

## **Julia Mascherbauer**

Medical University of Vienna, Department of Internal Medicine II, Division of Cardiology  
Waehringer Guertel 18-20, 1090 Vienna, Phone +43-1-40400-46140, +43-6644272024  
[julia.mascherbauer@meduniwien.ac.at](mailto:julia.mascherbauer@meduniwien.ac.at)



### **Current position at the Medical University of Vienna (MUV), Department of Internal Medicine II, Division of Cardiology**

- Associate Professor of Cardiology
- Managing senior physician
- Head of the structural heart team
- Interventional cardiologist, structural heart disease specialist (TAVR, MitraClip, TriClip)
- Director, cardiac magnetic resonance imaging laboratory
- Critical care medicine specialist

### **Current positions in the European Society of Cardiology (ESC)**

- ESC Board 2018-2020
- Councillor, Young Community and Women in ESC 2018-2020
- Nucleurs - Cardiovascular Round Table 2018-2020
- Council Board - Council on Valvular Heart Disease 2018-2020
- EACVI - Advocacy - Industry Round Table Committee 2018-2020
- ESC Membership Committee 2018-2020
- Official ESC spokesperson for ESC Congress and ongoing press activities
- Fellow of the ESC

### **Current activities in the National Cardiac Society and the Austrian Medical Chamber**

- National director of training for the ESC
- Since 2016 Commissioner, Cardiology specialist examination by the Austrian Medical Chamber
- Austrian Society of Cardiology, nucleus member of the working groups on
  - Interventional cardiology
  - Cardiac magnetic resonance imaging, cardiac computed tomography, and cardiac nuclear imaging
  - Pulmonary circulation and right ventricular function

### **Previous positions in the National Cardiac Society**

- 2014 - 2018 Board member
- 2014 - 2018 Coordinator, working groups of the Austrian Society of Cardiology
- 2014 - 2015 National guideline coordinator for the ESC
- 2014 - 2018 Scientific congress program coordinator, annual meeting of the Austrian Society of Cardiology
- 2012 - 2016 Director, working group “Cardiac magnetic resonance imaging, cardiac computed tomography, and cardiac nuclear imaging” of the Austrian Society of Cardiology

### **Honours and awards (First / senior author)**

- 2019 **Präsidentenstipendium**, ÖKG, Erstautor: A. Kammerlander 2018 **Theodor Billroth- Preis** der Ärztekammer für Wien, first author: M. Antlanger
- 2018 **Best Abstract**, Österreichische Gesellschaft für Innere Medizin, first author: A. Kammerlander
- 2017 **Theodor Billroth- Preis** der Ärztekammer für Wien, first author: A. Kammerlander
- 2017 **Women Transforming Leadership Programme 2017**, ESC
- 2017 **Skoda Projektförderungspreis 2017**, Austrian Society of Internal Medicine, first author: M. Antlanger
- 2017 **Young Investigator Award**, Heart Failure Association European Society of Cardiology, first author: F. Duca
- 2017 **Best Paper Award, Clinical Science**. Circulation: Cardiovascular Imaging (Circ Cardiovasc Imaging. 2016;9:e005277), first author: F. Duca
- 2016 **Best Abstract Clinical Science**, annual meeting of the Austrian Society of Cardiology, Salzburg; first author: F. Duca
- 2015 **Sanofi- Aventis Award**, MUV; first author: AA Kammerlander
- 2015 **Österreichischer Kardiologenpreis. Clinical Science**. Austrian Society of Cardiology; first author: AA Kammerlander
- 2015 **Best Abstract**, “Verein zur Förderung von Wissenschaft und Forschung” (vfwf); first author: AA Kammerlander

- 2015 **Best Poster**, Kardiologie im Zentrum 2015, first author: AA Kammerlander
- 2014 **Österreichischer Kardiologenpreis. Clinical Science.** Austrian Society of Cardiology; first author: S Pfaffenberger
- 2014 **Moderated Poster Session Award**, ESC Congress, Barcelona; first author: S Aschauer
- 2014 **Best Abstract Clinical Science**, annual meeting of the Austrian Society of Cardiology, Salzburg; first author: S Aschauer
- 2014 **Best Abstract Clinical Science**, annual meeting of the Austrian Society of Cardiology, Salzburg; first author: AA Kammerlander
- 2013 **Österreichischer Kardiologenpreis. Clinical Science.** Austrian Society of Cardiology; first author: S Neuhold
- 2012 **Best Abstract**, EuroCMR; first author: B Marzluf
- 2011 **Best Abstract**, annual meeting of the Austrian Society of Cardiology, Salzburg; first author: B Marzluf
- 2011 **Thesis grant**; AA Kammerlander
- 2007 **Best Abstract Clinical Science**, annual meeting of the Austrian Society of Cardiology, Salzburg
- 1999 **Young Investigator Award**, Working Group of Echocardiography, ESC
- 1997 **Best Abstract**, European Society of Echocardiographie
- 1997 **Österreichischer Kardiologenpreis. Clinical Science.** Austrian Society of Cardiology

#### **Honours and awards (Co - author)**

- 2018 **Österreichischer Kardiologenpreis. Clinical Science.** Austrian Society of Cardiology; first author: F. Duca
- 2017 **Hans und Blanca Moser Förderungspreis** auf dem Gebiet der Kardiovaskulären Forschung 2017; first author: D. Dalos
- 2016 **Österreichischer Kardiologenpreis. Clinical Science.** Austrian Society of Cardiology; first author: C. Zotter-Tufaro
- 2016 **Erste Bank Forschungsförderungspreis**; first author: A Mangold
- 2014 **Moderated Poster Session Award**, ESC Congress, Barcelona; first author: G Goliasch
- 2014 **Best Abstract**, PneumoUpdate 2014; first author: C Tufaro
- 2012 **Best Abstract**, annual meeting of the Austrian Society of Cardiology, Salzburg; first author: C Tufaro
- 2010 **Young Investigator Award of the American Heart Association**, first author: C Adlbrecht

## Publications

**Total Impact Factor: 729.425**

**h-index: 23**

1. Aortic valve stenosis awareness in Austria-results of a nationwide survey in 1001 subjects. Hengstenberg C, Thoenes M, Bramlage P, Siller-Matula J, **Mascherbauer J**. Wien Med Wochenschr. 2019 Sep 20. doi: 10.1007/s10354-019-00708-2.
2. The Membership Committee of the ESC. Linde C; Members of the ESC Membership Committee and the ESC Officers Sophie Squarta, Director Membership & Community, and her team. Cardiovasc Res. 2019 Sep 11. pii: cvz225. doi: 10.1093/cvr/cvz225.  
**IF 6.290**
3. 2019 ESC Guidelines for the diagnosis and management of acute pulmonary embolism developed in collaboration with the European Respiratory Society (ERS). Konstantinides SV, Meyer G, Becattini C, Bueno H, Geersing GJ, Harjola VP, Huisman MV, Humbert M, Jennings CS, Jiménez D, Kucher N, Lang IM, Lankeit M, Lorusso R, Mazzolai L, Meneveau N, Ní Áinle F, Prandoni P, Pruszczyk P, Righini M, Torbicki A, Van Belle E, Zamorano JL; ESC Scientific Document Group . Eur Heart J. 2019 Aug 31. pii: ehz405. doi: 10.1093/eurheartj/ehz405.  
**IF 23.239**
4. Native T1 time of right ventricular insertion points by cardiac magnetic resonance: relation with invasive haemodynamics and outcome in heart failure with preserved ejection fraction. Nitsche C, Kammerlander AA, Binder C, Duca F, Aschauer S, Koschutnik M, Snidat A, Beitzke D, Loewe C, Bonderman D, Hengstenberg C, **Mascherbauer J**. Eur Heart J Cardiovasc Imaging. 2019 Sep 8. pii: jez221. doi: 10.1093/ehjci/jez221.  
**IF 5.260**
5. Patients with Heart Failure and Preserved Ejection Fraction Are at Risk of Gastrointestinal Bleeding. Schrutka L, Seirer B, Duca F, Binder C, Dalos D, Kammerlander A, Aschauer S, Koller L, Benazzo A, Agibetov A, Gwechenberger M, Hengstenberg C, **Mascherbauer J**, Bonderman D. J Clin Med. 2019 Aug 17;8(8). pii: E1240. doi: 10.3390/jcm8081240.  
**IF 5.583**
6. Phenotyping Progression of Secondary Mitral Regurgitation in Chronic Systolic Heart Failure. Arfsten H, Bartko PE, Pavo N, Heitzinger G, **Mascherbauer J**, Hengstenberg C, Hülsmann M, Goliash G. Eur J Clin Invest. 2019 Jul 29:e13159. doi: 10.1111/eci.13159.  
**IF 2.784**
7. Disproportionate Functional Mitral Regurgitation: Advancing a Conceptual Framework to Clinical Practice. Bartko PE, Heitzinger G, Arfsten H, Pavo N, Spinka G, Andreas M, **Mascherbauer J**, Hengstenberg C, Hülsmann M, Goliash G. JACC Cardiovasc Imaging. 2019 Jun 8. pii: S1936-878X(19)30455-3. doi: 10.1016/j.jcmg.2019.05.005.  
**IF 10.975**
8. The Authors Reply. Goliash G, **Mascherbauer J**. JACC Cardiovasc Imaging. 2019 Jun;12(6):1114. doi: 10.1016/j.jcmg.2019.03.023. No abstract available.  
**IF 10.975**

9. EXPRESS: Riociguat for the treatment of transthyretin cardiac amyloidosis - Data from a named patient use program in Austria.  
Duca F, Aschauer S, Zotter-Tufaro C, Binder C, Kammerlander A, Börries B, Agis H, Kain R, Hengstenberg C, **Mascherbauer J**, Bonderman D.  
Pulm Circ. 2019 Apr 22;2045894019849394. doi: 10.1177/2045894019849394.  
**IF 2.283**
10. Global Longitudinal Strain by CMR Feature Tracking Is Associated With Outcome in HFPEF.  
Kammerlander AA, Kraiger JA, Nitsche C, Donà C, Duca F, Zotter-Tufaro C, Binder C, Aschauer S, Loewe C, Hengstenberg C, Bonderman D, **Mascherbauer J**.  
JACC Cardiovasc Imaging. 2019 Apr 10. pii: S1936-878X(19)30259-1. doi: 10.1016/j.jcmg.2019.02.016  
**IF 10.975**
11. What is normal? A central question in the application of CMR mapping techniques.  
Kammerlander AA, **Mascherbauer J**.  
Wien Klin Wochenschr. 2019 Apr;131(7-8):141-142. doi: 10.1007/s00508-019-1490-9.  
**IF 1.170**
12. Aortic valve disease.  
Siller-Matula JM, Hofer F, Goliasch G, Andreas M, **Mascherbauer J**, Hengstenberg C.  
MMW Fortschr Med. 2019 Apr;161(6):42-46. doi: 10.1007/s15006-019-0358-2.  
**IF 0.020**
13. Mitral valve pathologies.  
Schneider M, **Mascherbauer J**.  
MMW Fortschr Med. 2019 Apr;161(6):46-49. doi: 10.1007/s15006-019-0359-1.  
**IF 0.020**
14. Determinants of Bioprosthetic Aortic Valve Degeneration.  
Nitsche C, Kammerlander AA, Knechtelsdorfer K, Kraiger JA, Goliasch G, Dona C, Schachner L, Öztürk B, Binder C, Duca F, Aschauer S, Zimpfer D, Bonderman D, Hengstenberg C, **Mascherbauer J**.  
JACC Cardiovasc Imaging. 2019 Mar 13. pii: S1936-878X(19)30165-2. doi: 10.1016/j.jcmg.2019.01.027.  
**IF 10.975**
15. Novel transcatheter clip device (MitraClip XTR) enables significant tricuspid annular size reduction.  
Andreas M, Russo M, Taramasso M, Zuber M, **Mascherbauer J**.  
Eur Heart J Cardiovasc Imaging. 2019 Mar 8. pii: jez032. doi: 10.1093/ehjci/jez032.  
**IF 5.260**
16. Mechanisms of heart failure in transthyretin vs. light chain amyloidosis.  
Binder C, Duca F, Stelzer PD, Nitsche C, Rettl R, Aschauer S, Kammerlander AA, Binder T, Agis H, Kain R, Hengstenberg C, **Mascherbauer J**, Bonderman D.  
Eur Heart J Cardiovasc Imaging. 2019 Jan 10. doi: 10.1093/ehjci/jez225.  
**IF 5.260**
17. Sex-Related Differences in Low-Gradient, Low-Ejection Fraction Aortic Stenosis: Results From the Multicenter TOPAS Study.  
Bartko PE, Clavel MA, Annabi MS, Dahou A, Ristl R, Goliasch G, Baumgartner H, Hengstenberg C, Cavalcante JL, Burwash I, Enriquez-Sarano M, Bergler-Klein J, Rodés-Cabau J, Pibarot P, **Mascherbauer J**.  
JACC Cardiovasc Imaging. 2019 Jan;12(1):203-205. doi: 10.1016/j.jcmg.2018.11.003.  
**IF 10.975**
18. Syncope: The Underestimated Threat in Severe Aortic Stenosis.

Goliasch G, Kammerlander AA, Nitsche C, Dona C, Schachner L, Öztürk B, Binder C, Duca F, Aschauer S, Laufer G, Hengstenberg C, Bonderman D, **Mascherbauer J**. JACC Cardiovasc Imaging. 2019 Feb;12(2):225-232. doi: 10.1016/j.jcmg.2018.09.020. Epub 2018 Dec 12.

**IF 10.975**

19. Transcatheter mitral valve repair using the MitraClip: which patients benefit most?

**Mascherbauer J**.

Wien Klin Wochenschr. 2018 Dec;130(23-24):692-693. doi: 10.1007/s00508-018-1429-6.

**IF 1.170**

20. Diagnostic and Prognostic Utility of Cardiac Magnetic Resonance Imaging in Aortic Regurgitation.

Kammerlander AA, Wiesinger M, Duca F, Aschauer S, Binder C, Zotter Tufaro C, Nitsche C, Badre-Eslam R, Schönbauer R, Bartko P, Beitzke D, Loewe C, Hengstenberg C, Bonderman D, **Mascherbauer J**.

JACC Cardiovasc Imaging. 2018 Nov 8. pii: S1936-878X(18)30907-0. doi: 10.1016/j.jcmg.2018.08.036.

**IF 10.975**

21. Echocardiographic assessment of right ventricular function: current clinical practice.

Schneider M, Aschauer S, **Mascherbauer J**, Ran H, Binder C, Lang I, Goliasch G, Binder T.

Int J Cardiovasc Imaging. 2019 Jan;35(1):49-56. doi: 10.1007/s10554-018-1428-8. Epub 2018 Sep 6.

**IF 1.860**

22. 2018 ESC Guidelines for the management of cardiovascular diseases during pregnancy.

Regitz-Zagrosek V, Roos-Hesselink JW, Bauersachs J, Blomström-Lundqvist C, Cífková R, De Bonis M, Iung B, Johnson MR, Kintscher U, Kranke P, Lang IM, Morais J, Pieper PG, Presbitero P, Price S, Rosano GMC, Seeland U, Simoncini T, Swan L, Warnes CA; ESC Scientific Document Group .

Eur Heart J. 2018 Sep 7;39(34):3165-3241. doi: 10.1093/eurheartj/ehy340.

**IF 23.239**

23. Development and validation of a TTR-specific copy number screening tool, and application to potentially relevant patient cohorts.

Jahic A, Bock A, Duca F, Bonderman D, **Mascherbauer J**, Windhager R, Auer-Grumbach M, Beetz C.

Mol Cell Probes. 2018 Oct;41:61-63. doi: 10.1016/j.mcp.2018.08.005. Epub 2018 Aug 21.

**IF 2.511**

24. Cardiac Magnetic Resonance T<sub>1</sub> Mapping in Cardiac Amyloidosis.

Duca F, Kammerlander AA, Panzenböck A, Binder C, Aschauer S, Loewe C, Agis H, Kain R, Hengstenberg C, Bonderman D, **Mascherbauer J**.

JACC Cardiovasc Imaging. 2018 Dec;11(12):1924-1926. doi: 10.1016/j.jcmg.2018.06.010. Epub 2018 Aug 15.

**IF 10.975**

25. Impact of Systemic Volume Status on Cardiac Magnetic Resonance T1 Mapping.

Antlanger M, Aschauer S, Kammerlander AA, Duca F, Säemann MD, Bonderman D, **Mascherbauer J**.

Sci Rep. 2018 Apr 3;8(1):5572. doi: 10.1038/s41598-018-23868-4.

**IF 4.011**

26. Reply: Mechanisms of Discrepancy Between Pulmonary Artery Wedge Pressure and Left Ventricular End-Diastolic Pressure in Heart Failure With Preserved Ejection Fraction.

**Mascherbauer J**, Bonderman D.

JACC Heart Fail. 2018 Mar;6(3):269. doi: 10.1016/j.jchf.2018.01.015.  
**IF 8.910**

27. Tricuspid valve replacement: results of an orphan procedure - which is the best prosthesis?  
Wiedemann D, Rupprechter V, **Mascherbauer J**, Kammerlander A, Mora B, Dimitrov K, Weber B, Andreas M, Laufer G, Kocher A.  
J Cardiovasc Surg (Torino). 2018 Aug;59(4):626-632. doi: 10.23736/S0021-9509.18.10392-2. J  
**IF 1.062**
28. Correction to: Clinical recommendations for cardiovascular magnetic resonance mapping of T1, T2, T2\* and extracellular volume: A consensus statement by the Society for Cardiovascular Magnetic Resonance (SCMR) endorsed by the European Association for Cardiovascular Imaging (EACVI).  
Messroghli DR, Moon JC, Ferreira VM, Grosse-Wortmann L, He T, Kellman P, **Mascherbauer J**, Nezafat R, Salerno M, Schelbert EB, Taylor AJ, Thompson RB, Ugander M, van Heeswijk RB, Friedrich MG.  
J Cardiovasc Magn Reson. 2018 Feb 7;20(1):9. doi: 10.1186/s12968-017-0408-9.  
**IF 5.070**
29. Dobutamine Stress Echocardiography for Management of Low-Flow, Low-Gradient Aortic Stenosis.  
Annabi MS, Touboul E, Dahou A, Burwash IG, Bergler-Klein J, Enriquez-Sarano M, Orwat S, Baumgartner H, **Mascherbauer J**, Mundigler G, Cavalcante JL, Larose É, Pibarot P, Clavel MA.  
J Am Coll Cardiol. 2018 Feb 6;71(5):475-485. doi: 10.1016/j.jacc.2017.11.052.  
**IF 18.639**
30. Gender-related differences in heart failure with preserved ejection fraction.  
Duca F, Zotter-Tufaro C, Kammerlander AA, Aschauer S, Binder C, **Mascherbauer J**, Bonderman D.  
Sci Rep. 2018 Jan 18;8(1):1080. doi: 10.1038/s41598-018-19507-7.  
**IF 4.011**
31. Wedge Pressure Rather Than Left Ventricular End-Diastolic Pressure Predicts Outcome in Heart Failure With Preserved Ejection Fraction.  
**Mascherbauer J**, Zotter-Tufaro C, Duca F, Binder C, Koschutnik M, Kammerlander AA, Aschauer S, Bonderman D.  
JACC Heart Fail. 2017 Nov;5(11):795-801. doi: 10.1016/j.jchf.2017.08.005. Epub 2017 Oct 11.  
**IF 8.910**
32. Refining the prognostic impact of functional mitral regurgitation in chronic heart failure.  
Golasch G, Bartko PE, Pavo N, Neuhold S, Wurm R, **Mascherbauer J**, Lang IM, Strunk G, Hülsmann M.  
Eur Heart J. 2018 Jan 1;39(1):39-46. doi: 10.1093/eurheartj/ehx402.  
**IF 23.239**
33. Clinical recommendations for cardiovascular magnetic resonance mapping of T1, T2, T2\* and extracellular volume: A consensus statement by the Society for Cardiovascular Magnetic Resonance (SCMR) endorsed by the European Association for Cardiovascular Imaging (EACVI).  
Messroghli DR, Moon JC, Ferreira VM, Grosse-Wortmann L, He T, Kellman P, **Mascherbauer J**, Nezafat R, Salerno M, Schelbert EB, Taylor AJ, Thompson R, Ugander M, van Heeswijk RB, Friedrich MG.  
J Cardiovasc Magn Reson. 2017 Oct 9;19(1):75. doi: 10.1186/s12968-017-0389-8.  
**IF 5.070**

34. Extracellular volume quantification by cardiac magnetic resonance imaging without hematocrit sampling : Ready for prime time?  
Kammerlander AA, Duca F, Binder C, Aschauer S, Zotter-Tufaro C, Koschutnik M, Marzluf BA, Bonderman D, **Mascherbauer J**.  
Wien Klin Wochenschr. 2018 Mar;130(5-6):190-196. doi: 10.1007/s00508-017-1267-y. Epub 2017 Oct 4.  
**IF 1.170**
35. 2017 ESC/EACTS Guidelines for the management of valvular heart disease.  
Baumgartner H, Falk V, Bax JJ, De Bonis M, Hamm C, Holm PJ, Iung B, Lancellotti P, Lansac E, Rodriguez Muñoz D, Rosenhek R, Sjögren J, Tornos Mas P, Vahanian A, Walther T, Wendler O, Windecker S, Zamorano JL; ESC Scientific Document Group.  
Eur Heart J. 2017 Sep 21;38(36):2739-2791. doi: 10.1093/eurheartj/ehx391. No abstract available.  
**IF 23.239**
36. Preserved right ventricular integrity in a new telemetric rat model of severe pulmonary hypertension.  
Schreiber C, Eilenberg M, Kiss A, Bergmeister H, Podesser B, **Mascherbauer J**, Bonderman D.  
Am J Physiol Lung Cell Mol Physiol. 2017 Nov 1;313(5):L957-L963. doi: 10.1152/ajplung.00278.2017.  
**IF 4.092**
37. Combined oral administration of L-arginine and tetrahydrobiopterin in a rat model of pulmonary arterial hypertension.  
Schreiber C, Eilenberg MS, Panzenboeck A, Winter MP, Bergmeister H, Herzog R, **Mascherbauer J**, Lang IM, Bonderman D.  
Pulm Circ. 2017 Apr 4;7(1):89-97. doi: 10.1086/689289. eCollection 2017 Mar.  
**IF 2.283**
38. Diameter of the Pulmonary Artery in Relation to the Ascending Aorta: Association with Cardiovascular Outcome.  
Kammerlander AA, Aschauer S, Zotter-Tufaro C, Duca F, Knechtelsdorfer K, Wiesinger M, Schwaiger ML, Dalos D, Schneider M, Marzluf BA, Bonderman D, **Mascherbauer J**.  
Radiology. 2017 Sep;284(3):685-693. doi: 10.1148/radiol.2017161849. Epub 2017 May 29.  
**IF 7.608**
39. Myocardial Inflammation: An Important Pitfall During CMR T1 Mapping for the Quantification of Diffuse Fibrosis in Heart Failure.  
**Mascherbauer J**.  
JACC Cardiovasc Imaging. 2018 Jan;11(1):46-47. doi: 10.1016/j.jcmg.2017.03.003. Epub 2017 Apr 12.  
**IF 10.975**
40. Heart Failure with Preserved and Reduced Ejection Fraction in Hemodialysis Patients: Prevalence, Disease Prediction and Prognosis.  
Antlanger M, Aschauer S, Kopecky C, Hecking M, Kovarik JJ, Werzowa J, **Mascherbauer J**, Genser B, Säemann MD, Bonderman D.  
Kidney Blood Press Res. 2017;42(1):165-176. doi: 10.1159/000473868. Epub 2017 Apr 11.  
**IF 3.000**
41. Facts and alternative facts - basic principles of scientific work.  
**Mascherbauer J**.  
Wien Klin Wochenschr. 2017 Apr;129(7-8):223-224. doi: 10.1007/s00508-017-1196-9.  
**IF 1.170**
42. Presence of 'isolated' tricuspid regurgitation should prompt the suspicion of heart failure with preserved ejection fraction.



**Mascherbauer J**, Kammerlander AA, Zotter-Tufaro C, Aschauer S, Duca F, Dalos D, Winkler S, Schneider M, Bergler-Klein J, Bonderman D.

PLoS One. 2017 Feb 15;12(2):e0171542. doi: 10.1371/journal.pone.0171542. eCollection 2017.

**IF 2.766**

43. Fluid status and outcome in patients with heart failure and preserved ejection fraction. Koell B, Zotter-Tufaro C, Duca F, Kammerlander AA, Aschauer S, Dalos D, Antlanger M, Hecking M, Säemann M, **Mascherbauer J**, Bonderman D. Int J Cardiol. 2017 Mar 1;230:476-481. doi: 10.1016/j.ijcard.2016.12.080. Epub 2016 Dec 21. **IF 3.471**

44. Interstitial Fibrosis, Functional Status, and Outcomes in Heart Failure With Preserved Ejection Fraction: Insights From a Prospective Cardiac Magnetic Resonance Imaging Study.

Duca F, Kammerlander AA, Zotter-Tufaro C, Aschauer S, Schwaiger ML, Marzluf BA, Bonderman D, **Mascherbauer J**.

Circ Cardiovasc Imaging. 2016 Dec;9(12). pii: e005277.

**IF 5.813**

45. Cardiac extracellular matrix is associated with adverse outcome in patients with chronic heart failure.

Duca F, Zotter-Tufaro C, Kammerlander AA, Panzenböck A, Aschauer S, Dalos D, Köll B, Börries B, Agis H, Kain R, Aumayr K, Klingmüller F, **Mascherbauer J**, Bonderman D.

Eur J Heart Fail. 2017 Apr;19(4):502-511. doi: 10.1002/ejhf.680. Epub 2016 Nov 27.

**IF 13.965**

46. Modes of death in patients with heart failure and preserved ejection fraction.

Aschauer S, Zotter-Tufaro C, Duca F, Kammerlander A, Dalos D, **Mascherbauer J**, Bonderman D.

Int J Cardiol. 2017 Feb 1;228:422-426. doi: 10.1016/j.ijcard.2016.11.154. Epub 2016 Nov 18.

**IF 3.471**

47. Long-Term Outcome of Combined (Percutaneous Intramyocardial and Intracoronary) Application of Autologous Bone Marrow Mononuclear Cells Post Myocardial Infarction: The 5-Year MYSTAR Study.

Gyöngyösi M, Giurgea GA, Syeda B, Charwat S, Marzluf B, **Mascherbauer J**, Jakab A, Zimba A, Sárközy M, Pavo N, Sochor H, Graf S, Lang I, Maurer G, Bergler-Klein J; MYSTAR investigators.

PLoS One. 2016 Oct 20;11(10):e0164908. doi: 10.1371/journal.pone.0164908. eCollection 2016.

**IF 2.766**

48. Myocardial late gadolinium enhancement is associated with clinical presentation in Duchenne muscular dystrophy carriers.

Wexberg P, Avanzini M, **Mascherbauer J**, Pfaffenberger S, Freudenthaler B, Bittner R, Bernert G, Weidinger F.

J Cardiovasc Magn Reson. 2016 Sep 22;18(1):61.

**IF 5.070**

49. Evaluation of the pharmacoDYNAMIC effects of riociguat in subjects with pulmonary hypertension and heart failure with preserved ejection fraction : Study protocol for a randomized controlled trial.

**Mascherbauer J**, Grünig E, Halank M, Hohenforst-Schmidt W, Kammerlander AA, Pretsch I, Steringer-Mascherbauer R, Ulrich S, Lang IM, Wargenau M, Frey R, Bonderman D.

Wien Klin Wochenschr. 2016 Dec;128(23-24):882-889. Epub 2016 Sep 2.

IF 1.170

50. Functional Status, Pulmonary Artery Pressure, and Clinical Outcomes in Heart Failure With Preserved Ejection Fraction.  
Dalos D, **Mascherbauer J**, Zotter-Tufaro C, Duca F, Kammerlander AA, Aschauer S, Bonderman D.  
J Am Coll Cardiol. 2016 Jul 12;68(2):189-99. doi: 10.1016/j.jacc.2016.04.052.  
IF 18.639
51. Amyloid in the heart: an under-recognized threat at the interface of cardiology, haematology, and pathology.  
Bonderman D, Agis H, Kain R, **Mascherbauer J**.  
Eur Heart J Cardiovasc Imaging. 2016 Sep;17(9):978-80. doi: 10.1093/ehjci/jew130. Epub 2016 Jul 4.  
IF 5.260
52. When it rains, it pours: Peripartum cardiomyopathy with features of left-ventricular noncompaction in a hemodialysis patient.  
Antlanger M, Kammerlander AA, Ullrich R, Haidinger M, Bonderman D, **Mascherbauer J**, Säemann MD.  
Hemodial Int. 2016 Oct;20(4):E14-E17. doi: 10.1111/hdi.12427. Epub 2016 May 5.  
IF 1.737
53. Right ventricular longitudinal strain for risk stratification in low-flow, low-gradient aortic stenosis with low ejection fraction.  
Dahou A, Clavel MA, Capoulade R, Bartko PE, Magne J, Mundigler G, Bergler-Klein J, Burwash I, **Mascherbauer J**, Ribeiro HB, O'Connor K, Baumgartner H, Sénéchal M, Dumesnil JG, Rosenhek R, Mathieu P, Larose E, Rodés-Cabau J, Pibarot P.  
Heart. 2016 Apr;102(7):548-54. doi: 10.1136/heartjnl-2015-308309. Epub 2016 Jan 13.  
IF 5.082
54. Soluble neprilysin does not correlate with outcome in heart failure with preserved ejection fraction.  
Goliash G, Pavo N, Zotter-Tufaro C, Kammerlander A, Duca F, **Mascherbauer J**, Bonderman D.  
Eur J Heart Fail. 2016 Jan;18(1):89-93. doi: 10.1002/ejhf.435. Epub 2016 Jan 4.  
IF 13.965
55. T1 Mapping by CMR Imaging: From Histological Validation to Clinical Implication.  
Kammerlander AA, Marzluf BA, Zotter-Tufaro C, Aschauer S, Duca F, Bachmann A, Knechtelsdorfer K, Wiesinger M, Pfaffenberger S, Greiser A, Lang IM, Bonderman D, **Mascherbauer J**.  
JACC Cardiovasc Imaging. 2016 Jan;9(1):14-23. doi: 10.1016/j.jcmg.2015.11.002. Epub 2015 Dec 9.  
IF 10.975
56. The right heart in heart failure with preserved ejection fraction: insights from cardiac magnetic resonance imaging and invasive haemodynamics.  
Aschauer S, Kammerlander AA, Zotter-Tufaro C, Ristl R, Pfaffenberger S, Bachmann A, Duca F, Marzluf BA, Bonderman D, **Mascherbauer J**.  
Eur J Heart Fail. 2016 Jan;18(1):71-80. doi: 10.1002/ejhf.418. Epub 2015 Oct 9.  
IF 13.965
57. Diastolic Pressure Gradient Predicts Outcome in Patients With Heart Failure and Preserved Ejection Fraction.  
Zotter-Tufaro C, Duca F, Kammerlander AA, Koell B, Aschauer S, Dalos D, **Mascherbauer J**, Bonderman D.  
J Am Coll Cardiol. 2015 Sep 15;66(11):1308-1310. doi: 10.1016/j.jacc.2015.07.011.  
IF 18.639

58. 2015 ESC Guidelines for the diagnosis and management of pericardial diseases: The Task Force for the Diagnosis and Management of Pericardial Diseases of the European Society of Cardiology (ESC) Endorsed by: The European Association for Cardio-Thoracic Surgery (EACTS).  
Adler Y, Charron P, Imazio M, Badano L, Barón-Esquivias G, Bogaert J, Brucato A, Gueret P, Klingel K, Lionis C, Maisch B, Mayosi B, Pavie A, Ristic AD, Sabaté Tenas M, Seferovic P, Swedberg K, Tomkowski W; ESC Scientific Document Group .  
Eur Heart J. 2015 Nov 7;36(42):2921-2964. doi: 10.1093/eurheartj/ehv318. Epub 2015 Aug 29.  
**IF 23.239**
59. Pulmonary artery to aorta ratio for the detection of pulmonary hypertension: cardiovascular magnetic resonance and invasive hemodynamics in heart failure with preserved ejection fraction.  
Karakus G, Kammerlander AA, Aschauer S, Marzluf BA, Zotter-Tufaro C, Bachmann A, Degirmencioglu A, Duca F, Babayev J, Pfaffenberger S, Bonderman D, **Mascherbauer J**.  
J Cardiovasc Magn Reson. 2015 Aug 30;17:79. doi: 10.1186/s12968-015-0184-3.  
**IF 5.070**
60. Prognostic Impact of Tricuspid Regurgitation in Patients Undergoing Aortic Valve Surgery for Aortic Stenosis.  
**Mascherbauer J**, Kammerlander AA, Marzluf BA, Graf A, Kocher A, Bonderman D.  
PLoS One. 2015 Aug 20;10(8):e0136024. doi: 10.1371/journal.pone.0136024. eCollection 2015.  
**IF 2.766**
61. Outcome in Heart Failure with Preserved Ejection Fraction: The Role of Myocardial Structure and Right Ventricular Performance.  
Goliash G, Zotter-Tufaro C, Aschauer S, Duca F, Koell B, Kammerlander AA, Ristl R, Lang IM, Maurer G, **Mascherbauer J**, Bonderman D.  
PLoS One. 2015 Jul 30;10(7):e0134479. doi: 10.1371/journal.pone.0134479. eCollection 2015.  
**IF 2.766**
62. Prognostic Significance and Determinants of the 6-Min Walk Test in Patients With Heart Failure and Preserved Ejection Fraction.  
Zotter-Tufaro C, **Mascherbauer J**, Duca F, Koell B, Aschauer S, Kammerlander AA, Panzenboeck A, Sadushi-Kolici R, Bangert C, Laimer D, Ristl R, Lang IM, Bonderman D.  
JACC Heart Fail. 2015 Jun;3(6):459-466. doi: 10.1016/j.jchf.2015.01.010.  
**IF 8.910**
63. Coronary neutrophil extracellular trap burden and deoxyribonuclease activity in ST-elevation acute coronary syndrome are predictors of ST-segment resolution and infarct size.  
Mangold A, Alias S, Scherz T, Hofbauer T, Jakowitsch J, Panzenböck A, Simon D, Laimer D, Bangert C, Kammerlander A, **Mascherbauer J**, Winter MP, Distelmaier K, Adlbrecht C, Preissner KT, Lang IM.  
Circ Res. 2015 Mar 27;116(7):1182-92. doi: 10.1161/CIRCRESAHA.116.304944. Epub 2014 Dec 29.  
**IF 15.862**
64. Right ventricular dysfunction, but not tricuspid regurgitation, is associated with outcome late after left heart valve procedure.  
Kammerlander AA, Marzluf BA, Graf A, Bachmann A, Kocher A, Bonderman D, **Mascherbauer J**.  
J Am Coll Cardiol. 2014 Dec 23;64(24):2633-2642. doi: 10.1016/j.jacc.2014.09.062.  
**IF 18.639**

65. The 2014 AHA/ACC valve disease guideline: new stages of disease, new treatment options, and a call for earlier intervention.  
**Mascherbauer J.**  
 Wien Klin Wochenschr. 2014 Aug;126(15-16):458-9. doi: 10.1007/s00508-014-0579-4.  
**IF 1.170**
66. Mechanisms underlying arterial hypertension in contemporary patients with repaired aortic coarctation: do we know enough?  
**Mascherbauer J.**  
 Heart. 2014 Nov;100(21):1657-8. doi: 10.1136/heartjnl-2014-306257. Epub 2014 Aug 8.  
**IF 5.082**
67. Training Catalog for cardiac imaging procedure in the context of the additive compartment Cardiology -- recommendations of the Austrian Society of Cardiology.  
**Mascherbauer J, Avanzini M, Pichler-Cetin E, Pichler P, Klug G, Dolliner P, Friedrich G, Gessner M, Hawlisch K, Niel J, Schuchlenz H, Steringer-Mascherbauer R, Watzinger N, Frank H, Wexberg P.**  
 Wien Klin Wochenschr. 2013 Dec;125(23-24):759-65.  
**IF 1.170**
68. Factors determining patient-prosthesis mismatch after aortic valve replacement--a prospective cohort study.  
 Bonderman D, Graf A, Kammerlander AA, Kocher A, Laufer G, Lang IM, **Mascherbauer J.**  
 PLoS One. 2013 Dec 3;8(12):e81940. doi: 10.1371/journal.pone.0081940. eCollection 2013.  
**IF 2.766**
69. Ausbildungskatalog für kardiale Schnittbildverfahren im Rahmen des Additivfachs Kardiologie - Empfehlungen der Österreichischen Kardiologischen Gesellschaft.  
**Mascherbauer J, Avanzini M, Pichler-Cetin E, Pichler P, Klug G, Dolliner P, Friedrich G, Gessner M, Hawlisch K, Niel J, Schuchlenz H, Steringer-Mascherbauer R, Watzinger N, Frank H, Wexberg P.**  
 Wien Klin Wochenschr. 2013 Nov 14.  
**IF 1.170**
70. Cardiac magnetic resonance postcontrast T1 time is associated with outcome in patients with heart failure and preserved ejection fraction.  
**Mascherbauer J, Marzluf BA, Tufaro C, Pfaffenberger S, Graf A, Wexberg P, Panzenböck A, Jakowitsch J, Bangert C, Laimer D, Schreiber C, Karakus G, Hülsmann M, Pacher R, Lang IM, Maurer G, Bonderman D.**  
 Circ Cardiovasc Imaging. 2013 Nov;6(6):1056-65. doi: 10.1161/CIRCIMAGING.113.000633.  
**IF 5.813**
71. Size matters! Impact of age, sex, height, and weight on the normal heart size.  
 Pfaffenberger S, Bartko P, Graf A, Pernicka E, Babayev J, Lolic E, Bonderman D, Baumgartner H, Maurer G, **Mascherbauer J.**  
 Circ Cardiovasc Imaging. 2013 Nov;6(6):1073-9. doi: 10.1161/CIRCIMAGING.113.000690.  
**IF 5.813**
72. Exhaled nitric oxide measurement to monitor pulmonary hypertension in a pneumonectomy-monocrotaline rat model.  
 Strobl M, Schreiber C, Panzenböck A, Winter MP, Bergmeister H, Jakowitsch J, **Mascherbauer J, Lang IM, Wexberg P, Bonderman D.**  
 Am J Physiol Lung Cell Mol Physiol. 2013 Oct 1;305(7):L485-90. doi: 10.1152/ajplung.00087.2013.  
**IF 2.580**
73. Hereditary amyloidosis caused by R554L fibrinogen A $\alpha$ -chain mutation in a Spanish family and review of the literature.

Haidinger M, Werzowa J, Kain R, Antlanger M, Hecking M, Pfaffenberger S, **Mascherbauer J**, Gremmel T, Gilbertson JA, Rowczenio D, Weichhart T, Kopecky C, Hörl WH, Hawkins PN, Säemann MD.  
Amyloid. 2013 Jun;20(2):72-9. doi: 10.3109/13506129.2013.781998.  
**IF 4.048**

74. Impact of tricuspid regurgitation on survival in patients with chronic heart failure: unexpected findings of a long-term observational study.

Neuhold S, Huelsmann M, Pernicka E, Graf A, Bonderman D, Adlbrecht C, Binder T, Maurer G, Pacher R, **Mascherbauer J**.  
Eur Heart J. 2013 Mar;34(11):844-52. doi: 10.1093/eurheartj/ehs465. Epub 2013 Jan 18.  
**IF 23.239**

75. Systemic endothelin receptor blockade in ST-segment elevation acute coronary syndrome protects the microvasculature: a randomised pilot study.

Adlbrecht C, Andreas M, Redwan B, Distelmaier K, **Mascherbauer J**, Kaider A, Wolzt M, Tilea IA, Neunteufl T, Delle-Karth G, Maurer G, Lang IM.  
EuroIntervention. 2012 Apr;7(12):1386-95. doi: 10.4244/EIJV7I12A218.  
**IF 4.018**

76. Predictors of outcome of non-ischemic mitral valve surgery.

**Mascherbauer J**, Fuchs C, Pernicka E, Wollenek G, Rosenhek R, Bonderman D, Maurer G, Baumgartner H.  
Int J Cardiol. 2013 Apr 30;165(1):87-92. doi: 10.1016/j.ijcard.2011.07.088. Epub 2011 Sep 8.  
**IF 3.471**

77. Prognostic value of serial B-type natriuretic peptide measurement in asymptomatic organic mitral regurgitation.

Klaar U, Gabriel H, Bergler-Klein J, Pernicka E, Heger M, **Mascherbauer J**, Rosenhek R, Binder T, Maurer G, Baumgartner H.  
Eur J Heart Fail. 2011 Feb;13(2):163-9. doi: 10.1093/eurjhf/hfq189. Epub 2010 Nov 4.  
**IF 13.965**

78. The forgotten valve: lessons to be learned in tricuspid regurgitation.

**Mascherbauer J**, Maurer G.  
Eur Heart J. 2010 Dec;31(23):2841-3. doi: 10.1093/eurheartj/ehq303. Epub 2010 Aug 20.  
**IF 23.239**

79. Gender differences in clinical presentation and surgical outcome of aortic stenosis.

Fuchs C, **Mascherbauer J**, Rosenhek R, Pernicka E, Klaar U, Scholten C, Heger M, Wollenek G, Czerny M, Maurer G, Baumgartner H.  
Heart. 2010 Apr;96(7):539-45. doi: 10.1136/hrt.2009.186650.  
**IF 5.082**

80. Systemic pressure does not directly affect pressure gradient and valve area estimates in aortic stenosis in vitro.

**Mascherbauer J**, Fuchs C, Stoiber M, Schima H, Pernicka E, Maurer G, Baumgartner H.  
Eur Heart J. 2008 Aug;29(16):2049-57. doi: 10.1093/eurheartj/ehn209. Epub 2008 May 22.  
**IF 23.239**

81. Moderate patient-prosthesis mismatch after valve replacement for severe aortic stenosis has no impact on short-term and long-term mortality.

**Mascherbauer J**, Rosenhek R, Fuchs C, Pernicka E, Klaar U, Scholten C, Heger M, Wollenek G, Maurer G, Baumgartner H.  
Heart. 2008 Dec;94(12):1639-45. doi: 10.1136/hrt.2008.142596. Epub 2008 May 1.  
**IF 5.082**

82. Doppler echocardiographic assessment of valvular regurgitation severity by measurement of the vena contracta: an in vitro validation study.  
**Mascherbauer J**, Rosenhek R, Bittner B, Binder J, Simon P, Maurer G, Schima H, Baumgartner H.  
 J Am Soc Echocardiogr. 2005 Oct;18(10):999-1006.  
**IF 6.111**
83. Doppler assessment of mechanical aortic valve prostheses: effect of valve design and size of the aorta.  
**Mascherbauer J**, Schima H, Maurer G, Baumgartner H.  
 J Heart Valve Dis. 2004 Sep;13(5):823-30.  
**IF 0.800**
84. Value and limitations of aortic valve resistance with particular consideration of low flow-low gradient aortic stenosis: an in vitro study.  
**Mascherbauer J**, Schima H, Rosenhek R, Czerny M, Maurer G, Baumgartner H.  
 Eur Heart J. 2004 May;25(9):787-93.  
**IF 23.239**
85. Pressure recovery in aortic stenosis-comparison of Doppler ultrasound and catheter measurements.  
**Mascherbauer J**, Schima H, Maurer G, Baumgartner H.  
 Med Biol Eng Comput 1999; 37:II-1414-1415  
**IF 1.971**
86. "Overestimation" of catheter gradients by Doppler ultrasound in patients with aortic stenosis: a predictable manifestation of pressure recovery.  
 Baumgartner H, Stefenelli T, **Niederberger J**, Schima H, Maurer G.  
 J Am Coll Cardiol. 1999;33(6):1655-61  
**IF 18.639**
87. In-vitro Strömungsvisualisierung an End-zu-Seit Graft Anastomosen und Stenosen mit einem Schnellbild-Kamerasystem.  
 Noori N, Trubel W, Polterauer P, Ullrich R, **Mascherbauer J**, Baumgartner H, Schima H.  
 Biomed Tech 1998; 43:66-68  
**IF 1.007**
88. Importance of pressure recovery for the assessment of aortic stenosis by Doppler ultrasound-the role of the aortic size, aortic valve area, and the direction of the stenotic jet in vitro.
89. **Niederberger J**, Schima H, Maurer G, Baumgartner H.  
 Circulation.1996;94:1934-40  
**IF 23.054**

### **Current positions as Journal Editor**

- Editorial board member, European Journal of Heart Failure
- Editorial board member, European Heart Journal Cardiovascular Imaging
- Section Editor Cardiology, Wiener Klinische Wochenschrift
- Editorial Board Member “CardioNewsAustria”

### **Reviewer – Journals**

European Heart Journal, European Heart Journal - Cardiovascular Imaging, European Journal of Heart Failure, EuroIntervention, Circulation, Circulation Research, Circulation Imaging, Circulation Heart Failure, Journal of the American College of Cardiology, JACC Cardiovascular Imaging, JACC Heart Failure, Heart, Trials, Journal of the American Society of Echocardiography, Journal of Cardiovascular Magnetic Resonance, Wiener Klinische Wochenschrift, Pulmonary Circulation

### **Reviewer – Research Funds**

Austrian Society of Cardiology, Österreichischer Herzfonds, Canadian Cardiovascular Research Foundation, Fonds des Bürgermeisters der Bundeshauptstadt Wien, Fonds der Österreichischen Nationalbank, Tiroler Wissenschaftsfonds

## Motivation Letter ESC Election 2020

**Julia Mascherbauer, MD**  
**Associate Professor of Cardiology**

### Present Position and Address

Managing senior physician  
Head of the structural heart team  
Interventional cardiologist, structural heart disease specialist (TAVR, MitraClip)  
Director, cardiac magnetic resonance imaging laboratory  
Critical care medicine specialist

Medical University of Vienna, Department of Internal Medicine, Division of Cardiology  
Waehringer Guertel 18-20, 1090 Vienna, Austria  
Phone +43 1 40400 46140, Mobile +43 6644272024  
mail julia.mascherbauer@meduniwien.ac.at

### European Society of Cardiology Activities

ESC Board 2018-2020  
Councillor, Young Community and Women in ESC 2018-2020  
Nucleus group member, Cardiovascular Round Table 2018-2020  
Council Board - Council on Valvular Heart Disease 2018-2020  
Council on Valvular Heart Disease Nucleus 2018-2020  
EACVI - Advocacy - Industry Round Table Committee 2018-2020  
ESC Membership Committee 2018-2020  
Official ESC spokesperson for ESC Congress and ongoing press activities  
Fellow of the ESC  
Member: EAPCI, EACVI and HF Association

National director of training

- Implementation of the General Cardiology Training in Austria
- Organization of the EEGC in Austria

### Added value that I will bring to the ESC with my election

During my career of more than 20 years in clinical cardiology and science I have gathered extensive experience and insight into problems and needs of



cardiologists, scientists, and industrial partners. As the PI of a large scientific working group I have been responsible for study design, collaboration with industry, and fund-raising for numerous research projects over many years. Clinically, I cover large parts of the field of cardiology, including interventional cardiology, valve disease and interventions in valvular heart disease, heart failure, and multimodality imaging. Based on my professional career and clinical position I am aware of the needs of clinicians as well as scientists, and I have the experience and insight to understand and represent the professional community on the Board. In addition, I am one of the few female interventional cardiologists in my country who in parallel also pursue an academic career. As such, I am particularly aware of the needs of women in cardiology and science.

The national cardiac societies are the backbone of the ESC. I have been strongly involved in the Austrian Cardiac Society for many years, amongst other roles as a member of its Executive Board from 2014 to 2018. One of my responsibilities during that time has been the organization of large parts of the scientific program of the Annual Meeting of our society (about 900 participants). As my involvement with ESC grew, I have implemented the ESC General Cardiology Training in Austria – at that time we were one of the first European countries to do so - and coordinated the set up of the ESC Exam in General Cardiology. The cooperation between ESC and national cardiac societies is already well established but nevertheless needs ongoing attention and care. I am well aware of the input that is needed from ESC to nourish excellent bi-lateral relationships.

In 2018 I was elected as Councillor of the ESC Board, with my responsibilities including *Women in ESC* and the *Young Community*. Furthermore, I was nominated for the Membership Committee that has during the past 2 years taken great efforts to streamline and simplify the ESC membership scheme. The ESC Board has furthermore encouraged the development of a new *ESC Young Committee* that is currently being established with great enthusiasm. As a passionate promoter of promising researchers, I was personally involved in the set-up together with the ESC team and it has been a privilege to witness first hand the great input and enormous efforts that have been undertaken by the young cardiologists – which will certainly lead to a very active and important interaction with all ESC bodies in the near future. The creation of this *ESC Young Committee* is of particular importance to me personally, as among young cardiologists the proportion of women who are actively involved in ESC activities is significantly higher than among other groups. We, on the ESC Board, have great hopes that this effect will soon spread and positively impact historically skewed gender distributions among Cardiologists in Europe and beyond.

### **My thoughts on ESC achievements in the near future**

There are several important challenges that have to be dealt with by ESC in the near future. Many of them are related to the ongoing need to raise funds to support the rapid advancement of cardiovascular medicine.

- A strong and tight collaboration of the ESC with industrial partners is well established. However, refinements will be needed to foster efficient further evolution of devices and medications in cardiovascular medicine. Particularly the development of reasonable trial designs that enable valid and reliable results at reasonable cost will be an important task.
- The implementation of revolutionary digital possibilities including artificial intelligence and availability of “big data” will become a special challenge. Diagnostic possibilities based on presumably soon available fully automated algorithms will raise many difficult questions with regard to data safety and data control.
- ESC has recently intensified its educational activities by offering online education to General Cardiology and Cardiology Specialities. In addition, the ESC Exam in General Cardiology is now offered in the ESC member countries. Such efforts are particularly important to harmonize and improve cardiology training throughout Europe, and to set the professional standards of cardiology practice and patient care.
- Stronger involvement of patients in the ESC bodies, as well as improved patient education and information through the ESC is a timely, important goal. Apart from the impact that such activities will have with respect to improved patient care, individual patients as well as patient organizations have already become strong partners with respect to advocacy and fund-raising. The involvement of patients in Guideline activities is under way. However, many more actions have to be taken in the near future, particularly in countries where patient involvement is less well established at the moment.
- Many actions have been taken to increase the number of female ESC members, to strengthen their position, understand their needs, and support them in meaningful ways. Parts of these goals have been achieved, the number of female ESC members has significantly increased, and active participation of women in ESC Congresses in particular has risen. However, a

lot remains to be done! Not least on account of many women still struggling to be adequately represented in interventional cardiology but also other fields. However, there is agreement among ESC bodies that female cardiologists bring immense potential into the community, which warrants particular attention and support.

- The Young Community is a rapidly growing group of ESC members that is currently investing an enormous amount of time and energy to establish the ESC Young Committee. Its active members take great efforts to put their ideas forward, which is certainly very important for ESC development. A development I take great pride in fostering further in years to come - at any level of involvement.
- The ESC was and will always be of uttermost importance for articulation of the interests of cardiologists and also patients with cardiovascular disease at the European authorities.