somerset West, W Cape; M Essop, T Nunkoo, Chris Hani Baragwanath Hospital, Diepkloof, Gauteng; M Gani, L Wilson, GCT- Mercantile CTC, Port Elizabeth, E Cape; Y Kelfkens, Y Kelfkens, Potchefstroom, NW; I Mitha, J Taljaard, Worthwhile Clinical Trials, Benoni, Gauteng; D Naidoo, Y Duki, Research Clinic, Durban, KZ-Natal; F Snyders, M Munnik, Wilgers Medical Consortium, Pretoria, Gauteng; P Soma, H Johnston, University of Pretoria Clinical Trial Unit, Pretoria, Gauteng; N van der Merwe, Y Goosen, Medi-Clinic Bloemfontein, Bloemfontein, Free State; L van Zyl, M le Roux, Clinical Project Research, Worcester; T Venter, L Wessels, Union Hospital, Alberton, Gauteng.

**South Korea- 230 patients 23 centers**

HJ Bae, MG Han, Seoul National University Bundang Hospital, Gyeonggi-do; JK Cha, DH Kim, Dong-A University Medical Center, Busan; BR Cho, DR Ryu, Kangwon National University Hospital, Gangwon-do; HH Choi, KS Hong, Chuncheon Sacred Heart Hospital, Gangwon-do; WS Chung, YS Oh, The Catholic University of Korea Seoul St. Mary Hospital, Seoul; SH Han, KH Lee, Gachon University Gil Hospital, Incheon; TJ Hong, HW Lee, Pusan National University Hospital, Pusan; MS Hyon, JW Jung, Soonchunhyang University Hospital, Seoul; HK Jeon, JM Lee, The Catholic University of Korea Uijeongbu St.Mary's Hospital, Gyeonggi-do; DH Kang, KJ Choi, Asan Medical Center, Seoul; CJ Kim, ES Jin, Kyung Hee University Hospital at Gandong, Seoul; DS Kim, JS Seo, Inje University Busan Paik Hospital, Busan; HS Kim, MJ Cha, Seoul National University Hospital, Seoul; JT Kim, MS Park, Chonnam National University Hospital, Gwangju; JH Kim, JH Park, Chungnam National University Hospital, Daejeon; JS Kim, SJ Park, Samsung Medical Center, Seoul; SH Kim, JB Seo, Seoul Metropolitan Government Seoul National University, Seoul; YJ Kim, MY Chun, Ewha Womans University Mokdong Hospital, Seoul; MH Lee, BY Joung, Severance Hospital Yonsei University College of Medicine, Seoul; SH Lee, DG Shin, Yeungnam University Hospital, Daegu; J Namgung, JJ Kwak, Inje University Ilsan Paik Hospital, Gyeonggi-do; SW Rha, JO Na, Korea University Guro Hospital, Seoul; SJ Rim, JY Kim, Gangnam Severance Hospital, Seoul.

**Spain- 166 patients 14 centers**

M Arcocha Torres, A Manzanal Rey, Hospital de Basurto, Bilbao, 48; J Blanco Coronado, I Puertas, Hospital Virgen del Mar, Almeria, 4; J Bruguera Cortada, P Cabero, H del Mar, Barcelona, 8; C Calvo, G Calvo, HCU de Santiago, La Coruna, 15; A de Arce Borda, A Asensio, Hospital de Donostia, San Sebastian, 20; E Diez Tejedor, M Pérez Guevara, HGU La Paz, Madrid, 28; J Gonzalez Juanatey, M Moure, HCU de Santiago, Santiago de Compostela, 15; A

Hernandez Madrid, A Delgado, HU Ramon y Cajal, Madrid, 28; V Lopez Garcia-Aranda, R Barquero, HU Virgen Macarena, Sevilla, 41; L Manzano, S Blanco Abril, Hospital Universitario Ramón y Cajal, Madrid, 28; J Merino, M Diaz-Pintado, H.G.U.La Paz, Madrid, 28; J Arias, M Fernandez, R Fernandez Alvarez, Polyclinico de Vigo-Povisa, Vigo, 36; M Terns, M Dachs Delgado, CAP El Remei, Barcelona, 8; R Villuendas, L Astier, Hospital Universitari Germans Trias i Pujol, Barcelona, 8.

**Sweden- 252 patients 16 centers**

P Appelros, A Åkerberg, Universitetssjukhuset Örebro, Örebro; K Berndtsson Blom, R Andersson, Ladulaas kliniska studier, Skene; P Blomström, L Persson, Akademiska Sjukhuset, Uppsala; T Carlsson, A Stener Bengtsson, Hjärthuset AB, Varberg; S Dettmann, S Östberg, Mora lasarett, Mora; J Engdahl, L Karlsson, Länssjukhuset Halmstad, Halmstad; J Herlitz, L Winberg, Sahlgrenska Sjukhuset, Göteborg; **S Juul-Möller**, H Jernhed, Universitetssjukhuset MAS, Malmö; P Koskinen, E Håkansson, PharmaSite AB, Malmö; P Kozak, M Edlund, ProbarE, Lund; L Malmqvist, G Eriksson, Köpings lasarett, Köping; F Randers, J Moodh, Sahlgrenska Universitetssjukhuset Mölndal, Mölndal; A Rautio, M Johansson, Sensia Forskning, Luleå; F Rönn, C Sundholm, Norrlands Universitetssjukhus, Umeå; A Stenberg, A Gunnarsson, Lindesbergs lasarett, Lindesberg; J Thulin, M Broberg, Capio Citykliniken Lund, Lund.

**Switzerland- 5 patients 1 center**

**T Moccetti**, I Petrova Slater, Cardio Centro Ticino, Lugano.

**Taiwan- 234 patients 15 centers**

CC Cheng, WS Wu, Chi-Mei Medical Center - Yongkang, Tainan; CE Chiang, WC Yu, Taipei Veterans General Hospital, Taipei; FT Chiang, YW Wu, National Taiwan University Hospital, Taipei; CW Chiou, TC Yeh, Kaohsiung Veterans General Hospital, Kaohsiung; CH Hsia, YP Chen, Changhua Christian Hospital, Changhua; JL Huang, YF Chen, Taichung Veterans General Hospital, Taichung; CT Kuo, CL Wang, Chang Gung Memorial Hospital - Linkou, Taoyuan; WT Lai, TH Lin, Kaohsiung Medical University Chung-Ho Memorial Hospital, Kaohsiung; JT Lee, CC Cheng, Tri-Service General Hospital, Taipei; PY Pai, KH Lin, China Medical University Hospital, Taichung; KG Shyu, CZ Chiu, Shin Kong Wu Ho-Su Memorial Hospital, Taipei; WK Tseng, YF Pan, E-Da Hospital, Kaohsiung; KC Ueng, SC Lee, Chung-Shan Medical University Hospital, Taichung; JH Wang, WC Tsai, Hualien Tzu Chi Hospital, Hualien; HI Yeh, JY Kuo, Mackay Memorial Hospital - Tamsui, New Taipei.

**Thailand- 115 patients 8 centers**

K Jirasirirojanakorn, K Pornchaiyosit, Bhumibol Adulyadej Hospital, Bangkok; P Kaewsuwan, W Sinthusopa, Maharat Nakhon Ratchasima Hospital, Nakhon Ratchasima; S Kiatchoosakun, S Sriprasert, Srinagarind Hospital, Khon Kaen; P Laothavorn, P Bamrungpong, Phramongkutklao Hospital, Bangkok; D Piyayotai, A Sripracha, Thammasat Chalerm-Prakiat Hospital, Pathumthani; **P Sritara**, P Panpunuan, Ramathibodi Hospital, Bangkok; A Sukonthasarn, W Mekara, Maharaj Nakorn Chiang Mai Hospital, Chiang Mai; Y Vorasettakarnkij, E Puripun, King Chulalongkorn Memorial Hospital, Bangkok.

**Turkey- 111 patients 17 centers**

M Acikel, M Acikel, Ataturk University Medical Faculty, Erzurum; H Akilli, H Demir, Konya Necmettin Erbakan University Meram Faculty of Medicine, Konya; N Ata, N Ata, Osmangazi University Tip Faculty Hospital, Eskisehir; S Bayata, S Bayata, Izmir Ataturk Training and

Research Hospital, Izmir; N Cakmak, A Calik, Siyami Ersek Hospital, Istanbul; M Cayli, M Cayli, Adana Numune Training and Research Hospital, Adana; C Ceyhan, C Ceyhan, Adnan Menderes University Medical Faculty, Aydin; D Erdogan, D Erdogan, Suleyman Demirel University Medical Faculty., Isparta; C Ermis, C Ermis, Akdeniz Univesity Medical Faculty, Antalya; K Kabul, H Demir, GATA (Gulhane Military Medical School), Ankara; M Kanadasi, M Kanadasi, Cukurova University Medical Faculty, Adana; **A Oto**, A Oto, Hacettepe University School of Medicine, Ankara; O Turgut, I Tandogan, Cumhuriyet University Medical Faculty, Sivas; R Yalcin, R Yalcin, Gazi University, Ankara; F Yigit, F Yigit, Baskent University Medical Faculty, Adana; Z Yigit, Z Yigit, Istanbul University Cardiology Institute, Istanbul; M Zoghi, M Zoghi, Ege University Medical Faculty Hospital, Izmir.

**Ukraine- 1148 patients 46 centers**

V Batushkin, M Azhdari, Kyiv City Clinical Hospital 5, Kyiv; A Bazylevych, Z Vlasyuk, City Communal Clinical Hospital #5, Outpatient Department, Danylo Galytskiy Lviv National Medical University, Lviv; I Bereznyakov, M Lebedynskaya, City Clinical Multifield Hospital #25, Cardiology Department; Kharkiv Medical Academy of Postgraduate Education, Kharkiv; S Dotsenko, R Kulynych, Communal Institution Zaporizhzhya Regional Clinical Hospital, Zaporizhzhya State Medical University, Chair of Internal Diseases #3, Zaporizhzhya; G Dzyak, L Vasiliyeva, Communal Institution Dnipropetrovsk Regional Clinical Centre of Cardiology and Cardiosurgery of Dnipropetrovsk Regional Council, Department of Electrophysiological Research and Anaesthesiological Care, State Institution Dnipropetrovsk Medical Academy of the Ministry of Health of Ukraine, Dnipropetrovsk; A Faynyk, M Sorokivskyy, Lviv Regional State Clinical Medical and Diagnostic Cardiology Centre, Lviv; V Gavrysyuk, Y Dzublik, SI National Institute of Phthisiology and Pulmonology named after F.G.Yanovsky AMS of Ukraine, Kyiv; L Horbach, V Husyev, Communal City Clinical Hospital 8, Lviv; O Godlevska, Y Samburg, City Clinical Emergency Hospital named after O.I. Meshchaninov, Department of Therapy #1, Kharkiv Medical Academy of Postgraduate Education, Kharkiv; O Karpenko, I Nevolina, Kiiv Municipal Clinical Hospital 1, Kyiv; Y Karpenko, O Blihar, Odesa Regional Clinical Hospital, Department of Cardiology, Odesa State Medical, Odesa; I Kaydashev, N Gerasimenko, City Clinical Hospital #1, Therapeutic Department; Ukrainian Medical Stomatological Poltava; S Kolomyiits, V Vasylets, Odesa Municipal Clinical Hospital 9, Odesa; M Kopytsya, O Petyunina, State Institution Institute of Therapy named after L.T. Malaya of Academy of Medical Sciences of Ukraine, Kharkiv; V Kotseruba, M Dvoieglazova, Chernigiv City Hospital 1, Chernigiv; V Koval, O Ohirko, Communal City Clinical Hospital 8, Lviv; O Koval', P Kaplan, Communal Institution Dnipropetrovsk Clinical Association of Emergency Medical Care of Dnipropetrovsk Regional Council, Department of Cardiology for Treatment of Patients with Myocardial Infarction #2, State Institution Dnipropetrovsk Medical Academy of the Ministry of Health of Ukraine, Dnipropetrovsk; I Kraiz, N Usan, Kharkiv Central Clinical Hospital Ukrzaliznitsi, Kharkiv; O Kraydashenko, R Stets, Zaporizhzhya State Medical University, Communal Institution City Clinical Hospital #6, chair of clinical pharmacology and pharmacotherapy, Zaporizhzhia; I Kupnovytska, I Kupnovytska, Iv-Frank. Ivano-Frankivsk Regional Clinical Cardiological Center, Department of Arterial Hypertension, Ivano-Frankivsk State Medical University, Ivano-Frankivsk; Y Kyyak, Y Kyyak, Communal City Clinical Emergency Hospital, Cardiology Department, Danilo Galytskiy Lviv State Medical University, Lviv; V Lizogub, O Gorna, Kyiv City Clinical Hospital #12, Department of Cardiology, O.O. Bogomolets National Medical University, Kyiv; Y Malynovsky, S Fedotov, MI RMC of Cardiovascular Diseases of Zaporizhzhia RC, Zaporizhzhia; L Ostrovska, L Ushakova-Sokolova, Kherson Municipal Clinical Hospital, Kherson; **A Parkhomenko**, N Dovgan, National Scientific

Center The M.D. Strazhesko Institute of Cardiology of the Academy of Medical Sciences of Ukraine, Kyiv; P Potapenko, A Nekrasa, Luhansk Municipal Clinical Hospital 1, Luhansk; O Prokhorov, V Leonidova, Kharkiv City Clinical Hospital 27, Kharkiv; B Rebrov, O Gamacheck, Lugansk Regional Clinical Hospital, Lugansk; M Rishko, T Chendey, Transcarpathian Regional Cardiology Dispensary, Department of Cardiology, Uzhgorod National University, Uzhgorod; I Rudyk, I Rudyk, SI Institute of Therapy named after L.T.Mala NAMS of Ukraine, Kharkiv; V Shatilo, V Ishchuk, Institute of Herontology AMS of Ukraine, Kyiv; V Shcherbak, I Goncharova, Vinnytsya city clinical hospital 1, Vinnytsya; N Shvetz, M Zamlynskyy, City Clinical Hospital 1, Mykolayiv; Y Sirenko, Y Sirenko, State Institution National Scientific Center The M.D. Strazhesko Institute of Cardiology of National Academy of Medical Science of Ukraine, Kyiv; M Stanislavchuk, L Perebetiuk, Vinnytsya Regional Clinical Hospital named after M.I. Pyrogov, Department of Cardiology, Vinnytsya National Medical University named after M.I. Pyrogov, Vinnytsya; O Sychov, S Lyzohub, NSC Cardiology Institute named after M.D. Strazheska, Kyiv; V Tselyukko, I Kuznetsov, Communal Healthcare Institution Kharkiv City Clinical Hospital #8, Cardiology Department, Kharkiv Medical Academy of Postgraduate Education, Kharkiv; S Tykhonova, S Tykhonova, Centre of Reconstructive and Rehabilitation Medicine (University Clinic) of Odesa State Medical University of Ukraine, Therapeutic Department, Odesa State Medical University MoH of Ukraine, Internal Medicine Department #2, Odessa; I Vakaliuk, I Drapchak, Ivano-Frankivsk Regional Clinical Cardiological Center, Infarction Department #2, Ivano-Frankivsk State Medical University, Ivano-Frankivsk; M Vatutin, O Sklyanna, V.K.Gusak Institute of Urgent and Recovery Surgery AMSU, Department of Urgent Cardiology and Rehabilitation, M.Gorky Donetsk National Medical University, Donetsk; V Vizir, O Goncharov, Communal Institution City Hospital #7, Department of Cardiology, Zaporizhzhya State Medical University, Zaporizhzhia; V Volkov, S Serik, Institute of Therapy named after L.T. Malaya NAMS Ukraine, Kharkiv; A Yagensky, V Nahrebetskyy, Lutsk City Clinical Hospital, Volyn Regional Center of Cardiovascular Disease and Thrombolysis, Lutsk; L Yena, I Mudruk, Institute of Herontology AMS of Ukraine, Kyiv; O Zharinov, Y Logvinov, National Medical Academy of Postgraduate Education named after P.L.Shupyk, Department of Cardiology and Functional Diagnostics, Kyiv; S Zhurba, T Shandra, Cherkaskiy Region Cardiological Center, Cherkasy.

### **United Kingdom- 400 patients 31 centers**

R Aggarwal, S Smith, Basildon University Hospital, Basildon, Essex; I Beeton, S Dunn, St Peter's Hospital, Chertsey, Surrey; M Blagden, R Price, Avondale Surgery, Chesterfield, Derby; **J Camm**, K Dougal, St Georges Hospital, London, GT LON; O Chapman, D Davies, University Hospital of Coventry and Warwickshire, Coventry, Warwks; A Choy, J Duff, Ninewells Hospital, Dundee; A Cohen, R Wilmott, King's College Hospital, London, GT LON; D D'Costa, M Green, New Cross Hospital, Wolverhampton, WSTMID; H Douglas, D Dickinson, University Hospital Aintree, Liverpool, MERSYD; F Lie, V Ramasamy, Whipps Cross Hospital, London, GT LON; S Lindsay, C Atkinson, Bradford Royal Infirmary, Bradford, WYORKS; N Linker, M Finlayson, James Cook Hospital, Middlesborough, T&W; G Lip, R Brown, City Hospital, Birmingham; P MacCallum, P Ebano, Barts and the London NHS Trust, London; P MacCallum, P Ebano, Wolfson Insitute of Preventive Medicine, London, GT LON; M MacLeod, C McGhee, Forth Valley Royal Hospital, Larbert, AYR; P Marazzi, D Jones, East Horsley Medical Centre, East Horsley, Surrey; T Maxwell, C Isted, Little Common Surgery, Bexhill on Sea, E.SUSX; R More, L Helliwell, Lancashire Cardiac Centre, Blackpool, LANCS; A Moriarty, A Mackin, Craigavon Area Hospital, Belfast, BFS; D Murdoch, A Andrews, Southern General Hospital NHS Trust, Glasgow, STRATH; D Newby, L Flint, Edinburgh Royal Infirmary, Edinburgh,

LOTH; M Pye, L Wright, York Hospital, York, E YORK; J Roberts, D Avery, Mayfield Medical Centre, Paignton, DEVON; R Senior, G Young, Northwick Park Hospital, Middlesex, MDDSX; M Sopher, S Kennard, Royal Bournemouth Hospital, Bournemouth, Dorset; R Storey, C Bridge, University of Sheffield SOM & Biomed Sciences, Sheffield, SYORKS; W Turner, M Walker, The Burbage Surgery, Leicester, LEICS; A Venkataraman, M Gilchrist, George Eliot Hospital, Nuneaton, Warwks; R Watkin, A Chung, Good Hope District General Hospital, Birmingham, WSTMID; A Wright, J Wright, Hathaway Medical Centre, Swindon, WILTS.

**United States- 3907 patients 336 centers**

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