

Europass Curriculum Vitae



Personal information

First name /Surname	Mauro Cassese		
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Nationality	Italian		
Date of birth	11/24/1957		
Gender	male		

Occupational field	Cardiovascular Surgery Mininvasive Cardiac Surgery Interventional Cardiology for Structural Heart Diseases with a very special interest for TF, TA and Tao-TAVI
Dates	From 13/06/2016 until today
Occupation or position held	Director – Department of Cardiovascular Surgery
Main activities and responsibilities	Full responsibility of all departmental activities
Name and address of the employer	IRCCS - San Pio Foundation Ospedale Casa Sollievo della Sofferenza Viale Cappuccini, 1 San Giovanni Rotondo, 71013 (FG) Italy Website: www.operapadrepio.it
Sector	Cardiac Surgery Mininvasive Cardiac Surgery Interventional Cardiology for Structural Heart Diseases
Dates	From 15/09/2012 until 13/06/2016
Occupation or position held	Director – Department of Cardiovascular Surgery, Cardiology and Interventional Cardiology for Structural heart Disease
Main activities and responsibilities	Full responsibility of all departmental activities: 500 open-heart operations/year, 2400 cath lab procedures/year, 700 PTCA /year, 100 TAVI /year, 450 EP procedures/year, 400 major vascular procedures/year, 30 TEVAR procedures/year. The Department includes 61 beds in the wards, 10 ICU beds, 3 Operating Theaters, 2 Cath Labs, 1 EP lab. The Department serves an area of almost 800.000 people on a regional basis, for both emergency and elective cases.
Name and address of the employer	Santa Maria Hospital Via de Ferraris, 18 Bari, Italy Website: www.ospedalesantemaria.it
Sector	Cardiac Surgery Mininvasive Cardiac surgery Interventional Cardiology for Structural Heart Diseases

Dates	From 18/03/2002 until 14/07/2012
Occupation or position held	Director - Department of Cardiovascular Surgery, Interventional Cardiology for Structural Heart Diseases and Cardiology
Main activities and responsibilities	Full responsibility of all departmental activities: 900 open-heart operations/year, 2800 cath lab procedures/year, 800 PTCA /year, 80 TAVI /year, 600 EP procedures/year, 500 major vascular procedures/year, 60 TEVAR procedures/year, 4500-5000 admissions per year in all the Department. The Department includes 83 beds in the wards, 14 ICU beds, 4 Operating Theaters, 1 full Hybrid room, 2 Cath Labs, 1 EP Lab. The Department serves an area of almost 1.500.000 people on a regional basis, for both emergency and elective cases.
Name and address of employer	S. Anna Hospital, Via Pio X, 111 Catanzaro, 88100 Italy Website: www.santannahospital.it
Sector	Cardiovascular Surgery Interventional Cardiology for Structural Heart Diseases
Dates	From 16/11/1995 to 21/12/2001
Occupation or position held	Director - Department of Cardiovascular Surgery and Cardiology
Main activities and responsibilities	Full responsibility of all departmental activities: 1200 open-heart operations/year, 3500 cath lab procedures/year, 800 PTCA /year, 300 major vascular procedures/year, 5000-5500 admissions per year in all the Department. The Department included 65 beds in the wards, 16 ICU beds, 4 Operating Theaters, 2 Cath Labs. The Department served an area of almost 1.000.000 people on a regional basis, for both emergency and elective cases.
Name and address of employer	Villa Maria Pia Hospital, Strada Mongreno 221, 10100, Turin Italy Website: www.gvmnet.it
Sector	Cardiovascular Surgery

Dates	From 01/02/1990 to 30/04/1996
Occupation or position held	Assistant to Professor in Cardiovascular Surgery Department of Cardiac Surgery University of Rome "La Sapienza" Rome Italy
Main activities and responsibilities	Operating Surgeon, ICU responsibilities, Teaching responsibilities
Name and address of employer	University of Rome "La Sapienza" Piazzale Aldo Moro,1 00100, Roma Italy Website: www.uniroma1.it
Sector	Cardiac Surgery
Education and training	
Dates	1976-82 Medical School , University of Rome, Italy 1982-87 Residency in General Surgery , University of Rome, Italy 1985-86 Clinical Fellowship in General Surgery , Oklahoma University, USA 1887-92 Residency in Cardiac Surgery , University of Rome, Italy 1992 Clinical Fellowship in Cardiac Surgery , Ospedale San Donato, Milan, Italy
Title of qualification awarded	<u>Italian Board Certification in General Surgery</u> <u>Italian Board Certification in Cardiac Surgery</u> <u>ECFMG Certification and abilitation to work in the USA (since December 1985) with n° A7943</u> ACTIVE MEMBER <ul style="list-style-type: none"> • Italian Society of Cardiac Surgery (SICCH) since 1995 • European Association for CardioThoracic Surgery (EACTS) since 2005 • Society of Thoracic Surgeons (STS) since 2007

Name and type of organisation providing education and training

University of Rome "La Sapienza", Rome, Italy

University of Oklahoma Health Science Center, Oklahoma City, USA

San Donato Hospital, Milan, Italy

Personal skills and competences

As a first operator I performed around 800 operations of general surgery and more than 11.000 cardiac surgical operations. Furthermore doing a 22 years activity as Director of Cardiac Surgery in different hospitals in various regions of Italy I supervised and directed more than 18.000 open heart operations.

My **main areas of interest** are:

1 - CABG, ARTERIAL CABG and TOTAL ARTERIAL REVASCULARIZATION:

Since 1996 I started using 2 skeletonized mammary arteries to perform CABG.

The mammary arteries have been used as in situ conduits and preferentially as Y-grafts.

Total arterial revascularization has been mainly performed using sequential anastomosis with the Right IMA in Y-configuration with Left IMA.

To revascularize the right coronary artery I mainly used the gastroepiploic artery skeletonized.

Very large experience of CABG procedures in urgency and emergency often associated with concomitant procedures for the treatment of post-ischemic mechanical complications (mitral insufficiency, rupture of LV free wall, papillary muscle rupture, repair of interventricular post-infarction defects, LV-aneurismectomy).

I performed a total amount of more than 5000 CABG: 70% of them have been arterial CABG and around 5% total arterial revascularization.

2 - OFF-PUMP CABG

During the last 10 years this technique has been mainly reserved to patients with whatever contraindication to extracorporeal circulation. 30-40 cases per year have been done

3 - HYBRID REVASCULARIZATION

During the last 5 years hybrid revascularization procedures have been done after heart-team discussion of the cases.

Various combinations of on and off-pump CABG have been applied together to PTCA procedures (mainly for right coronary stenosis) performed in day 3rd-6th after CABG.

In the last 2 years working daily in a full-hybrid room CABG has been performed off-pump in selected cases through the 5th intercostal space after LIMA preparation through the same incision, followed by PTCA to circumflex or RCA in the same setting or after 1-2 days.

4 - HEART VALVE REPLACEMENT / REPAIR

My experience consist of

- >2.500 cases of single, double or triple valve replacement-repair with mechanical or biological prosthesis and rings
- > 600 cases of mitral repair operations done in the last 10 years.

I am familiar with all Prof. Carpentier techniques of mitral leaflet repair and the loop technique with Goretex sutures for repair of the anterior leaflet of the mitral valve

Familiar with implantation of all rings for mitral and tricuspid anuloplasty.

5 - MINI-INVASIVE MITRAL AND AORTIC VALVE REPLACEMENT / REPAIR

- >200 mitral valve repair/replacement through 4th i.s. right minithoracotomy with both direct aortic cannulation or Endoclamp.
- >100 aortic valve replacement through 2nd-3rd intercostal space. A personal technique has been developed to perform this operation.

6 – AORTIC SURGERY

I performed more than 500 procedures both elective and in emergency for all types of aortic aneurisms and aortic dissection.

Familiar with Bentall, Cabrol operations, emiarch and total arch replacement, arch debranching, frozen elephant trunk and TEVAR procedures, David and Yacoub valve sparing operations.

7 - TRANSCATHETER AORTIC VALVE IMPLANTATION

Very skilled in all approaches(transfemoral, transaortic and transapical) used for TAVI.

Fully autonomous in percutaneous approaches for transfemoral TAVI.

Large experience in Valve in Valve both aortic and mitral. Experience with Valve in Ring for both mitral and tricuspid valves, Valve in Valve in tricuspid and some cases of native mitral valve implantation (TMVR).

Experience >600 cases(85% TF, 15% TA).

All TAVI experience has been carried out in a hybrid-room facility with the use of dedicated softwares for 3D reconstruction of aorta and aortic valve.

8 - HEART FAILURE SURGERY

Non-transplant heart-failure surgery experience accounts for more than 250 left ventricular aneurysmectomy often associated with mitral valve repair, tricuspid valve repair, CABG and MAZE procedures.

Familiar with ECMO, both peripheral and central.

9 – SURGERY FOR ATRIAL FIBRILLATION

Very large experience in Cox-Maze IV procedure, both left and right side, with the aid of radiofrequency ablation devices.

More than 250 CONCOMITANT procedures done.

Some experience in the treatment of ISOLATED atrial fibrillation through minithoracotomy access.

Teaching Activity

University of Rome “La Sapienza”

1989-1995 as Professor in Cardiac Surgery for both students in Medicine and Residents in Cardiac Surgery Residency Program.

Activity of Proctoring

Proctor for THV-Edwards Lifesciences

- Long lasting (march 2011- January 2018) and very large experience with proctoring of Sapien XT and Sapien-3 valves in **more than 500 cases**.
- One of the very few proctors in the world certified for all the approaches (TF, TA, TAO) with Sapien XT and Sapien-3 transcatheter valves.
- More than **6 months experiences in proctoring the USA**. I visited more than 30 different hospitals and universities in more than 20 States mainly located in all the East Coast, South west and Mid West.
More than 90% of proctored cases were transfemoral.

- **1 month experience of proctoring in Japan** in Tokio, Osaka, Kokura and Kobe cities. Only transapical approach TAVI has been proctored in this country.
- **Very long and large experience in proctoring in Middle East and Arabic countries:** more than 30 different hospitals and universities trained among Saudi Arabia, Oman, Egypt, Iran, Lebanon, Dubai, Kuwait.
- **Other often visited countries** for proctoring have been the following: Cyprus, Israel, Greece, Czech Republic, Lithuania, Poland, Slovakia, Rumania, Venezuela, Great Britain, Khazakistan, Russia, Spain,
- **In Italy** proctored procedures have been performed in hospitals or universities of the following cities: Turin, Milan, Brescia, Rome, Naples, Ancona, Caserta, Avellino, Bari, Taranto, Cagliari.

Proctor for HVT-Edwards Lifesciences

2016-18 experience in proctoring surgical procedures mainly related to minimal access AVR through mini-thoracotomy with Rapid Deployment Valves (Intuity and Elite valves) or standard surgical stented valves.

I am actually a Faculty member of the Minimally Invasive (Mini-Thoracotomy) AVR Advanced Course held in Nyon, Switzerland at Edwards Lifesciences Educational Center in Europe.

Proctor for Medtronic

This proctoring activity has been related with the ENGAGER system for transapical TAVI procedures.

I proctored in Italy (Milan, Turin, Rome), Lithuania, Great Britain and Canada.

I personally proctored the first North-American TAVR with the Engager system in London Ontario, Canada and this first experience has been published in the Annals of Thoracic Surgery.

Proctor for Symetis/Boston Scientific

2016-18 This proctoring activity has been related to the Symetis Accurate-TA and Accurate Neo-TF. Proctored countries: *Canada, Spain, Greece, Italy.*

Mother tongue Italian

Other languages English, Spanish

English

Spanish

Understanding		Speaking		Writing	
Listening	Reading	Spoken interaction	Spoken production		
Excellent	Excellent	Excellent	Excellent	Very good	
Very good	Excellent	Excellent	Very good	Very good	

(*) [Common European Framework of Reference for Languages](#)

Scientific Books and Manuals

- Author of a manual focused on TAVI: **“Practical Manual for the Implantation of TA and TF Sapien XT Prosthesis”** with a presentation wrote by Prof. Alain Cribier. Edited in Catanzaro, May 2011.
- Co-Author of 1 book and 1 Chapter in a book.
 1. “Aortic Valve Sparing Surgery: indications, techniques, and results”. M. Cassese, GL Martinelli, M. Braccio, C. Baraldi Galasso Publishing, 2010
 2. Continuous artero-venous hemofiltration in postoperative acute renal failure. In G. Ruvolo: “Intensive Care in Cardiac Surgery”, Casa Editrice Ambrosiana, Milano, 1994

Organization of Scientific Meetings

Organizer of 2 International and 2 National Cardiac Surgical Meetings

1. **“New Trends in Arterial Myocardial Revascularization”**.
Turin, 14th-15th December 2001 with 8 live surgical cases, 1 performed by me
2. **“Transcatheter Aortic valve Implantation and endovascular treatment of Thoracoabdominal aneurysms”**.
Lamezia Terme, 27th-29th May 2001 with 6 live cases
3. **“Diagnosis and Treatment of Aortic Insufficiency”**.
Lamezia Terme, 6th May 2009
4. **“Reparative Surgery of the Mitral Valve”**.
Gizzeria Lido, 1st March 2008

Partecipation as a Speaker in Meetings and Congresses

Speaker or Invited Speaker in more than 60 National or International Meetings, including EACTS and SICCH

Additional information

- 1) **Cassese M, D'Onofrio A, Salizzoni S, et al. -Transapical aortic valve replacement is a safe option in patients with poor left ventricular ejection fraction: results from the Italian Transcatheter Balloon-Expandable Registry.**- Eur J Cardiothorac Surg 2017,doi:10.1093/ejcts/ezx227.
- 2) Eftychiou C, **Cassese M**, et al. –**Repeated transapical TAVI for the treatment of a degenerated bioprosthetic valve** – Hellenic Society of Cardiology (2017), doi:10.1016/j.hjc.2017.06.004
- 3) **Cassese M, D'Onofrio A, Salizzoni S, et al. –The rise of new technologies for aortic valve stenosis: A comparison of suturless and transcatheter aortic valve implantation.** – The J of Thoracic and Cardiovascular Surgery. Vol 152, Number 1, pp 99/109
- 4) Salizzoni S, **Cassese M**, D'Onofrio A, et al. – **Early and mid-term outcomes of 1904 patients undergoing transcatheter balloon-expandable valve implantation in Italy: results from the Italian Transcatheter Balloon-Expandable Valve Implantation Registry (ITER)**- Eur J Cardiothorac surg 2016, 50:1139-48
- 5) Conrotto F, D'Ascenzo F, **Cassese M**, et al. – **Predictive ability of the CHADS₂ and CHA₂DS₂-VAS_c scores for stroke after transcatheter aortic balloon-expandable valve implantation: an Italian Transcatheter Balloon-Expandable Valve Implantation Registry (ITER)sub-analysis**- Eur J Cardiothorac Surg 2016, 50:867-73
- 6) Onorati F,D' Onofrio A, **Cassese M**, et al. – **Results of surgical aortic valve replacement and transapical transcatheter aortic valve replacement in patients with previous coronary artery bypass grafting** – Interact Cardiovasc Thorac Surgery 2016, 22:806-12
- 7) Conrotto F, **Cassese M**, D'Ascenzo F, et al. – **Predictive ability of the CHADS₂ and CHA₂DS₂-VAS_c scores for stroke after transcatheter aortic balloon-expandable valve implantation :an Italian Transcatheter Balloon-Expandable Valve Implantation Registry (ITER) sub-analysis** - Eur J Cardiothorac Surgery 2016, doi:10.1093/ejcts/ezw199
- 8) **Cassese M**, Pestrichella V, Braccio M, et al.- **Transcatheter Simultaneous Double-Transapical Access for Paravalvular Mitral Leak Closure Using the Occlutech PLD** – The J of Invasive Cardiology, July 2016 No.7 Vol 28
- 9) Bagur R, Kiaii B, **Cassese M**, et al. – **First North American Experience With the Engager Self-Expanding Transcatheter Aortic Valve: Insights From the London Health Sciences Centre Heart Team** - Ann Thorac Surg 2016; 102:e167-71
- 10) **Cassese M**, Martinelli G L, Cotroneo A, et al. – **Stenless aortic reoperation: New surgical strategy with rapid deployment valves** – The J of Thorac and Cardiovascular Surgery June 2015 e88-89
- 11) Scrascia G, **Cassese M**, Guida P, et al. – **Incremental Value of Anemia in Cardiac Surgical Risk Prediction With the European System for Cardiac Operative Risk Evaluation (EuroSCORE) II Model** – Ann Thorac Surg 2014,98:869-76
- 12) **Cassese M**, Braccio M, Martinelli G L, et al. – **Treatment of Cardiogenic Shock in Severe Aortic Stenosis with the Edwards INTUITY Valve** – Ann Thorac Surg 2014; 98: 107-8
- 13) Paparella D, **Cassese M**, Guida P, et al. – **Development and results of Puglia adult cardiac surgery registry**- J Cardiovasc Med 2014; 15:810-819
- 14) **Cassese M**, D'Onofrio A, Salizzoni S, et al. – **When does transapical aortic valve replacement become a futile procedure? An analysis from a national registry**- The J of Thoracic and Cardiovascular Surgery ; September 2014 vol 148 Number 3
- 15) Perrotta I, Perrotta E, **Cassese M**, et al.- **MnSOD expression in human atherosclerotic plaques: an immunohistochemical and ultrastructural study**- Cardiovascular Pathology 22(2013)428-437
- 16) **Cassese M**, Braccio M, Martinelli G L, et al.- **Multibranch frozen Elephant Trunk with Left Subclavian Artery cannulation**- Aorta , April 2014,vol 2,Issue 2:87-90

- 17) **Cassese M**, Paparella D, Guida P, et al.- **Risk stratification for in-hospital mortality after cardiac surgery: external validation of EuroSCORE II in a prospective regional registry-** Eur J of Cardio Thoracic Surgery 46 (2014) 840-848
- 18) D'Onofrio A, **Cassese M**, Salizzoni S, et al.- **Medium Term Outcomes of Transapical Aortic Valve Implantation : Results from the Italian Registry of Trans-Apical Aortic Valve Implantation –** Ann Thorac Surgery 2013, 96:830-6
- 19) **Cassese M**, Barosi A, Lunati M, et al. – **Cardiac resynchronization therapy in patients undergoing open-chest cardiac surgery-** J Interv Card Electrophysiol (2011) 30:251-259
- 20) **Cassese M**, Rubino P, Salvador L, et al.- **Clinical and Hemodynamic outcomes of “all-comers” undergoing transapical aortic valve implantation: Results from the Italian Registry of Trans- apical Aortic Valve Implantation (I-TA)-** The J of Thoracic and Cardiovascular Surgery October 2011
- 21) **Cassese M**, Perrotta I, Brunelli E, et al. – **iNOS induction and PARP-1 activation in human atherosclerotic lesions: an immunohistochemical and ultrastructural approach-** Cardiovascular Pathology 20(2011) 195-203
- 22) **Cassese M**, Perrotta I, Donato G, et al. – **Ultrastructural analysis and Electron Microscopic Localization of Nox4 in Healthy and Atherosclerotic Human Aorta –** Informa Healthcare Usa inc. (2011)
- 23) **Cassese M**, Macrina F, et al.- **Long-Term mortality prediction after operations for type A ascending Aortic dissection –** J of Cardiothoracic Surgery (2010) 5:42
- 24) **Cassese M**, Brunelli E, et al. – **Inducible and endothelial nitric oxide synthase expression in human atherogenesis: an immunohistochemical and ultrastructural study-** Cardiovascular Pathology 18 (2009) 361-368
- 25) **Cassese M**, Macrina F, et al. – **Artificial Neural Networks Versus Multiple Logistic Regression to Predict 30-day mortality after operations for Type A Ascending Aortic Dissection-** The Open Cardiovascular Medicine Journal,2009;3,81-95
- 26) **Cassese M**, Martinelli GL, Nasso G, et al. – **Topical Cooling for Myocardial Protection: The Results of a prospective Randomized study of the “Shallow Technique” –**J Card Surg 2006 21:357-362
- 27) **Cassese M**, Seccareccia F, et al. – **The Italian CABG Outcome Study: short-term outcomes in patients with coronary artery bypass graft surgery –** Eur J of Cardio-Thoracic Surgery 29 (2006)56-64
- 28) **Cassese M**, Braccio M, Diena M, et al. – **Myocardial revascularization through a mini-thoracotomy with thoroscopic assistance –** Eur J of Cardio-thoracic Surgery 14 (suppl 1) (1998) s68-s70

MAURO CASSESE, M.D.