INTERVENTION IN STRUCTURAL HEART DISEASE @ HOSPITAL DE SANTA CRUZ 2025

Síntese

An European driven hands program on education and training in structural heart disease intervention

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Structural Heart Disease fellowship @ Hospital de Santa Cruz 2025

An European driven hands-on education and training program

Preamble

Hospital de Santa Cruz ULSLO performs 900 PCIs per year with a CTO program, 350 TAVIs, 40 M/CT and practically all contemporary techniques. Find more @ https://2vrt.pt/

The possibility of an internship is real and depends on the candidate's CV, the duration and their objectives, including research, which is mandatory.
Prior national recognition as a doctor by the Medical Association and minimum command of the Portuguese language are essential. Find more @ https://ordemdosmedicos.pt/

We follow the EAPCI guidelines, the EAPCI Core Curriculae and we are part of the EAPCI Hosting Centres - 2024 Education & Training Grants Programme. Find more @

- https://eurointervention.pcronline.com/article/eapci-core-curriculum-for-percutaneous-cardiovascular-interventions-2020committee-for-education-and-training-european-association-of-percutaneous-cardiovascular-interventions-eapcia-branch-of-the-european-society-of-cardiology
- https://eurointervention.pcronline.com/article/percutaneous-valvular-and-structural-heart-disease-interventions-2024-core-curriculum-of-the-european-association-of-percutaneous-cardiovascular-interventions-eapci-of-the-esc
- https://www.escardio.org/Education/Career-Development/Grants-and-fellowships/EAPCI-interventional-cardiology-training-and-research-grants

Trainers

1. Manuel Almeida, MD, PhD (Supervisor, Cath Lab Director)
2. Rui Campante Teles, MD, PhD (Mentor, SHD Program DIrector)
3. João Brito, MD, PhD Student (Trainer)
4. Silvio Leal, MD, PhD Student (Trainer)
5. Henrique Mesquita Gabriel, MD (Trainer)
6. Pedro Araújo Gonçalves, MD, PhD (Trainer)
7. Luis Raposo, MD, PhD (Trainer)
8. Eduardo Oliveira, MD (Trainer)
9. Tiago Nolasco, MD (Trainer)

Objective

- **Interventional cardiology Education and Training on Structural Heart Disease (SHD) interventions primarily focused on the aortic track.**

Organization

- UNICARV

Target audience

- Interventional Cardiologists

Language

- Portuguese

Duration

- 6 months minimun

Diploma

- EAPCI Core Curriculum compliance: Mentor and Supervisor

Theory and knowlegde

Module 1

1 TAVI indications & procedural planning (JB, RCT)

- *2021 ESC/EACTS Guidelines for the management of valvular heart disease. Eur Heart J. 2022 Feb 12;43(7):561-632. doi: 10.1093/eurheartj/ehab395.*
- *2024 Core Curriculum of the European Association of Percutaneous Cardiovascular Interventions (EAPCI) of the ESC. EuroIntervention 2024;20:e1-e10 • DOI: 10.4244/EIJ-D-23-00983*
- *Management of Left-sided Severe VHD complciated by cardiogenic shock: focus on the role of transhcatheter valve interventions . A EAPCI clinical consensus statement in collaboration with the Association for Acute CardioVascular Care & the ESC Working Group on Cardiovascular Surgery. EuroIntervention 2023*

1.1 Principles of THV selection
1.2 MSCT imaging skills in TAVI
1.3 TAVI primary vascular access planning according to anatomy.
1.4 Challenging arterial access: the role of alternative access routes and of percutaneous interventions
1.5 TAVI secondary vascular access planning.

Module 2

2 The TAVI procedure (RCT, EO)

- *2024 Core Curriculum of the European Association of Percutaneous Cardiovascular Interventions (EAPCI) of the ESC. EuroIntervention 2024;20:e1-e10 • DOI: 10.4244/EIJ-D-23-00983*
- *EAPCI Core Curriculum for Percutaneous Cardiovascular Interventions (2020): Committee for Education and Training European Association of Percutaneous Cardiovascular Interventions (EAPCI). A branch of the European Society of Cardiology. EuroIntervention. 2021 May 17;17(1):23-31.*

2.1 Procedural set-up
2.2 Pharmacological strategies
2.3 Large bore access
2.4 Rapid pacing techniques
2.5 Balloon aortic valvuloplasty (BAV)
2.6 Technical considerations for THV deployment

Module 3

3 The TAVI procedure (RCT) Prediction, prevention and management of procedural complications (HMG, PG)

- *2024 Core Curriculum of the European Association of Percutaneous Cardiovascular Interventions (EAPCI) of the ESC. EuroIntervention 2024;20:e1-e10 • DOI: 10.4244/EIJ-D-23-00983*
- *2021 ESC/EACTS Guidelines for the management of valvular heart disease. Eur Heart J. 2022 Feb 12;43(7):561-632.*

3.1 Preparation for complications: essential equipment, vascular and surgical access, team training
3.2 Vascular access: pre-procedure assessment of access site selection, procedure performance, and use of closure devices.
3.3 Endovascular management of vascular complications: perforation, dissection, and occlusion
3.4 Management of bleeding complications: femoral, pericardial, and remote
3.5 Conduction disorders: impact, prediction, prevention, management
3.6 Valve malposition: migration, embolization or ectopic deployment
3.7 Paravalvular regurgitation (PVL) peri-TAVI
3.8 Coronary obstruction: prediction, risk-assessment, prevention, management
3.9 Aortic injury: prediction, avoidance, and management of aortic dissection and annular rupture
3.10 Acute hypotension: algorithm to identify cause of hypotension and acute management
3.11 Stroke: risk evaluation, cerebral protection devices, acute management, clinical outcomes
3.12 Patient prosthesis mismatch (PPM): prevention, diagnosis, outcomes

Module 4

4 Post procedural management (JB, LR)

- *2024 Core Curriculum of the European Association of Percutaneous Cardiovascular Interventions (EAPCI) of the ESC. EuroIntervention 2024;20:e1-e10 • DOI: 10.4244/EIJ-D-23-00983*
- *Management of antithrombotic therapy in patients undergoing transcatheter aortic valve implantation: a consensus document of the ESC Working Group on Thrombosis and the EAPIC in collaboration with the ESC Council on Valvular Heart Disease.Eur Heart J. 2021 Jun 14;42(23):2265-2269*

4.1 Discharge from hospital: timing, planning, execution, and liaison with family
4.2 Anti-thrombotic therapy after TAVI
4.3 Clinical and imaging follow-up after TAVI: clinical review, imaging, endocarditis prevention, rehabilitation
4.4 Bioprosthetic valve dysfunction (BVD): definitions, operative classification and outcomes.

Module 5

5 Specific clinical scenarios (MA, RCT)

- *2024 Core Curriculum of the European Association of Percutaneous Cardiovascular Interventions (EAPCI) of the ESC. EuroIntervention 2024;20:e1-e10 • DOI: 10.4244/EIJ-D-23-00983*
- *2021 ESC/EACTS Guidelines for the management of valvular heart disease. Eur Heart J. 2022 Feb 12;43(7):561-632. doi: 10.1093/eurheartj/ehab395. Erratum in: Eur Heart J. 2022 Feb 18;:*
- *EAPCI Core Curriculum for Percutaneous Cardiovascular Interventions (2020): Committee for Education and Training European Association of Percutaneous Cardiovascular Interventions (EAPCI). A branch of the European Society of Cardiology. EuroIntervention. 2021 May 17;17(1):23-31.*

5.1 Low gradient AoS: low flow, normal flow, low EF, preserved EF
5.2 TAVI and coronary artery disease (CAD)
5.3 TAVI in bicuspid aortic valves
5.4 TAVI for aortic regurgitation (AR)
5.5 TAVI for valve in valve (VIV): TAVI in SAVR and TAVI in TAVI

Module 6-2VRT

Practice, skills and attitudes- Summary

- TAVI and other SHD interventions: mitral/tricuspid (MTC), paravalvular leaks (PVL), left atrial appendage (LAAO) and pulmonary thromboembolism (PTE), 4 days per week.
- Outpatient Clinic - Interventional cardiology, 1 day per week
- Heart Team meetings, 1 day per week
- Coronariography, PCI and catheterization, 2 half-days per week

20/12/2024

Rui Campante Teles, MD, PhD
Mentor, SHD Program Director

Manuel Almeida, MD, PhD
Supervisor, Cath Lab Director