

# Publikationen 2020

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## Liebe Leserinnen und Leser,

wie Sie dem folgenden Publikationsbericht entnehmen können, wurde auch im Jahr 2020 die erfolgreiche und engagierte Forschungstätigkeit an der Kerckhoff-Klinik auf sehr hohem nationalem und internationalem Niveau fortgeführt.

Trotz der zum Teil drastischen Änderungen im Rahmen der COVID-Pandemie wurden unverändert fächerübergreifende Forschungs- und Publikationsthemen mit gleichrangiger Grundlagen- und Anwendungsorientierung realisiert. Belege dafür sind neben den umfangreichen hochrangigen Publikationen auch zahlreiche Preise und Ehrungen an die Wissenschaftler/Innen unseres Campus, was die ausgezeichnete Expertise und die hohe qualitative Ausrichtung der Forschung unterstreicht.

Die ambulante wie auch stationäre Patientenversorgung der Kerckhoff-Klinik erfüllt nicht zuletzt aufgrund der sehr erfolgreichen Forschungstätigkeit höchste medizinische Maßstäbe.

Die wissenschaftliche Netzwerkbildung unseres Campus Kerckhoff der Universität Gießen konnte weiter ausgebaut werden. Verbindungen existieren zur Goethe-Universität Frankfurt/Main, zum Exzellenz-Cluster Cardio-Pulmonary System (ECCPS) an der Justus-Liebig-Universität Gießen, zum Deutschen Zentrum für Herz-Kreislauf-Forschung (DZHK) e. V., zum Sonderforschungsbereich 1213 „Pulmonale Hypertonie und Cor pulmonale“ der Deutschen Forschungsgemeinschaft (DFG) e. V., zum Rheumazentrum Hessen, zur European Scleroderma Trials and Research Group, zum Deutsches Netzwerk für Systemische Sklerodermie, zum Myositis Netzwerk Hessen, zum European Reference Network on Rare and Complex Connective Tissue and Musculoskeletal Diseases, zur Regionalen Expertenkommission Osteoporose (REKO) Deutschland und Hessen und zum Verbund osteologischer Universitätsforschungszentren DVO.

Unser Ziel ist es, die engagierte Forschungsarbeit der letzten Jahre auch in 2021 fortzuführen. Gemeinsam mit unseren Patienten/Innen arbeiten wir daran, neue Therapieoptionen zu finden oder bestehende Therapien weiter zu optimieren. Nur so können unter modernsten medizinischen Gesichtspunkten unsere Patienten/Innen exzellent betreut werden.

Wir bedanken uns vielmals bei allen Beteiligten, die mit ihrem unermüdlichen Einsatz die wissenschaftliche Expertise am Campus Kerckhoff kontinuierlich fortgeführt und ausgebaut haben.

Mit freundlichen Grüßen

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Beauftragter für den Publikationsbericht

Bad Nauheim, im Mai 2021



# Herzzentrum Kardiologie

Direktor: Univ.- Prof. Dr. med. C. Hamm



## PUBLIKATIONEN 2020

### Originalarbeiten & Übersichtsartikel

1. Abdel-Wahab M, Fujita B, Frerker C, Bauer T, Beckmann A, Bekeredjian R, Bleiziffer S, Möllmann H, Walther T, Hamm C, Beyersdorf F, Zeiher A, Gummert J, Herrmann E, Borger MA, Holzhey D, Thiele H, Ensminger S. Transcatheter Versus Rapid-Deployment Aortic Valve Replacement: A Propensity-Matched Analysis From the German Aortic Valve Registry. *JACC Cardiovasc Interv.* 2020; 13(22): 2642-2654.
2. Abplanalp WT, John D, Cremer S, Assmus B, Dorsheimer L, Hoffmann J, Becker-Pergola G, Rieger MA, Zeiher AM, Vasa-Nicotera M, Dimmeler S. Single cell RNA sequencing reveals profound changes in circulating immune cells in patients with heart failure. *Cardiovasc Res.* 2020: In press.
3. Albert C, Zapf A, Haase M, Röver C, Pickering JW, Albert A, Bellomo R, Breidhardt T, Camou F, Chen Z, Chocron S, Cruz D, de Geus HRH, Devarajan P, Di Somma S, Doi K, Endre ZH, Garcia-Alvarez M, Hjortrup PB, Hur M, Karaolanis G, Kavalci C, Kim H, Lentini P, Liebetrau C, Lipcsey M, Mårtensson J, Müller C, Nanas S, Nickolas TL, Pipili C, Ronco C, Rosa-Diez GJ, Ralib A, Soto K, Braun-Dullaeus RC, Heinz J, Haase-Fielitz A. Neutrophil Gelatinase-Associated Lipocalin Measured on Clinical Laboratory Platforms for the Prediction of Acute Kidney Injury and the Associated Need for Dialysis Therapy: A Systematic Review and Meta-analysis. *Am J Kidney Dis.* 2020; 76(6): 826-841.e1.
4. Angermann CE, Assmus B, Anker SD, Asselbergs FW, Brachmann J, Brett ME, Brugts JJ, Ertl G, Ginn G, Hilker L, Koehler F, Rosenkranz S, Zhou Q, Adamson PB, Böhm M. Pulmonary artery pressure-guided therapy in ambulatory patients with symptomatic heart failure: the CardioMEMS European Monitoring Study for Heart Failure (MEMS-HF). *Eur J Heart Fail.* 2020; 22: 1891-1901.
5. Araki M, Yonetsu T, Kurihara O, Nakajima A, Lee H, Soeda T, Minami Y, Higuma T, Kimura S, Takano M, Yan BP, Adriaenssens T, Boeder NF, Nef HM, Kim CJ, Crea F, Kakuta T, Jang IK. Circadian variations in pathogenesis of ST-segment elevation myocardial infarction: an optical coherence tomography study. *J Thromb Thrombolysis.* 2020: In press.
6. Arcari L, Hinojar R, Engel J, Freiwald T, Platschek S, Zainal H, Zhou H, Vasquez M, Keller T, Rolf A, Geiger H, Hauser I, Vogl TJ, Zeiher AM, Volpe M, Nagel E, Puntmann VO. Native T1 and T2 provide hypertrophic cardiomyopathy. *Int J Cardiol.* 2020; 306: 102-108.
7. Aslam M, Ladilov Y. Targeting the sAC-Dependent cAMP Pool to Prevent SARS-Cov-2 Infection. *Cells.* 2020; 9(9): E1962.
8. Assmus B, Cremer S, Kirschbaum K, Culmann D, Kiefer K, Dorsheimer L, Rasper T, Abou-El-Ardat K, Herrmann E, Berkowitsch A, Hoffmann J, Seeger F, Mas-Peiro S, Rieger MA, Dimmeler S, Zeiher AM. Clonal haematopoiesis in chronic ischaemic heart failure: prognostic role of clone size for DNMT3A- and TET2-driver gene mutations. *Eur Heart J.* 2020: In press.
9. AYTEKIN A, NDREPEPA G, NEUMANN FJ, MENICHELLI M, MAYER K, WÖHRLE J, BERNLOCHNER I, LAHU S, RICHARDT G, WITZENBICHLER B, SIBBING D, CASSESA S, ANGIOLILLO DJ, VALINA C, KUFNER S, LIEBETRAU C, HAMM CW, XHEPA E, HAPFELMEIER A, SAGER HB, WUSTROW I, JONER M, TRENK D, FUSARO M, LAUGWITZ KL, SCHUNKERT H, SCHÜPKE S, KASTRATI A. Ticagrelor or Prasugrel in Patients with ST-Segment-Elevation Myocardial Infarction Undergoing Primary Percutaneous Coronary Intervention. *Circulation.* 2020; 142: 2329-2337.
10. Baber U, Dangas G, Angiolillo DJ, Cohen DJ, Sharma SK, Nicolas J, Briguori C, Cha JY, Collier T, Dudek D, Džavik V, Escaned J, Gil R, Gurbel P, Hamm CW, Henry T, Huber K, Kastrati A, Kaul U, Kornowski R, Krucoff M, Kunadian V, Marx SO, Mehta S, Moliterno D, Ohman EM, Oldroyd K, Sardella G, Sartori S, Shlofmitz R, Steg PG, Weisz G, Witzentbichler B, Han YL, Pocock S, Gibson CM, Mehran R. Ticagrelor alone vs. ticagrelor plus aspirin following percutaneous coronary intervention in patients with non-ST-segment elevation acute coronary syndromes: TWILIGHT-ACS. *Eur Heart J.* 2020; 41(37): 3533-3545.
11. Barbato E, Noc M, Baumbach A, Dudek D, Bunc M, Skolidis E, Banning A, Legutko J, Witt N, Pan M, Tilsted HH, Nef H, Tarantini G, Kazakiewicz D, Huculeci R, Cook S, Magdy A, Desmet W, Cayla G, Vinereanu D, Voskuil M, Goktekin O, Vardas P, Timmis A, Haude M. Mapping interventional cardiology in Europe: the European Association of Percutaneous Cardiovascular Interventions (EAPCI) Atlas Project. *Eur Heart J.* 2020; 41: 2579-2588.
12. Bauer P, Kraushaar L, Dörr O, Bauer T, Nef H, Hamm CW, Most A. Association of 25-hydroxy vitamin D level with the blood pressure response to a maximum exercise test among professional indoor athletes. *Eur J Appl Physiol.* 2020; 120: 1931-1941.

13. Bauer P, Kraushaar L, Dörr O, Nef H, Hamm CW, Most A. Workload-indexed blood pressure response to a maximum exercise test among professional indoor athletes. *Eur J Prev Cardiol.* 2020: In press.
14. Bauer T, Zeymer U, Diallo A, Vicaut E, Bolognese L, Cequier A, Huber K, Montalescot G, Hamm CW, Van't Hof AW. Impact of preprocedural TIMI flow on clinical outcome in low-risk patients with ST-elevation myocardial infarction: Results from the ATLANTIC study. *Catheter Cardiovasc Interv.* 2020; 95(3): 494-500.
15. Baumann S, Hirt M, Schoepf UJ, Rutsch M, Tesche C, Renker M, Golden JW, Buss SJ, Becher T, Bojara W, Weiss C, Papavassiliu T, Akin I, Borggrefe M, Schoenberg SO, Haubenreisser H, Overhoff D, Lossnitzer D. Correlation of machine learning computed tomography-based fractional flow reserve with instantaneous wave free ratio to detect hemodynamically significant coronary stenosis. *Clin Res Cardiol.* 2020; 109: 735-745.
16. Baumann S, Kaeder F, Schoepf UJ, Golden JW, Kryeziu P, Tesche C, Renker M, Janssen S, Weiss C, Hetjens S, Schoenberg SO, Borggrefe M, Akin I, Lossnitzer D, Overhoff D. Prognostic Value of Coronary Computed Tomography Angiography-derived Morphologic and Quantitative Plaque Markers Using Semiautomated Plaque Software. *J Thorac Imaging.* 2020: In press.
17. Baumann S, Özdemir GH, Tesche C, Schoepf UJ, Golden JW, Becher T, Hirt M, Weiss C, Renker M, Akin I, Schoenberg SO, Borggrefe M, Haubenreisser H, Lossnitzer D, Overhoff D. Coronary CT angiography derived plaque markers correlated with invasive instantaneous flow reserve for detecting hemodynamically significant coronary stenoses. *Eur J Radiol.* 2020; 122: 108744.
18. Becerra-Muñoz VM, Núñez-Gil IJ, Eid CM, Aguado MG, Romero R, Huang J, Mulet A, Ugo F, Rametta F, Liebetrau C, Aparisi A, Fernández-Rozas I, Viana-Llamas MC, Feltes G, Pepe M, Moreno-Rondón LA, Cerrato E, Raposeiras-Roubin S, Alfonso E, Carrero-Fernández A, Buzón-Martin L, Abumayyaleh M, Gonzalez A, Ortiz AF, Macaya C, Estrada V, Fernández-Pérez C, Gómez-Doblas JJ. Clinical profile and predictors of in-hospital mortality among older patients admitted for COVID-19. *Age Ageing.* 2020: In press.
19. Blachutzik F, Honton B, Escaned J, Hill JM, Werner N, Banning AP, Lansky AJ, Schlattner S, De Bruyne B, Di Mario C, Dörr O, Hamm C, Nef HM. Safety and effectiveness of coronary intravascular lithotripsy in eccentric calcified coronary lesions: a patient-level pooled analysis from the Disrupt CAD I and CAD II Studies. *Clin Res Cardiol.* 2020: In press.
20. Blessberger H, Mueller P, Makimoto H, Hauffe F, Meissner A, Gemein C, Schmitt J, Hamm C, Deneke T, Schiedat F, Mügge A, Gabriel M, Steinwender C. Association of adipocytokines serum levels with left atrial thrombus formation in atrial fibrillation patients on oral anticoagulation (Alert) - A cross-sectional study. *Nutr Metab Cardiovasc Dis.* 2020: In press.
21. Blumenstein J, Möllmann H, Bleiziffer S, Bauer T, Ensminger S, Bekeredjian R, Walther T, Frerker C, Beyersdorf F, Hamm C, Beckmann A. Transcatheter aortic valve implantation in nonagenarians: in sights from the German Aortic Valve Registry (GARY). *Clin Res Cardiol.* 2020; 109(9): 1099-1106.
22. Boeder NF, Bayer M, Niemann B, Nef HM. First-in-man lithoplasty of a LIMA bypass with ECMO support in a last-remaining-vessel. *Cardiovasc Revasc Med.* 2020; 21(11S): 155-157.
23. Bormann J, Psyraakis DA, von Jeinsen B, Grun D, Elsner LK, Wolter JS, Weferling M, Diouf K, Kriechbaum S, Troidl C, Dörr O, Nef H, Hamm CW, Liebetrau C, Keller T. Myeloid-related protein 8/14 and high-sensitivity cardiac troponin I to differentiate type 2 myocardial infarction. *Int J Cardiol.* 2020; 304: 144-147.
24. Burch AE, Scherr D, Rieth A, Griffin J, Bianco NR, Odeneg T, Sears SF. Wearable Cardioverter Defibrillator-Guided 6-Min Walk Test Performed at Home Is Accurate and Reliable: RESULTS OF THE TRENDS STUDY. *J Cardiopulm Rehabil Prev.* 2020; 40(2): E14-E17.
25. Butty A, Gencer B, Koskinas KC, Carballo D, Räber L, Klingenberg R, Matter CM, Lüscher TF, Windecker S, Muller O, Rodondi N, Mach F, Nanchen D. Control of cardiovascular risk factors and health behaviors in patients post acute coronary syndromes eligible for protein convertase subtilisin/kexin-9 inhibitors. *Int J Cardiol.* 2020; 299: 289-295.
26. Chang CC, Chichareon P, Modolo R, Takahashi K, Kogame N, Tomaniak M, Gao C, Royaards KJ, Cequier A, Oldroyd K, Steg PG, Hamm C, Jüni P, Valgimigli M, Windecker S, Onuma Y, Stables RH, Jan van Geuns R, Serruys PW. Association between post-percutaneous coronary intervention bivalirudin infusion and net adverse clinical events: a post hoc analysis of the GLOBAL LEADERS study. *Eur Heart J Cardiovasc Pharmacother.* 2020; 6(1): 22-30.
27. Chatzantonis G, Bietenbeck M, Elsanhoury A, Tschöpe C, Pleske B, Tauscher G, Vietheer J, Shomanova Z, Mahrholdt H, Rolf A, Kelle S, Yilmaz A. Diagnostic value of cardiovascular magnetic resonance in comparison to endomyocardial biopsy in cardiac amyloidosis: a multi-centre study. *Clin Res Cardiol.* 2020: In press.

28. Chichareon P, Modolo R, Kawashima H, Takahashi K, Kogame N, Chang CC, Tomaniak M, Ono M, Walsh S, Suryapranata H, Cotton J, Koning R, Akin I, Kukreja N, Wykrzykowska J, Piek JJ, Garg S, Hamm C, Steg PG, Juni P, Vranckx P, Valgimigli M, Windecker S, Onuma Y, Serruys PW. DAPT Score and the Impact of Ticagrelor Monotherapy During the Second Year After PCI. *JACC Cardiovasc Interv.* 2020; 13(5): 634-646.
29. Chichareon P, Modolo R, Kerckmeijer L, Tomaniak M, Kogame N, Takahashi K, Chang CC, Komiyama H, Moccetti T, Talwar S, Colombo A, Maillard L, Barlis P, Wykrzykowska J, Piek JJ, Garg S, Hamm C, Steg PG, Juni P, Valgimigli M, Windecker S, Onuma Y, Mehran R, Serruys PW. Association of Sex With Outcomes in Patients Undergoing Percutaneous Coronary Intervention: A Subgroup Analysis of the GLOBAL LEADERS Randomized Clinical Trial. *JAMA Cardiol.* 2020; 5(1): 21-29.
30. Chichareon P, Modolo R, Kogame N, Takahashi K, Chang CC, Tomaniak M, Botelho R, Eeckhout E, Hofma S, Trendafilova-Lazarova D, Koszegi Z, Iniguez A, Wykrzykowska JJ, Piek JJ, Garg S, Hamm C, Steg PG, Juni P, Vranckx P, Valgimigli M, Windecker S, Onuma Y, Serruys PW. Association of diabetes with outcomes in patients undergoing contemporary percutaneous coronary intervention: Pre-specified subgroup analysis from the randomized GLOBAL LEADERS study. *Atherosclerosis.* 2020; 295: 45-53.
31. Cremer S, Kirschbaum K, Berkowitsch A, John D, Kiefer K, Dorsheimer L, Wagner J, Rasper T, Abou-El-Ardat K, Assmus B, Serve H, Rieger M, Dimmeler S, Zeiher AM. Multiple Somatic Mutations for Clonal Hematopoiesis Are Associated with Increased Mortality in Patients with Chronic Heart Failure. *Circ Genom Precis Med.* 2020; 13(4): e003003.
32. D'Ascenzo F, Biolè C, Raposeiras-Roubin S, Gaido F, Abu-Assi E, Kinnaird T, Ariza-Solé A, Liebetrau C, Manzano-Fernández S, Boccuzzi G, Henriques JPS, Templin C, Wilton SB, Omedè P, Velicki L, Xanthopoulou I, Correia L, Cerrato E, Rognoni A, Fabrizio U, Nuñez-Gil I, Montabone A, Taha S, Fujii T, Durante A, Song X, Gili S, Magnani G, Autelli M, Bongiovanni F, Grosso A, Kawaji T, Blanco PF, Garay A, Quadri G, Alexopoulos D, Queija BC, Huczek Z, Paz RC, González-Juanatey JR, Fernández MC, Nie SP, Pousa IM, Kawashiri MA, Rettegno S, Gallo D, Morbiducci U, Conrotto F, Dominguez-Rodriguez A, Valdés M, Cequier A, Iñiguez-Romo A, Biondi-Zoccai G, Stone GW, De Ferrari GM. Average daily ischemic versus bleeding risk in patients with ACS undergoing PCI: Insights from the BleeMACS and RENAMI registries. *Am Heart J.* 2020; 220: 108-115.
33. D'Ascenzo F, Saglietto A, Ramakrishna H, Andreis A, Jiménez-Mazuecos JM, Nombela-Franco L, Cerrato E, Liebetrau C, Alfonso-Rodríguez E, Bagur R, Alkhouli M, De Ferrari GM, Núñez-Gil IJ. Usefulness of oral anticoagulation in patients with coronary aneurysms: Insights from the CAAR registry. *Catheter Cardiovasc Interv.* 2020: In press.
34. De Backer O, Dangas GD, Jilaihawi H, Leipsic JA, Terkelsen CJ, Makkar R, Kini AS, Veien KT, Abdel-Wahab M, Kim WK, Balan P, Van Mieghem N, Mathiassen ON, Jeger RV, Arnold M, Mehran R, Guimaraes AHC, Norgaard BL, Kofoed KF, Blanke P, Windecker S, Sondergaard L. Reduced Leaflet Motion after Transcatheter Aortic-Valve Replacement. *N Engl J Med.* 2020; 382(2): 130-139.
35. de Faria AP, Modolo R, Chichareon P, Chang CC, Kogame N, Tomaniak M, Takahashi K, Rademaker-Havinga T, Wykrzykowska J, de Winter RJ, Ferreira RC, Sousa A, Lemos PA, Garg S, Hamm C, Juni P, Vranckx P, Valgimigli M, Windecker S, Onuma Y, Steg PG, Serruys PW. Association of Pulse Pressure With Clinical Outcomes in Patients Under Different Antiplatelet Strategies After Percutaneous Coronary Intervention: Analysis of GLOBAL LEADERS. *Can J Cardiol.* 2020; 36(5): 747-755.
36. De Filippo O, D'Ascenzo F, Raposeiras-Roubin S, Abu-Assi E, Peyracchia M, Bocchino PP, Kinnaird T, Ariza-Solé A, Liebetrau C, Manzano-Fernández S, Boccuzzi G, Henriques JPS, Templin C, Wilton SB, Omedè P, Velicki L, Xanthopoulou I, Correia L, Cerrato E, Rognoni A, Fabrizio U, Nuñez-Gil I, Iannaccone M, Montabone A, Taha S, Fujii T, Durante A, Song X, Gili S, Magnani G, Varbella F, Kawaji T, Blanco PF, Garay A, Quadri G, Alexopoulos D, Caneiro Queija B, Huczek Z, Cobas Paz R, González Juanatey JR, Cespón Fernández M, Nie SP, Muñoz Pousa I, Kawashiri MA, Gallo D, Morbiducci U, Conrotto F, Montefusco A, Dominguez-Rodriguez A, López-Cuenca A, Cequier A, Iñiguez-Romo A, Usmiani T, Rinaldi M, De Ferrari GM. P2Y12 inhibitors in acute coronary syndrome patients with renal dysfunction: an analysis from the RENAMI and BleeMACS projects. *Eur Heart J Cardiovasc Pharma cother.* 2020; 6(1): 31-42.
37. del Val D, Linke A, Abdel-Wahab M, Latib A, Ihlemann N, Urena M, Kim W-K, Husser O, Herrmann Howard C, Nombela-Franco L, Cheema Asim N, Le Breton H, Stortecky S, Bartorelli Antonio L, Sinning Jan M, Amat-Santos I, Muñoz-García A, Lerakis S, Gutiérrez-Ibanez E, Landt M, Tchetché D, Testa L, Eltchaninoff H, Livi U, Castillo Juan C, Chakravarty T, Webb John G, Barbanti M, Kodali S, de Brito Fabio S, Ribeiro Henrique B, Miceli A, Fiorina C, Dato Guglielmo Mario A, Rosato F, Serra V, Masson J-B, Wijeyesundera Harindra C, Mangione Jose A, Ferreira M-C, Lima Valter C, Colafranceschi Alexandre S, Abizaid A, Marino Marcos A, Esteves V, Andrea Julio CM, Himbert D, Pellegrini C, Auffret V, Olivares P, Nietlispach F, Pilgrim T, Durand E, Lisko J, Makkar R, Alkhourair A, Søndergaard L, Mangner N, Crusius L, Holzhey D, Regueiro A, Rodés-Cabau J, Long-Term Outcomes After Infective Endocarditis After Transcatheter Aortic Valve Replacement. *Circulation.* 2020; 142(15): 1497-1499.



38. Dörr O, Liebetrau C, Weferling M, Hoffmann F, Forderer N, Keller T, Boeder N, Blachutzik F, Keranov S, Bauer P, Bauer T, Hamm CW, Nef H. Fractional flow reserve and frequency of PCI in patients with coronary artery disease. *Herz*. 2020; 45: 752-758.
39. Dorsheimer L, Assmus B, Rasper T, Ortman CA, Abou-El-Ardat K, Kiefer KC, Hoffmann J, Seeger F, Bonig H, Dimmeler S, Zeiher AM, Rieger MA. Hematopoietic alterations in chronic heart failure patients by somatic mutations leading to clonal hematopoiesis. *Haematologica*. 2020; 105(7): e328-e332.
40. Duncker D, Dahme T, Deisenhofer I, Hillmann HAK, Kantenwein V, Müller-Leisse J, Palacios D, Pott A, Reents T, Schmitt J, Veltmann C, Zormpas C, Johnson V. It's all over! : Complications in the EP lab and their solutions. *Herzschrittmacherther Elektrophysiol*. 2020; 31(4): 401-413.
41. Elliott P, Cowie MR, Franke J, Ziegler A, Antoniadis C, Bax J, Bucciarelli-Ducci C, Flachskampf FA, Hamm C, Jensen MT, Katus H, Maisel A, McDonagh T, Mittmann C, Muntendam P, Nagel E, Rosano G, Twerenbold R, Zannad F. Development, validation and implementation of biomarker testing in cardiovascular medicine state-of-the-art: Proceedings of the European Society of Cardiology - Cardiovascular Round Table. *Cardiovasc Res*. 2020: In press.
42. Elsner LK, Jeinsen BV, Grün D, Wolter JS, Weferling M, Diouf K, Kriechbaum S, Troidl C, Dörr O, Nef H, Hamm CW, Liebetrau C, Keller T. Prognostic performance of the ESC SCORE and its German recalibrated versions in primary and secondary prevention. *Eur J Prev Cardiol*. 2020; 27(19): 2166-2169.
43. Erath JW, Aßmus B, Burch A, Bondermann D, Russo AM, Kutlyifa V. Sustained Ventricular Tachyarrhythmia Termination in a Large Cohort of Women Using Wearable Cardioverter-Defibrillators. *JACC Clin Electrophysiol*. 2020; 6(9): 1187-1188.
44. Erkapic D, Frommeyer G, Brettner N, Sözener K, Crijns H, Seyfarth M, Hamm CW, Bogossian H. QTc interval evaluation in patients with right bundle branch block or bifascicular blocks. *Clin Cardiol*. 2020; 43(9): 957-962.
45. Escher F, Pietsch H, Aleshcheva G, Bock T, Baumeier C, Elsaesser A, Wenzel P, Hamm C, Westenfeld R, Schultheiss M, Gross U, Morawietz L, Schultheiss HP. Detection of viral SARS-CoV-2 genomes and histopathological changes in endomyocardial biopsies. *ESC Heart Fail*. 2020; 7(5): 2440-2447.
46. Fabris E, Ten Berg JM, Hermanides RS, Dambrink J, Gosselink AM, Sinagra G, Koopmans PC, Giannitsis E, Hamm C, van 't Hof AWJ. NT-proBNP level before primary PCI and risk of poor myocardial reperfusion: insight from the On-Time II trial. *Am Heart J*. 2020: In press.
47. Färber G, Bleiziffer S, Doenst T, Bon D, Böning A, Weiler H, Herrmann E, Frerker C, Beckmann A, Möllmann H, Ensminger S, Bekeredjian R, Walther T, Harringer W, Katus HA, Hamm CW, Beyersdorf F, Bauer T, Fichtlscherer S. Transcatheter or surgical aortic valve implantation in chronic dialysis patients: a German Aortic Valve Registry analysis. *Clin Res Cardiol*. 2020: In press.
48. Feldmann K, Hamm CW, Aßmus B. [Suspected cardiac amyloidosis - diagnostic steps for evaluation]. *Dtsch Med Wochenschr*. 2020; 145(16): 1162-1168.
49. Filippo O, D'Ascenzo F, Raposeiras-Roubin S, Abu-Assi E, Peyracchia M, Bocchino PP, Kinnaird T, Ariza-Sole A, Liebetrau C, Manzano-Fernandez S, Boccuzzi G, Henriques JPS, Templin C, Wilton SB, Omede P, Velicki L, Xanthopoulos I, Correia L, Cerrato E, Rognoni A, Fabrizio U, Nunez-Gil I, Iannaccone M, Montabone A, Taha S, Fujii T, Durante A, Song X, Gili S, Magnani G, Varbella F, Kawaji T, Blanco PF, Garay A, Quadri G, Alexopoulos D, Queija BC, Huczek Z, Paz RC, Gonzalez Juanatey JR, Fernandez MC, Nie SP, Pousa IM, Kawashiri MA, Gallo D, Morbiducci U, Conrotto F, Montefusco A, Dominguez-Rodriguez A, Lopez-Cuenca A, Cequier A, Iniguez-Romo A, Usmiani T, Rinaldi M, De Ferrari GM. P2Y12 inhibitors in acute coronary syndrome patients with renal dysfunction: an analysis from the RENAMI and BleeMACS projects. *Eur Heart J Cardiovasc Pharmacother*. 2020; 6(6): 31-42.
50. Fischer-Rasokat U, Renker M, Liebetrau C, Möllmann H, Hamm CW, Kim WK. Impact of Rapid Ventricular Pacing During Transcatheter Implantation of Self-Expanding Aortic Valve Prostheses in Patients at Highest Risk. *J Invasive Cardiol*. 2020; 32(12): E355-E361.
51. Fischer-Rasokat U, Renker M, Liebetrau C, Weferling M, Rolf A, Doss M, Möllmann H, Walther T, Hamm CW, Kim WK. Does the severity of low-gradient aortic stenosis classified by computed tomography-derived aortic valve calcification determine the outcome of patients after transcatheter aortic valve implantation (TAVI)? *Eur Radiol*. 2020: In press.
52. Franzone A, McFadden EP, Leonardi S, Piccolo R, Vranckx P, Serruys PW, Hamm C, Steg PG, Heg D, Branca M, Jüni P, Windecker S, Valgimigli M. Ticagrelor alone or conventional dual antiplatelet therapy in patients with stable or acute coronary syndromes. *EuroIntervention*. 2020; 16(8): 627-633.
53. Fujita B, Schmidt T, Bleiziffer S, Bauer T, Beckmann A, Bekeredjian R, Möllmann H, Walther T, Landwehr S, Hamm C, Beyersdorf F, Katus HA, Harringer W, Ensminger S, Frerker C. Impact of new pacemaker implantation following surgical and transcatheter aortic valve replacement on 1-year outcome. *Eur J Cardiothorac Surg*. 2020; 57(1): 151-159.

54. Gaede L, Blumenstein J, Liebetrau C, Dörr O, Kim WK, Nef H, Husser O, Gulker J, Elsässer A, Hamm CW, Achenbach S, Möllmann H. Transvascular transcatheter aortic valve implantation in 2017. *Clin Res Cardiol.* 2020; 109: 303-314.
55. Gao C, Buszman P, Buszman P, Chichareon P, Modolo R, Garg S, Takahashi K, Kawashima H, Wang R, Chang CC, Kogame N, Tomaniak M, Ono M, Hara H, Slagboom T, Aminian A, Naber CK, Carrie D, Hamm C, Steg PG, Onuma Y, Geuns RV, Serruys PW, Zurakowski A. Influence of Bleeding Risk on Outcomes of Radial and Femoral Access for Percutaneous Coronary Intervention: An Analysis From the GLOBAL LEADERS Trial. *Can J Cardiol.* 2020: In press.
56. Gao C, Takahashi K, Garg S, Hara H, Wang R, Kawashima H, Ono M, Montalescot G, Haude M, Slagboom T, Vranckx P, Valgimigli M, Windecker S, Hamm C, Steg PG, Storey R, van Geuns RJ, Tao L, Onuma Y, Serruys PW. Regional variation in patients and outcomes in the GLOBAL LEADERS trial. *Int J Cardiol.* 2020: In press.
57. Gao C, Tomaniak M, Takahashi K, Kawashima H, Wang R, Hara H, Ono M, Montalescot G, Garg S, Haude M, Slagboom T, Vranckx P, Valgimigli M, Windecker S, van Geuns RJ, Hamm C, Steg PG, Onuma Y, Angiolillo DJ, Serruys PW. Ticagrelor monotherapy in patients with concomitant diabetes mellitus and chronic kidney disease: a post hoc analysis of the GLOBAL LEADERS trial. *Cardiovasc Diabetol.* 2020; 19(1): 179.
58. Garg S, Chichareon P, Kogame N, Takahashi K, Modolo R, Chang CC, Tomaniak M, Fath-Ordoubadi F, Anderson R, Oldroyd KG, Stables RH, Kukreja N, Chowdhary S, Galasko G, Hoole S, Zaman A, Hamm CW, Steg PG, Juni P, Valgimigli M, Windecker S, Onuma Y, Serruys PW. Impact of established cardiovascular disease on outcomes in the randomized global leaders trial. *Catheter Cardiovasc Interv.* 2020; 96(7): 1369-1378.
59. Gencer B, Carballo D, Nanchen D, Koskinas KC, Klingenberg R, Räber L, Auer R, Carballo S, Heg D, Windecker S, Lüscher TF, Matter CM, Rodondi N, Mach F. Intensified lipid lowering using ezetimibe after publication of the IMPROVE-IT trial: A contemporary analysis from the SPUM-ACS cohort. *Int J Cardiol.* 2020; 303: 8-13.
60. Giannitsis E, Huber K, Hamm CW, Möckel M. Instant rule-out of suspected non-ST-segment elevation myocardial infarction using high-sensitivity cardiac troponin T with Copeptin versus a single low high-sensitivity cardiac troponin T: findings from a large pooled individual data analysis on 10,329 patients. *Clin Res Cardiol.* 2020: In press.
61. Goldenberg I, Erath JW, Russo AM, Burch AE, Assmus B, Bonderman D, McNitt S, Kutiyafa V. Sex-Differences in Arrhythmic Burden with the Wearable Cardioverter Defibrillator. *Heart Rhythm.* 2020: In press.
62. Götze AM, Schubert C, Jung G, Dörr O, Liebetrau C, Hamm CW, Schmitz-Rixen T, Troidl C, Troidl K. IL10 Alters Peri-Collateral Macrophage Polarization and Hind-Limb Reperfusion in Mice after Femoral Artery Ligation. *Int J Mol Sci.* 2020; 21(8): 2821.
63. Gagnano F, Heg D, Franzone A, McFadden EP, Leonardi S, Piccolo R, Vranckx P, Branca M, Serruys PW, Benit E, Liebetrau C, Janssens L, Ferrario M, Zurakowski A, Diletti R, Dominici M, Huber K, Slagboom T, Buszman P, Bolognese L, Tumscitz C, Bryniarski K, Aminian A, Vrolix M, Petrov I, Garg S, Naber C, Prokopczuk J, Hamm C, Steg PG, Juni P, Windecker S, Valgimigli M. PRECISE-DAPT score for bleeding risk prediction in patients on dual or single antiplatelet regimens: insights from the GLOBAL LEADERS and GLASSY. *Eur Heart J Cardiovasc Pharmacother.* 2020: In press.
64. Grieshaber P, Oswald I, Albert M, Reents W, Zacher M, Roth P, Niemann B, Dörr O, Kruger T, Nef H, Sodah A, Hamm C, Schlensak C, Diegeler A, Sedding D, Franke U, Boening A. Risk of perioperative coronary stent stenosis or occlusion in patients with previous percutaneous coronary intervention undergoing coronary artery bypass grafting surgery. *Eur J Cardiothorac Surg.* 2020; 57(6): 1122-1129.
65. Grün D, Rudolph F, Gumpfer N, Hannig J, Elsner LK, von Jeinsen B, Hamm CW, Rieth A, Guckert M, Keller T. Identifying Heart Failure in ECG Data with Artificial Intelligence - a Meta-Analysis. *Front Digit Health.* 2020: In press.
66. Gumpfer N, Grün D, Hannig J, Keller T, Guckert M. Detecting myocardial scar using electrocardiogram data and deep neural networks. *Biol Chem.* 2020: In press.
67. Haller PM, Boeddinghaus J, Neumann JT, Sorensen NA, Hartikainen TS, Gossling A, Nestelberger T, Twerenbold R, Lehmacher J, Keller T, Zeller T, Blankenberg S, Mueller C, Westermann D. Performance of the ESC 0/1-h and 0/3-h Algorithm for the Rapid Identification of Myocardial Infarction Without ST-Elevation in Patients With Diabetes. *Diabetes Care.* 2020; 43(2): 460-467.
68. Hamm CW, Beyersdorf F. GARY-The Largest Registry of Aortic Stenosis Treatment Worldwide. *Eur Heart J.* 2020; 41(6): 733-735.
69. Hamm CW, Dörr O, Woehrle J, Krackhardt F, Ince H, Zeus T, Berland J, Piot C, Roubille F, Schult I, Allocco DJ, Nef H. A multicentre, randomised controlled clinical study of drug-coated balloons for the treatment of coronary in-stent restenosis. *EuroIntervention.* 2020; 16(4): e328-e334.

70. Hara H, Klaveren DV, Takahashi K, Kogame N, Chichareon P, Modolo R, Tomaniak M, Ono M, Kawashima H, Wang R, Gao C, Niethammer M, Fontos G, Angioi M, Ribeiro VG, Barbato E, Leandro S, Hamm C, Valgimigli M, Windecker S, Jüni P, Steg PG, Verbeeck J, Tijssen JGP, Sharif F, Onuma Y, Serruys PW. Comparative Methodological Assessment of the Randomized GLOBAL LEADERS Trial Using Total Ischemic and Bleeding Events. *Circ Cardiovasc Qual Outcomes*. 2020: Circout comes120006660.
71. Hara H, Kogame N, Takahashi K, Modolo R, Chichareon P, Tomaniak M, Ono M, Kawashima H, Gao C, Wang R, Valkov VD, Vom Dahl J, Steinwender C, Geisler T, Lemos Neto PA, Macaya Miguel C, Garg S, Juni P, Hamm C, Steg PG, Valgimigli M, Vranckx P, Windecker S, Farooq V, Onuma Y, Serruys PW. Usefulness of the updated logistic clinical SYNTAX score after percutaneous coronary intervention in patients with prior coronary artery bypass graft surgery: Insights from the GLOBAL LEADERS trial. *Catheter Cardiovasc Interv*. 2020; 96(5): E516-E526.
72. Hara H, Takahashi K, Kogame N, Tomaniak M, Kerkmeijer LSM, Ono M, Kawashima H, Wang R, Gao C, Wykrzykowska JJ, de Winter RJ, Neumann FJ, Plante S, Lemos Neto PA, Garg S, Juüni P, Vranckx P, Windecker S, Valgimigli M, Hamm C, Steg PG, Onuma Y, Serruys PW. Impact of Bleeding and Myocardial Infarction on Mortality in All-Coroner Patients Undergoing Percutaneous Coronary Intervention. *Circ Cardiovasc Interv*. 2020; 13(9): e009177.
73. Hemetsberger R, Abdelghani M, Mankerious N, Allali A, Toelg R, Gori T, Achenbach S, Riemer T, Mehilli J, Nef HM, Naber C, Wohrle J, Zahn R, Kastner J, Schmermund A, Hamm C, Münzel T, Richardt G. Impact of coronary calcification on outcomes after ABSORB scaffold implantation: insights from the GABI-R registry. *Coron Artery Dis*. 2020; 31(7): 578-585.
74. Hermida JS, Chen J, Meyer C, Iacopino S, Arena G, Pavlovic N, Velagic V, Healey S, Packer DL, Pitschner HF, de Asmundis C, Kuniss M, Chierchia GB. Cryoballoon catheter ablation versus antiarrhythmic drugs as a first-line therapy for patients with paroxysmal atrial fibrillation: Rationale and design of the international Cryo-FIRST study. *Am Heart J*. 2020; 222: 64-72.
75. Heyl S, Nikkhoo A, Wieszner M, Fichtlscherer S, Seeger F, Assmus B, Luu B, Hemmann K, Walther C, Honold J. Comparison of effectiveness and survival after the MitraClip or Carillon procedure for severe functional mitral regurgitation: a single-center retrospective analysis. *Arch Med Sci Atheroscler Dis*. 2020; 5: e171-e177.
76. Hoffmann J, Fiser K, Liebetrau C, Staubach N, Kost D, Voss S, Heiden AZ, Dörr O, Lipps C, Nef HM, Möllmann H, Hamm CW, Keller T, Troidl C. High-Content Immunophenotyping and Hierarchical Clustering Reveal Sources of Heterogeneity and New Surface Markers of Human Blood Monocyte Subsets. *Thromb Haemost*. 2020; 120(01): 141-155.
77. Hudowenz O, Klemm P, Lange U, Rolf A, Schultheiss HP, Hamm C, Müller-Ladner U, Wegner F. Case report of severe PCR-confirmed COVID-19 myocarditis in a European patient manifesting in mid January 2020. *Eur Heart J Case Rep*. 2020; 4(6): 1-6.
78. Husain-Syed F, Gröne HJ, Assmus B, Bauer P, Gall H, Seeger W, Ghofrani A, Ronco C, Birk HW. Congestive nephropathy: a neglected entity? Proposal for diagnostic criteria and future perspectives. *ESC Heart Fail*. 2020: In press.
79. Huseynov A, Baumann S, Nef H, Riemer T, Schneider S, Pfannenbecker T, Achenbach S, Mehilli J, Münzel T, Gori T, Wohrle J, Zahn R, Kastner J, Schmermund A, Richardt G, Hamm CW, Akin I. Comparison between treatment of "established" versus complex "off-label" coronary lesions with Absorb(R) bioresorbable scaffold implantation: results from the GABI-R(R) registry. *Clin Res Cardiol*. 2020; 109(3): 374-384.
80. Ielasi A, Moscarella E, Mangieri A, Giannini F, Tchetchè D, Kim WK, Sinning JM, Landes U, Kornowski R, Backer, Nickenig G, De Biase C, Søndergaard L, De Marco F, Bedogni F, Ancona M, Montorfano M, Regazzoli D, Stefanini G, Toggweiler S, Tamburino C, Immè S, Tarantini G, Sievert H, Schäfer U, Kempfert J, Wöehrle J, Latib A, Calabrò P, Medda M, Tespili M, Colombo A. Procedural and clinical outcomes of type 0 versus type 1 bicuspid aortic valve stenosis undergoing trans-catheter valve replacement with new generation devices: Insight from the BEAT international collaborative registry. *Int J Cardiol*. 2020: In press.
81. Kawashima H, Gao C, Takahashi K, Tomaniak M, Ono M, Hara H, Wang R, Chichareon P, Suryapranata H, Walsh S, Cotton J, Koning R, Rensing B, Wykrzykowska J, de Winter RJ, Garg S, Anderson R, Hamm C, Steg PG, Onuma Y, Serruys PW. Comparative Assessment of Predictive Performance of PRECISE-DAPT, CRUSADE, and ACUITY Scores in Risk Stratifying 30-Day Bleeding Events. *Thromb Haemost*. 2020; 120(7): 1087-1095.
82. Kawashima H, Hara H, Wang R, Ono M, Gao C, Takahashi K, Suryapranata H, Walsh S, Cotton J, Carrie D, Sabate M, Steinwender C, Leibundgut G, Wykrzykowska J, Hamm C, Jüni P, Vranckx P, Valgimigli M, Windecker S, de Winter RJ, Sharif F, Onuma Y, Serruys PW. Usefulness of updated logistic clinical SYNTAX score based on MI-SYNTAX score in patients with ST-elevation myocardial infarction. *Catheter Cardiovasc Interv*. 2020: In press.

83. Kawashima H, Tomaniak M, Ono M, Wang R, Hara H, Gao C, Takahashi K, Sharif F, Thury A, Suryapranata H, Walsh S, Cotton J, Carrie D, Sabate M, Steinwender C, Leibundgut G, Wykrzykowska J, de Winter RJ, Garg S, Hamm C, Steg PG, Jüni P, Vranckx P, Valgimigli M, Windecker S, Onuma Y, Serruys PW. Safety and Efficacy of 1-Month Dual Antiplatelet Therapy (Ticagrelor+Aspirin) Followed by 23-Month Ticagrelor Monotherapy in Patients Undergoing Staged Percutaneous Coronary Intervention (A Sub-Study from GLOBAL LEADERS). *Am J Cardiol.* 2020: In press.
84. Keranov S, Dörr O, Jafari L, Liebetrau C, Keller T, Troidl C, Kriechbaum S, Voss S, Richter M, Tello K, Gall H, Ghofrani HA, Mayer E, Seeger W, Hamm CW, Nef H. SPARCL1 as a biomarker of maladaptive right ventricular remodelling in pulmonary hypertension. *Biomarkers.* 2020; 25(3): 290-295.
85. Keranov S, Dörr O, Jafari L, Troidl C, Liebetrau C, Kriechbaum S, Keller T, Voss S, Bauer T, Lorenz J, Richter MJ, Tello K, Gall H, Ghofrani HA, Mayer E, Wiedenroth CB, Guth S, Lörchner H, Pöling J, Chelladurai P, Pullamsetti SS, Braun T, Seeger W, Hamm CW, Nef H. CILP1 as a biomarker for right ventricular maladaptation in pulmonary hypertension. *Eur Respir J.* 2020: In press.
86. Keranov S, Nef H. [Chronic coronary syndrome]. *Dtsch Med Wochenschr.* 2020; 145(20): 1476-1480.
87. Kim HO, Kim CJ, Kim W, Cho JM, Soeda T, Takano M, Yan BP, Crea F, Niccoli G, Vergallo R, Minami Y, Higuma T, Kimura S, Boeder NF, Nef H, Adriaenssens T, Kurihara O, Thondapu V, Russo M, Yamamoto E, Sugiyama T, Lee H, Kakuta T, Yonetsu T, Jang IK. Relative risk of plaque erosion among different age and sex groups in patients with acute coronary syndrome. *J Thromb Thrombolysis.* 2020; 49: 352-359.
88. Kim WK, Avanzas P, Moris C. The EVOLUTion from R to PRO: Has there been any PROgress? *Int J Cardiol.* 2020: In press.
89. Kim WK, Hamm CW. TAVR for mixed aortic valve disease - A good companionship? *Int J Cardiol.* 2020; 300: 113-114.
90. Kim WK, Hengstenberg C, Hilker M, Schafer U, Rudolph TK, Toggweiler S, Ruck A, Sondergaard L, Conradi L, Hamm C, Walther T, Möllmann H. Transcatheter aortic valve implantation with the ACURATE neo valve: indications, procedural aspects and clinical outcomes. *EuroIntervention.* 2020; 15(18): e1571-e1579.
91. Kim WK, Liebetrau C, Fischer-Rasokat U, Renker M, Rolf A, Doss M, Möllmann H, Nef H, Walther T, Hamm CW. Challenges of recognizing bicuspid aortic valve in elderly patients undergoing TAVR. *Int J Cardiovasc Imaging.* 2020; 36(2): 251-256.
92. Kim WK, Möllmann H, Liebetrau C, Renker M, Walther T, Hamm CW. Effectiveness and Safety of the ACURATE Neo Prosthesis in 1,000 Patients With Aortic Stenosis. *Am J Cardiol.* 2020; 131: P12-16.
93. Kim WK, Möllmann H, Walther T, Hamm CW. Predictors of permanent pacemaker implantation after ACURATE neo transcatheter heart valve implantation. *Pacing Clin Electrophysiol.* 2020: In press.
94. Kogame N, Chichareon P, De Wilder K, Takahashi K, Modolo R, Chang CC, Tomaniak M, Komiyama H, Chieffo A, Colombo A, Garg S, Louvard Y, Jüni P, G. SP, Hamm C, Vranckx P, Valgimigli M, Windecker S, Stoll HP, Onuma Y, Janssens L, Serruys PW. Clinical relevance of ticagrelor monotherapy following 1-month dual antiplatelet therapy after bifurcation percutaneous coronary intervention: Insight from GLOBAL LEADERS trial. *Catheter Cardiovasc Interv.* 2020; 96(1): 100-111.
95. Koskinas KC, Gencer B, Nanchen D, Branca M, Carballo D, Klingenberg R, Blum MR, Carballo S, Muller O, Matter CM, Lüscher TF, Rodondi N, Heg D, Wilhelm M, Räber L, Mach F, Windecker S. Eligibility for PCSK9 inhibitors based on the 2019 ESC/EAS and 2018 ACC/AHA guidelines. *Eur J Prev Cardiol.* 2020: 2047487320940102.
96. Kränkel N, Strässler E, Uhlemann M, Müller M, Briand-Schumacher S, Klingenberg R, Schulze PC, Adams V, Schuler G, Lüscher TF, Möbius-Winkler S, Landmesser U. Extracellular vesicle species differentially affect endothelial cell functions and differentially respond to exercise training in patients with chronic coronary syndromes. *Eur J Prev Cardiol.* 2020: In press.
97. Kriechbaum SD, Boeder NF, Gaede L, Arnold M, Vigelius-Rauch U, Roth P, Sander M, Böning A, Bayer M, Elsässer A, Möllmann H, Hamm CW, Nef HM. Mitral valve leaflet repair with the new PASCAL system: early real-world data from a German multicentre experience. *Clin Res Cardiol.* 2020; 109: 549-559.
98. Kriechbaum SD, Rudolph F, Wiedenroth CB, Mielzarek L, Haas M, Guth S, Hamm CW, Mayer E, Liebetrau C, Keller T. Pregnancy-associated plasma protein A - a new indicator of pulmonary vascular remodeling in chronic thromboembolic pulmonary hypertension? *Respir Res.* 2020; 21(1): 204.
99. Kriechbaum SD, Scherwitz L, Wiedenroth CB, Rudolph F, Wolter JS, Haas M, Fischer-Rasokat U, Rolf A, Hamm CW, Mayer E, Guth S, Keller T, Konstantinides SV, Lankeit M, Liebetrau C. Mid-regional pro-atrial natriuretic peptide and copeptin as indicators of disease severity and therapy response in CTEPH. *ERJ Open Res.* 2020; 6(4).

100. Kriechbaum SD, Wiedenroth CB, Peters K, Barde MA, Aijnwojner R, Wolter JS, Haas M, Roller FC, Guth S, Rieth AJ, Rolf A, Hamm CW, Mayer E, Keller T, Liebetrau C. Galectin-3, GDF-15, and sST2 for the Assessment of Disease Severity and Therapy Response in patients suffering from inoperable Chronic Thromboembolic Pulmonary Hypertension. *Biomarkers*. 2020; 25(7): 578-586.
101. Kuck KH, Lebedev DS, Mikhaylov EN, Romanov A, Gellér L, Kalējs O, Neumann T, Davtyan K, On YK, Popov S, Bongiorno MG, Schlüter M, Willems S, Ouyang F. Catheter ablation or medical therapy to delay progression of atrial fibrillation: the randomized controlled atrial fibrillation progression trial (ATTEST). *Europace*. 2020: In press.
102. Kuniss M, Akkaya E, Berkowitsch A, Zaltsberg S, Greiss H, Rechner M, Weipert K, Hain A, Hamm CW, Neumann T. Left atrial roof ablation in patients with persistent atrial fibrillation using the second-generation cryoballoon: benefit or wasted time? *Clin Res Cardiol*. 2020; 109: 714-724.
103. Kurihara O, Takano M, Kakuta T, Soeda T, Crea F, Adriaenssens T, Nef HM, Boeder NF, Yamamoto E, Kim HO, Russo M, McNulty I, Araki M, Nakajima A, Lee H, Mizuno K, Jang I. Determinants of ST-segment elevation myocardial infarction as clinical presentation of acute coronary syndrome. *J Thromb Thrombolysis*. 2020: In press.
104. Kurihara O, Takano M, Yamamoto E, Yonetsu T, Kakuta T, Soeda T, Yan BP, Crea F, Higuma T, Kimura S, Minami Y, Adriaenssens T, Boeder NF, Nef HM, Kim CJ, Thondapu V, Kim HO, Russo M, Sugiyama T, Fracassi F, Lee H, Mizuno K, Jang IK. Seasonal Variations in the Pathogenesis of Acute Coronary Syndromes. *J Am Heart Assoc*. 2020; 9: e015579.
105. Landes U, Webb JG, De Backer O, Sondergaard L, Abdel-Wahab M, Crusius L, Kim WK, Hamm C, Buzzatti N, Montorfano M, Ludwig S, Schofer N, Voigtlaender L, Guerrero M, El Sabbagh A, Rodés-Cabau J, Guimaraes L, Kornowski R, Codner P, Okuno T, Pilgrim T, Fiorina C, Colombo A, Mangieri A, Eltchaninoff H, Nombela-Franco L, Van Wiechen MPH, Van Mieghem NM, Tchétché D, Schoels WH, Kullmer M, Tamburino C, Sinning JM, Al-Kassou B, Perlman GY, Danenberg H, Ielasi A, Fraccaro C, Tarantini G, De Marco F, Witberg G, Redwood SR, Lisko JC, Babaliaros VC, Laine M, Nerla R, Castriota F, Finkelstein A, Loewenstein I, Eitan A, Jaffe R, Ruile P, Neumann FJ, Piazza N, Alosaimi H, Sievert H, Sievert K, Russo M, Andreas M, Bunc M, Latib A, Govdfrey R, Hildick-Smith D, Sathananthan J, Hensey M, Alkhodair A, Blanke P, Leipsic J, Wood DA, Nazif TM, Kodali S, Leon MB, Barbanti M. Repeat Transcatheter Aortic Valve Replacement for Transcatheter Prosthesis Dysfunction. *J Am Coll Cardiol*. 2020; 75(16): 1882-1893.
106. Lüscher TF, Fox K, Hamm C, Carter RE, Taddei S, Simoons M, Crea F. Scientific integrity: what a journal can and cannot do. *Eur Heart J*. 2020; 41(48): 4552-4555.
107. Mahendiran T, Nanchen D, Gencer B, Meier D, Klingenberg R, Räber L, Carballo D, Matter CM, Lüscher TF, Windecker S, Mach F, Rodondi N, Müller O, Fournier S. Prognosis of Patients with Chronic and Hospital-Acquired Anaemia After Acute Coronary Syndromes. *J Cardiovasc Transl Res*. 2020; 13(4): 618-628.
108. Mahendiran T, Nanchen D, Meier D, Gencer B, Klingenberg R, Raber L, Carballo D, Matter CM, Lüscher TF, Windecker S, Mach F, Rodondi N, Müller O, Fournier S. Optimal Timing of Invasive Coronary Angiography following NSTEMI. *J Interv Cardiol*. 2020; 2020: 8513257.
109. Mangieri A, Tchetchè D, Kim WK, Pagnesi M, Sinning JM, Landes U, Kornowski R, De Backer O, Nickenig G, Ielasi A, De Biase C, Søndergaard L, De Marco F, Montorfano M, Chiarito M, Regazzoli D, Stefanini G, Presbitero P, Toggweiler S, Tamburino C, Immè S, Tarantini G, Sievert H, Schäfer U, Kempfert J, Wöhrle J, Gallo F, Laricchia A, Latib A, Giannini F, Colombo A. Balloon Versus Self-Expandable Valve for the Treatment of Bicuspid Aortic Valve Stenosis: Insights From the BEAT International Collaborative Registry. *Circ Cardiovasc Interv*. 2020; 13(7): e008714.
110. Mathew S, Fraebel C, Johnson V, Abdelgwad S, Schneider N, Müller P, Chasan R, Hamm C, Schmitt J. Cardiac arrhythmias in patients with SARS-CoV2 infection and effects of the lockdown on invasive rhythmological therapy. *Herzschrittmacherther Elektrophysiol*. 2020: In press.
111. Mauri V, Besler C, Riebisch M, Al-Hammadi O, Ruf T, Gerçek M, Horn P, Grothusen C, Mehr M, Becher MU, Mues C, Boeder N, Kreidel F, Friedrichs K, Westenfeld R, Braun D, Öztürk C, Baldus S, Rassaf T, Thiele H, Nickenig G, Hausleiter J, Möllmann H, Kelm M, Rudolph V, von Bardeleben RS, Nef HM, Luedike P, Lurz P, Pfister R. German Multicenter Experience With a New Leaflet-Based Transcatheter Mitral Valve Repair System for Mitral Regurgitation. *JACC Cardiovasc Interv*. 2020; 13(23): 2769-2778.
112. Menichelli M, Neumann FJ, Ndrepepa G, Mayer K, Wöhrle J, Bernlochner I, Richardt G, Witzenbichler B, Sibbing D, Gewalt S, Angiolillo DJ, Lahu S, Hamm CW, Hapfelmeier A, Trenk D, Laugwitz KL, Schunkert H, Schüpke S, Kastrati A. Age- and Weight-Adapted Dose of Prasugrel Versus Standard Dose of Ticagrelor in Patients With Acute Coronary Syndromes: Results From a Randomized Trial. *Ann Intern Med*. 2020; 173(6): 436-444.
113. Meyer MM, Brandenburg L, Hudel H, Agné A, Padberg W, Erdogan A, Nef H, Amati AL, Dörr O, Witte B, Grau V. Who Is Afraid of CRP? Elevated Preoperative CRP Levels Might Attenuate the Increase in Inflammatory Parameters in Response to Lung Cancer Surgery. *J Clin Med*. 2020; 9(10).

114. Möllmann H, Husser O, Blumenstein J, Liebetrau C, Dörr O, Kim WK, Nef H, Tesche C, Hamm CW, Elsässer A, Achenbach S, Gaede L. Lower mortality in an all-comers aortic stenosis population treated with TAVI in comparison to SAVR. *Clin Res Cardiol.* 2020; 109: 611-615.
115. Ndrepepa G, Kastrati A, Menichelli M, Neumann FJ, Wöhrle J, Bernlochner I, Richardt G, Witzembichler B, Sibbing D, Gewalt S, Angiolillo DJ, Hamm CW, Hapfelmeier A, Trenk D, Laugwitz KL, Schunkert H, Schüpke S, Mayer K. Ticagrelor or Prasugrel in Patients With Acute Coronary Syndromes and Diabetes Mellitus. *JACC Cardiovasc Interv.* 2020; 13(19): 2238-2247.
116. Nef HM, Elsässer A, Möllmann H, Abdel-Hadi M, Bauer T, Brück M, Eggebrecht H, Ehrlich JR, Ferrari MW, Fichtlscherer S, Hink U, Hölschermann H, Kacapor R, Koeth O, Korboukov S, Lamparter S, Laspoulas AJ, Lehmann R, Liebetrau C, Plücker T, Pons-Kühnemann J, Schächinger V, Schieffer B, Schött P, Schulze M, Teupe C, Vasa-Nicotera M, Weber M, Weinbrenner C, Werner G, Hamm CW, Dörr O. Impact of the COVID-19 pandemic on cardiovascular mortality and catheterization activity during the lockdown in central Germany: an observational study. *Clin Res Cardiol.* 2020; In press.
117. Nef HM, Wiebe J, Schmidt G, Möllmann H, Boeder NF, Dörr O, Bauer T, Blachutzik F, Liebetrau C, Elsässer A, Foin N, Hamm CW. Everolimus- vs. novolimus-eluting bioresorbable scaffolds in patients with acute coronary syndrome. *Herz.* 2020; 45(Suppl 1): 95-104.
118. Niemann B, Li L, Siegler D, Siegler BH, Knapp F, Hanna J, Aslam M, Kracht M, Schulz R, Rohrbach S. CTRP9 Mediates Protective Effects in Cardiomyocytes via AMPK- and Adiponectin Receptor-Mediated Induction of Anti-Oxidant Response. *Cells.* 2020; 9(5).
119. Nunez-Gil IJ, Cerrato E, Bollati M, Nombela-Franco L, Terol B, Alfonso-Rodriguez E, Camacho Freire SJ, Villablanca PA, Amat Santos IJ, de la Torre Hernandez JM, Pascual I, Liebetrau C, Camacho B, Pavani M, Albistur J, Latini RA, Varbella F, Jimenez-Diaz VA, Piraino D, Mancone M, Alfonso F, Linares JA, Rodriguez-Olivares R, Jimenez Mazuecos JM, Palazuelos Molinero J, Sanchez-Grande Flecha A, Gomez-Hospital JA, Ielasi A, Lozano I, Omede P, Bagur R, Ugo F, Medda M, Louka BF, Kala P, Escaned J, Bautista D, Feltes G, Salinas P, Alkhouli M, Macaya C, Fernandez-Ortiz A. Coronary artery aneurysms, insights from the international coronary artery aneurysm registry (CAAR). *Int J Cardiol.* 2020; 299: 49-55.
120. Ono M, Chichareon P, Tomaniak M, Kawashima H, Takahashi K, Kogame N, Modolo R, Hara H, Gao C, Wang R, Walsh S, Suryapranata H, da Silva PC, Cotton J, Koning R, Akin I, Rensing B, Garg S, Wykrzykowska JJ, Piek JJ, Juni P, Hamm C, Steg PG, Valgimigli M, Windecker S, Storey RF, Onuma Y, Vranckx P, Serruys PW. The association of body mass index with long-term clinical outcomes after ticagrelor monotherapy following abbreviated dual antiplatelet therapy in patients undergoing percutaneous coronary intervention: a prespecified sub-analysis of the GLOBAL LEADERS Trial. *Clin Res Cardiol.* 2020; 109(9): 1125-1139.
121. Ono M, Tomaniak M, Koenig W, Khamis R, de Silva R, Chichareon P, Kawashima H, Hara H, Gao C, Wang R, Huber K, Vrolix M, Jasionowicz P, Wykrzykowska JJ, Piek JJ, Juni P, Hamm C, Steg PG, Windecker S, Onuma Y, Storey RF, Serruys PW. Impact of White Blood Cell Count on Clinical Outcomes in Patients Treated with Aspirin-Free Ticagrelor Monotherapy after Percutaneous Coronary Intervention: Insights from the GLOBAL LEADERS Trial. *Eur Heart J Cardiovasc Pharmacother.* 2020; In press.
122. Pagnesi M, Kim WK, Conradi L, Barbanti M, Stefanini GG, Schofer J, Hildick-Smith D, Pilgrim T, Abizaid A, Zweiker D, Testa L, Taramasso M, Wolf A, Webb JG, Sedaghat A, Van der Heyden JAS, Ziviello F, MacCarthy P, Hamm CW, Bhadra OD, Schäfer U, Costa G, Tamburino C, Cannata F, Reimers B, Eitan A, Alsanjari O, Asami M, Windecker S, Siqueira D, Schmidt A, Bianchi G, Bedogni F, Saccocci M, Maisano F, Jensen CJ, Naber CK, Alenezi A, Wood DA, Sinning JM, Brouwer J, Tzalamouras V, Van Mieghem NM, Colombo A, Latib A. Impact of Predilatation Prior to Transcatheter Aortic Valve Implantation With the Self-Expanding Acurate neo Device (from the Multicenter NEOPRO Registry). *Am J Cardiol.* 2020; 125(9): 1369-1377.
123. Parahuleva MS, Worsch M, Euler G, Choukeir M, Mardini A, Parviz B, Kanse SM, Portig I, Khayrutdinov E, Schieffer B, Markus B. Factor VII Activating Protease Expression in Human Platelets and Accumulation in Symptomatic Carotid Plaque. *J Am Heart Assoc.* 2020; 9(17): e016445.
124. Peyracchia M, Saglietto A, Biolo C, Raposeiras-Roubin S, Abu-Assi E, Kinnaird T, Ariza-Sole A, Liebetrau C, Manzano-Fernandez S, Boccuzzi G, Henriques JPS, Wilton SB, Velicki L, Xanthopoulos I, Correia L, Rognoni A, Fabrizio U, Nunez-Gil I, Montabone A, Taha S, Fujii T, Durante A, Gili S, Magnani G, Autelli M, Grosso A, Kawaji T, Blanco PF, Garay A, Quadri G, Queija BC, Huczek Z, Paz RC, Gonzalez-Juanatey JR, Fernandez MC, Nie SP, D'Amico M, Pousa IM, Kawashiri MA, Gallo D, Morbiducci U, Dominguez-Rodriguez A, Lopez-Cuenca A, Cequier A, Alexopoulos D, Iniguez-Romo A, Grossomarra W, Usmani T, Rinaldi M, D'Ascenzo F. Efficacy and Safety of Clopidogrel, Prasugrel and Ticagrelor in ACS Patients Treated with PCI: A Propensity Score Analysis of the RENAMI and BleeMACS Registries. *Am J Cardiovasc Drugs.* 2020; 20: 259-269.

125. Porterfield C, P JG, Wystrach A, Rossi P, Rillo M, F AS, Giuggia M, Mantica M, Dorszewski A, Eldadah Z, Volpicelli M, Bottoni N, Jøns C, Z TH, Dekker L, Mathew S, Schmitt J, Nilsson K. Confirmation of Pulmonary Vein Isolation with High-Density Mapping: Comparison to Traditional Workflows. *J Atr Fibrillation*. 2020; 12(6): 2361.
126. Pranata R, Tondas AE, Huang I, Lim MA, Siswanto BB, Meyer M, Mitrovic V. Potential role of telemedicine in solving ST-segment elevation dilemmas in remote areas during the COVID-19 pandemic. *Am J Emerg Med*. 2020: In press.
127. Preissner KT, Fischer S, Deindl E. Extracellular RNA as a Versatile DAMP and Alarm Signal That Influences Leukocyte Recruitment in Inflammation and Infection. *Front Cell Dev Biol*. 2020; 8: 619221.
128. Procopio A, De Rosa S, Covelto C, Merola A, Sabatino J, De Luca A, Liebetrau C, Hamm CW, Indolfi C, Amato F, Cosentino C. Estimation of the Acute Myocardial Infarction Onset Time based on Time-Course Acquisitions. *Ann Biomed Eng*. 2020: In press.
129. Purita PAM, Tahoces LS, Fraccaro C, Nai Fovino L, Kim WK, Espada-Guerreiro C, De Backer O, Seiffert M, Nombela-Franco L, Gomez RM, Mangieri A, Franzone A, Bedogni F, Castriota F, Attisano T, Sondergaard L, Antolin RH, Tarantini G. Transcatheter treatment of native aortic valve regurgitation: Results from an international registry using the transfemoral ACURATE neo valve. *Int J Cardiol Heart Vasc*. 2020; 27: 100480.
130. Raposeiras-Roubin S, Abu-Assi E, Cespon-Fernandez M, Ibanez B, Garcia-Ruiz JM, D'Ascenzo F, Simao Henriques JP, Saucedo J, Caneiro-Queija B, Cobas-Paz R, Munoz-Pousa I, Wilton SB, Gonzalez Juanatey JR, Kikkert WJ, Nunez-Gil I, Ariza-Sole A, Song X, Alexopoulos D, Liebetrau C, Kawaji T, Gaita F, Huczek Z, Nie SP, Yan Y, Fujii T, Correia L, Kawashiri MA, Kedev S, Southern D, Alfonso E, Terol B, Garay A, Zhang D, Chen Y, Xanthopoulou I, Osman N, Möllmann H, Shiomi H, Giordana F, Kowara M, Filipiak K, Wang X, Fan JY, Ikari Y, Nakahayshi T, Sakata K, Yamagishi M, Kalpak O, Iniguez-Romo A. Impact of renin-angiotensin system blockade on the prognosis of acute coronary syndrome based on left ventricular ejection fraction. *Rev Esp Cardiol (Engl Ed)*. 2020; 73(2): 114-122.
131. Regazzoli D, Chiarito M, Cannata F, Pagnesi M, Miura M, Ziviello F, Picci A, Reifart J, De Marco F, Bedogni F, Adamo M, Curello S, Teles R, Taramasso M, Barbanti M, Tamburino C, Stefanini GG, Mangieri A, Giannini F, Pagnotta PA, Maisano F, Kim WK, Van Mieghem NM, Colombo A, Reimers B, Latib A. Transcatheter Self-Expandable Valve Implantation for Aortic Stenosis in Small Aortic Annuli: The TAVI-SMALL Registry. *JACC Cardiovasc Interv*. 2020; 13(2): 196-206.
132. Reifart J, Tschernatsch M, Hamm CW, Sperzel J, Hain A. A case report of sinoatrial arrest caused by temporal lobe epilepsy in subclinical glioblastoma. *BMC Cardiovasc Disord*. 2020; 20(1): 30.
133. Renker M, Kim WK. Choice of transcatheter heart valve: should we select the device according to each patient's characteristics or should it be "one valve fits all"? *Ann Transl Med*. 2020; 8(15): 961.
134. Rieth AJ, Hamm CW, Wanner C, Mitrovic V, Keller T. [Heart failure protection by SGLT2 inhibitors in patients with type 2 diabetes mellitus: evidence and possible mechanisms : A systematic review]. *Herz*. 2020: In press.
135. Rivinius R, Kaya Z, Schramm R, Boeken U, Provaznik Z, Heim C, Knosalla C, Schoenrath F, Rieth A, Berchtold-Herz M, Barten MJ, Rauschning D, Mücke VT, Heyl S, Pistulli R, Grinninger C, Hagl C, Gummert JF, Warnecke G, Schulze PC, Katus HA, Kreusser MM, Raake PW. COVID-19 among heart transplant recipients in Germany: a multicenter survey. *Clin Res Cardiol*. 2020; 109(12): 1531-1539.
136. Russo M, Kim HO, Thondapu V, Kurihara O, Araki M, Shinohara H, Yamamoto E, Lee H, Yonetsu T, Minami Y, Adriaenssens T, Boeder NF, Nef HM, Crea F, Soeda T, Jang IK. Ethnic Differences in the Pathobiology of Acute Coronary Syndromes Between Asians and Whites. *Am J Cardiol*. 2020; 125(12): 1757-1764.
137. Salazar CH, Gonzalo N, Aksoy A, Tovar Forero MN, Nef H, Van Mieghem NM, Latib A, Ocaranza Sanchez R, Werner N, Escaned J. Feasibility, Safety, and Efficacy of Intravascular Lithotripsy in Severely Calcified Left Main Coronary Stenosis. *JACC Cardiovasc Interv*. 2020; 13(14): 1727-1729.
138. Schmitt J, Mathew S, Doerr O, Hamm CW. The wearable cardioverter-defibrillator in acute coronary syndromes, a distinctive point of view. *Europace*. 2020: In press.
139. Sharma S, Hofbauer TM, Ondracek AS, Chausheva S, Alimohammadi A, Artner T, Panzenböck A, Rinderer J, Shafran IH, Mangold A, Winker R, Wohlschlaeger-Krenn E, Moser B, Taghavi S, Klepetko W, Preissner KT, Lang IM. Neutrophil extracellular traps promote fibrous vascular occlusions in chronic thrombosis. *Blood*. 2020: In press.

140. Simonato M, Whisenant B, Barbosa Ribeiro H, Webb JG, Kornowski R, Guerrero M, Wijeyesundera H, Søndergaard L, De Backer O, Villablanca P, Rihal C, Eleid M, Kempfert J, Unbehaun A, Erlebach M, Casselman F, Adam M, Montorfano M, Ancona M, Saia F, Ubben T, Meincke F, Napodano M, Codner P, Schofer J, Pelletier M, Cheung A, Shuvy M, Palma JH, Gaia DF, Duncan A, Hildick-Smith D, Veulemans V, Sinning JM, Arbel Y, Testa L, de Weger A, Eltchaninoff H, Hemery T, Landes U, Tchetché D, Dumonteil N, Rodés-Cabau J, Kim WK, Spargias K, Kourkovei P, Ben-Yehuda O, Campante Teles R, Barbanti M, Fiorina C, Thukkani A, Mackensen GB, Jones N, Presbitero P, Petronio AS, Allali A, Champagnac D, Bleiziffer S, Rudolph T, Iadanza A, Salizzoni S, Agrifoglio M, Nombela-Franco L, Bonaros N, Kass M, Bruschi G, Amabile N, Chhatrwalla A, Messina A, Hirji SA, Andreas M, Welsh R, Schoels W, Hellig F, Windecker S, Stortecky S, Maisano F, Stone GW, Dvir D. Transcatheter Mitral Valve Replacement After Surgical Repair or Replacement: Comprehensive Mid-Term Evaluation of Valve-in-Valve and Valve-in-Ring Implantation from the VIVID Registry. *Circulation*. 2020: In press.
141. Sperzel J, Hamm CW, Hain A. Over- and undersensing-pitfalls of arrhythmia detection with implantable devices and wearables. *Herzschrittmacher ther Elektrophysiol*. 2020; 31(3): 273-287.
142. Steinbach R, Schoepf UJ, Griffith LP, van Assen M, Renker M, Sahbaee P, Schwemmer C, Fischer AM, Varga-Szemes A, Martin SS, Bayer RR, 2nd. A fully automated software platform for structural mitral valve analysis. *Eur Radiol*. 2020; 30: 6528-6536.
143. Takahashi K, Chichareon P, Modolo R, Kogame N, Chang CC, Tomaniak M, Moschovitis A, Curzen N, Haude M, Jung W, Holmvang L, Garg S, Tijssen JGP, Wykrzykowska JJ, de Winter RJ, Hamm C, Steg PG, Stoll HP, Onuma Y, Valgimigli M, Vranckx P, Windecker S, Serruys PW. Impact of ticagrelor monotherapy on two-year clinical outcomes in patients with long stenting: a post hoc analysis of the GLOBAL LEADERS trial. *EuroIntervention*. 2020; 16(8): 634-644.
144. Takahashi K, Kogame N, Tomaniak M, Chichareon P, Chang CC, Modolo R, Benit E, Liebetrau C, Janssens L, Ferrario M, Zurakowski A, van Geuns RJ, Dominici M, Huber K, Buszman P, Bolognese L, Tumscitz C, Žmudka K, Aminian A, Vrolix M, Petrov I, Wykrzykowska JJ, de Winter RJ, Hamm C, Steg PG, Onuma Y, Valgimigli M, Windecker S, Vranckx P, Garg S, Serruys PW. Impact of recruitment and retention on all-cause mortality in a large all-comers randomised controlled trial: insights from the GLOBAL LEADERS trial. *Clin Res Cardiol*. 2020; 109(7): 918-929.
145. Takahashi K, Wang R, Kawashima H, Tomaniak M, Gao C, Ono M, Hara H, Wykrzykowska JJ, de Winter RJ, Werner N, Teiger E, Almeida M, Barraud P, Lantelme P, Barlis P, Garg S, Hamm C, Steg PG, Onuma Y, Vranckx P, Windecker S, Valgimigli M, Serruys PW. Efficacy and safety of one-month DAPT followed by 23-month ticagrelor monotherapy in patients undergoing proximal LAD stenting: Insights from the GLOBAL LEADERS trial. *Int J Cardiol*. 2020; 320: 27-34.
146. Tavenier AH, Hermanides RS, Fabris E, Lapostolle F, Silvain J, Ten Berg JM, Lassen JF, Bolognese L, Cantor WJ, Cequier A, Chettibi M, Goodman SG, Hammitt CJ, Huber K, Janzon M, Merkely B, Storey RF, Zeymer U, Ecollan P, Collet JP, Willems FF, Diallo A, Vicaut E, Hamm CW, Montalescot G, van 't Hof AWJ. Efficacy and Safety of Glycoprotein IIb/IIIa Inhibitors on Top of Ticagrelor in STEMI: A Subanalysis of the ATLANTIC Trial. *Thromb Haemost*. 2020; 120(01): 65-74.
147. Tesche C, Otani K, De Cecco CN, Coenen A, De Geer J, Kruk M, Kim YH, Albrecht MH, Baumann S, Renker M, Bayer RR, Duguay TM, Litwin SE, Varga-Szemes A, Steinberg DH, Yang DH, Kepka C, Persson A, Nieman K, Schoepf UJ. Influence of Coronary Calcium on Diagnostic Performance of Machine Learning CT-FFR: Results From MACHINE Registry. *JACC Cardiovasc Imaging*. 2020; 13(3): 760-770.
148. Thiele H, Kurz T, Feistritzer HJ, Stachel G, Hartung P, Eitel I, Marquetand C, Nef H, Doerr O, Lauten A, Landmesser U, Abdel-Wahab M, Sandri M, Holzhey D, Borger M, Ince H, Oner A, Meyer-Saraei R, Wienbergen H, Fach A, Frey N, König IR, Vonthein R, Ruckert Y, Funkat AK, de Waha-Thiele S, Desch S. Comparison of newer generation self-expandable vs. balloon-expandable valves in transcatheter aortic valve implantation: the randomized SOLVE-TAVI trial. *Eur Heart J*. 2020; 41(20): 1890-1899.
149. Tomaniak M, Chichareon P, Klimczak-Tomaniak D, Takahashi K, Kogame N, Modolo R, Wang R, Ono M, Hara H, Gao C, Kawashima H, Rademaker-Havinga T, Garg S, Curzen N, Haude M, Kochman J, Gori T, Montalescot G, Angiolillo DJ, Capodanno D, Storey RF, Hamm C, Vranckx P, Valgimigli M, Windecker S, Onuma Y, Serruys PW, Anderson R. Impact of renal function on clinical outcomes after PCI in ACS and stable CAD patients treated with ticagrelor: a prespecified analysis of the GLOBAL LEADERS randomized clinical trial. *Clin Res Cardiol*. 2020; 109: 930-943.
150. Tomaniak M, Chichareon P, Modolo R, Takahashi K, Chang CC, Kogame N, Spitzer E, Buszman PE, van Geuns RM, Valkov V, Steinwender C, Geisler T, Prokopczuk J, Sabate M, Zmudka K, Rademaker-Havinga T, Tijssen JGP, Juni P, Hamm C, Steg PG, Onuma Y, Vranckx P, Valgimigli M, Windecker S, Baber U, Anderson R, Dominici M, Serruys PW. Ticagrelor monotherapy beyond one month after PCI in ACS or stable CAD in elderly patients: a pre-specified analysis of the GLOBAL LEADERS trial. *EuroIntervention*. 2020; 15(18): e1605-e1614.



151. Tomaniak M, Chichareon P, Takahashi K, Kogame N, Modolo R, Chang CC, Spitzer E, Neumann FJ, Plante S, Hernández Antolin R, Jambrik Z, Gelev V, Brunel P, Konteva M, Beygui F, Morelle JF, Filipiak KJ, van Geuns RJ, Soliman O, Tijssen J, Rademaker-Havinga T, Storey RF, Hamm C, Steg PG, Windecker S, Onuma Y, Valgimigli M, Serruys PW. Impact of chronic obstructive pulmonary disease and dyspnoea on clinical outcomes in ticagrelor treated patients undergoing percutaneous coronary intervention in the randomized GLOBAL LEADERS trial. *Eur Heart J Cardiovasc Pharmacother.* 2020; 6(4): 222-230.
152. Troidl K, Hammerschick T, Albarran-Juarez J, Jung G, Schierling W, Tonack S, Krüger M, Matuschke B, Troidl C, Schaper W, Schmitz-Rixen T, Preissner KT, Fischer S. Shear Stress-Induced miR-143-3p in Collateral Arteries Contributes to Outward Vessel Growth by Targeting Collagen V- $\alpha$ 2. *Arterioscler Thromb Vasc Biol.* 2020; 40(5): e126-e137.
153. Tzikas S, Boulmpou A, Bakogiannis C, Evangelidou AP, Papadopoulos CE, Vassilikos V, Zafeiropoulos S, Hamilos M, Noutsias M, Tsigkas G, Kanakakis I, Keller T. A proposal for implementation of the chest pain unit model in Greece. *Hellenic J Cardiol.* 2020: In press.
154. Ueki Y, Yamaji K, Barbato E, Nef H, Brugaletta S, Alfonso F, Hill J, Cook S, Burzotta F, Karagiannis A, Windecker S, Raber L. Randomized comparison of optical coherence tomography versus angiography to guide Bioresorbable vascular scaffold implantation: The OPTICO BVS study. *Cardiovasc Revasc Med.* 2020; 21(10): 1244-1250.
155. Valina C, Neumann FJ, Menichelli M, Mayer K, Wöhrle J, Bernlochner I, Aytakin A, Richardt G, Witzenbichler B, Sibbing D, Cassese S, Angiolillo DJ, Kufner S, Liebetrau C, Hamm CW, Xhepa E, Hapfelmeier A, Sager HB, Wustrow I, Joner M, Trenk D, Laugwitz KL, Schunkert H, Schüpke S, Kastrati A. Ticagrelor or Prasugrel in Patients With Non-ST-Segment Elevation Acute Coronary Syndromes. *J Am Coll Cardiol.* 2020; 76(21): 2436-2446.
156. Voigtländer L, Twerenbold R, Schäfer U, Conradi L, Balaban Ü, Bekeredjian R, Ensminger S, Walther T, Beckmann A, Frerker C, Bauer T, Hamm C, Möllmann H, Bleiziffer S. Prognostic Impact of Under weight (Body Mass Index <20 kg/m<sup>2</sup>) in Patients With Severe Aortic Valve Stenosis Undergoing Transcatheter Aortic Valve Implantation or Surgical Aortic Valve Replacement (from the German Aortic Valve Registry [GARY]). *Am J Cardiol.* 2020; 129: 79-86.
157. von Jeinsen B, Ritzen L, Viethier J, Unbehaun C, Weferling M, Liebetrau C, Hamm CW, Rolf A, Keller T. The adipokine fatty-acid binding protein 4 and cardiac remodeling. *Cardiovasc Diabetol.* 2020; 19(1): 117.
158. von Jeinsen B, Short MI, Larson MG, Xanthakis V, McManus DD, Benjamin EJ, Mitchell GF, Aragam J, Cheng S, Vasan RS. Prognostic Significance of Echocardiographic Measures of Cardiac Remodeling. *J Am Soc Echocardiogr.* 2020; 33(1): 72-81.e6.
159. von Jeinsen B, Vasan RS, McManus DD, Mitchell GF, Cheng S, Xanthakis V. Joint influences of obesity, diabetes, and hypertension on indices of ventricular remodeling: Findings from the community-based Framingham Heart Study. *PLoS One.* 2020; 15(12): e0243199.
160. Waechter C, Ausbuettel F, Chatzis G, Fischer D, Nef H, Barth S, Halbfäß P, Deneke T, Kerber S, Divchev D, Schieffer B, Luesebrink U. Analysis of Atrial Fibrillation Treatment Regimes in a Multicenter Cohort of Transcatheter Edge-to-Edge Mitral Valve Repair Patients. *J Interv Cardiol.* 2020; 2020: 6542028.
161. Wang R, Takahashi K, Chichareon P, Gao C, Kogame N, Modolo R, Tomaniak M, Kawashima H, Ono M, Hara H, Schächinger V, Tonev G, Ungi I, Botelho R, Eeckhout E, Hamm C, Jüni P, Vranckx P, Windecker S, Garg S, Van Geuns RJ, Onuma Y, Serruys PW. The impact of pre-procedure heart rate on adverse clinical outcomes in patients undergoing percutaneous coronary intervention: Results from a 2-year follow-up of the GLOBAL LEADERS trial. *Atherosclerosis.* 2020; 303: 1-7.
162. Weipert KF, Bauer T, Nef HM, Hochadel M, Weidinger F, Gitt AK, Zeymer U, Hamm CW. Incidence and outcome of peri-procedural cardiogenic shock: results from the international Euro Heart Survey PCI registry. *Eur Heart J Acute Cardiovasc Care.* 2020; 9(2): 120-127.
163. Wiebe J, Baquet M, Dörr O, Hoppmann P, Jochheim D, Rheude T, Boeder N, Grundman D, Blachutzik F, Theiss H, Cassese S, Hofmann FJ, Gschwendtner S, Elsasser A, Massberg S, Hamm C, Laugwitz KL, Byrne RA, Mehilli J, Kastrati A, Nef H. Long-term follow-up and predictors of target lesion failure after implantation of everolimus-eluting bioresorbable scaffolds in real-world practice. *Int J Cardiol.* 2020; 312: 42-47.
164. Wiebe J, Hofmann FJ, Dörr O, Bauer T, Boeder N, Liebetrau C, Blachutzik F, Möllmann H, Elsässer A, Achenbach S, Hamm CW, Nef HM. Five-year follow-up of patients who underwent everolimus-eluting bioresorbable scaffold implantation. *Catheter Cardiovasc Interv.* 2020: In press.

165. Yoon SH, Kim WK, Dhoble A, Milhorini Pio S, Babaliaros V, Jilaihawi H, Pilgrim T, De Backer O, Bleiziffer S, Vincent F, Schmitz T, Butter C, Kamioka N, Eschenbach L, Renker M, Asami M, Lazkani M, Fujita B, Birs A, Barbanti M, Pershad A, Landes U, Oldemeyer B, Kitamura M, Oakley L, Ochiai T, Chakravarty T, Nakamura M, Ruile P, Deuschl F, Berman D, Modine T, Ensminger S, Kornowski R, Lange R, McCabe JM, Williams MR, Whisenant B, Delgado V, Windecker S, Van Belle E, Sondergaard L, Chevalier B, Mack M, Bax JJ, Leon MB, Makkar RR. Bicuspid Aortic Valve Morphology and Outcomes After Transcatheter Aortic Valve Replacement. *J Am Coll Cardiol.* 2020; 76(9): 1018-1030.
166. Yousif N, Niederseer D, Davies A, El Issa M, Sidia B, Noor HA, Amin H, Räber L, Gencer B, Klingenberg R, Windecker S, Mach F, Matter CM, Nanchen D, Lüscher TF, Obeid S. Impact of malignancy on clinical outcomes in patients with acute coronary syndromes. *Int J Cardiol.* 2020; In press.
167. Zaczekiewicz M, Wein B, Graf M, Zimmermann O, Kastner J, Wöhrle J, Thomas R, Hamm C, Torzewski J. Two year efficacy and safety of small versus large ABSORB bioresorbable vascular scaffolds of  $\leq 18$  mm device length: A subgroup analysis of the German-Austrian ABSORB ReglStRy (GABI-R). *Int J Cardiol Heart Vasc.* 2020; 27: 100501.
168. Zhang D, Song X, Chen Y, Raposeiras-Roubin S, Abu-Assi E, Henriques JPS, D'Ascenzo F, Saucedo J, Gonzalez-Juanatey JR, Wilton SB, Kikkert WJ, Nunez-Gil I, Ariza-Sole A, Alexopoulos D, Liebetrau C, Kawaji T, Moretti C, Huczek Z, Nie S, Fujii T, Correia L, Kawashiri MA, Garcia-Acuna JM, Southern D, Alfonso E, Terol B, Garay A, Xanthopoulou I, Osman N, Möllmann H, Shiomi H, Giordana F, Kowara M, Filipiak K, Wang X, Yan Y, Fan J, Ikari Y, Nakahashi T, Sakata K, Yamagishi M, Kalpak O, Kedev S. Outcome of Patients With Prior Stroke/Transient Ischemic Attack and Acute Coronary Syndromes. *Angiology.* 2020; 71(4): 324-332.
169. Zhang D, Song X, Chen Y, Raposeiras-Roubin S, Abu-Assi E, Henriques JPS, D'Ascenzo F, Saucedo J, Gonzalez-Juanatey JR, Wilton SB, Kikkert WJ, Nuñez-Gil I, Ariza-Sole A, Alexopoulos D, Liebetrau C, Kawaji T, Moretti C, Huczek Z, Nie S, Fujii T, Correia L, Kawashiri MA, Garcia-Acuña JM, Southern D, Alfonso E, Terol B, Garay A, Xanthopoulou I, Osman N, Möllmann H, Shiomi H, Giordana F, Kowara M, Filipiak K, Wang X, Yan Y, Fan J, Ikari Y, Nakahashi T, Sakata K, Yamagishi M, Kalpak O, Kedev S. Antithrombotic Therapy in Patients With Prior Stroke/Transient Ischemic Attack and Acute Coronary Syndromes. *Angiology.* 2020; 71(6): 576-577.
170. Zhang D, Song X, Raposeiras-Roubin S, Abu-Assi E, Henriques JPS, D'Ascenzo F, Saucedo J, Gonzalez-Juanatey JR, Wilton SB, Kikkert WJ, Nuñez-Gil I, Ariza-Sole A, Alexopoulos D, Liebetrau C, Kawaji T, Moretti C, Huczek Z, Nie S, Fujii T, Correia L, Kawashiri MA, Southern D, Kalpak O. The impact of optimal medical therapy on patients with recurrent acute myocardial infarction: Subanalysis from the BleeMACS study. *Int J Cardiol.* 2020; 318: 1-6.

## Buchartikel / Bücher

- **Dr. med. Andreas Rieth**  
Buch (Herausgeber) und Kapitel:  
„Pathophysiologie des Schocks“ in *Mechanische Unterstützung im akuten Kreislaufversagen*.  
Boeken, Assmann, Klotz, Born, Rieth, Schmid (Hersg.); pp. 13-30, Springer Verlag, 2020.

## Preise

- **Dr. med. Won-Keun Kim**  
1. Platz, Publikationspreis der Freunde und Förderer der Kerckhoff-Klinik für  
Lanz J, Kim WK, Walther T, Burgdorf C, Möllmann H, Linke A, Redwood S, Thilo C, Hilker M, Joner M, Thiele H, Conzelmann L, Conradi L, Kerber S, Schymik G, Prendergast B, Husser O, Stortecky S, Heg D, Juni P, Windecker S, Pilgrim T. Safety and efficacy of a self-expanding versus a balloon-expandable bioprosthesis for transcatheter aortic valve replacement in patients with symptomatic severe aortic stenosis: a randomised non-inferiority trial. *Lancet* 2019;394:1619-1628.
- **PD Dr. med. Ulrich Fischer-Rasokat**  
2. Platz, Publikationspreis der Freunde und Förderer der Kerckhoff-Klinik für  
Fischer-Rasokat U, Renker M, Liebetrau C, van Linden A, Arsalan M, Weferling M, Rolf A, Doss M, Möllmann H, Walther T, Hamm CW, Kim WK. 1-Year Survival After TAVR of Patients With Low-Flow, Low-Gradient and High-Gradient Aortic Valve Stenosis in Matched Study Populations. *JACC Cardiovasc Interv* 2019;12:752-763.
- **Univ.-Prof. Dr. med. Till Keller, FESC**  
Laura Bouillon (cand. med.)  
Peter Scriba Promotionsstipendium 2020  
der Deutschen Gesellschaft für Innere Medizin e.V. (DGIM)

## Publikationen 2020 - Elektrophysiologie

### Originalarbeiten & Übersichtsartikel

1. Kuniss M, Akkaya E, Berkowitsch A, Zaltsberg S, Greiss H, Rechner M, Weipert K, Hain A, Hamm CW, Neumann T. Left atrial roof ablation in patients with persistent atrial fibrillation using the second-generation cryoballoon: benefit or wasted time? *Clin Res Cardiol.* 2020 Jun;109(6):714-724.
2. Kuck KH, Lebedev DS, Mikhaylov EN, Romanov A, Gellér L, Kalējs O, Neumann T, Davtyan K, On YK, Popov S, Bongiorno MG, Schlüter M, Willems S, Ouyang F. Catheter ablation or medical therapy to delay progression of atrial fibrillation: the randomized controlled atrial fibrillation progression trial (ATTEST). *Europace.* 2020 Dec 17
3. Hermida JS, Chen J, Meyer C, Iacopino S, Arena G, Pavlovic N, Velagic V, Healey S, Packer DL, Pitschner HF, de Asmundis C, Kuniss M, Chierchia GB. Cryoballoon catheter ablation versus antiarrhythmic drugs as a first-line therapy for patients with paroxysmal atrial fibrillation: Rationale and design of the international Cryo-FIRST study. *Am Heart J.* 2020 Apr;222:64-72.
4. Sperzel J, Hamm CW, Hain A. Over- and undersensing-pitfalls of arrhythmia detection with implantable devices and wearables. *Herzschrittmacherther Elektrophysiol.* 2020 Sep;31(3):273-287.
5. Tripp C, Burch AE, Erath JW, Hain A, Sears SF. Physical Activity in Adults With Wearable Cardioverter Defibrillators in the Post-Myocardial Infarction Period. *J Cardiopulm Rehabil Prev.* 2020 May;40(3):164-166.





# Herzzentrum Herzchirurgie

Direktor: Univ.- Prof. Dr. med. Y. H. Choi



## PUBLIKATIONEN 2020

### Originalarbeiten & Übersichtsartikel

1. Kubin T, Cetinkaya A, Kubin N, Bramlage P, Sen-Hild B, Gajawada P, Akintürk H, Schönburg M, Schaper W, Choi YH, Barancik M, Richter M. The MEK/ERK Module Is Reprogrammed in Remodeling Adult Cardiomyocytes. *Int J Mol Sci.* 2020 Sep 1;21(17):6348. doi: 10.3390/ijms21176348.PMID: 32882982
2. Cetinkaya A, Berge B, Sen-Hild B, Troidl K, Gajawada P, Kubin N, Valeske K, Schranz D, Akintürk H, Schönburg M, Kubin T, Choi YH, Richter M. Radixin Relocalization and Nonmuscle  $\alpha$ -Actinin Expression Are Features of Remodeling Cardiomyocytes in Adult Patients with Dilated Cardiomyopathy. *Dis Markers.* 2020 Jul 22;2020:9356738. doi: 10.1155/2020/9356738. eCollection 2020.PMID: 32774516
3. Cetinkaya A, Zerriouh M, Liakopoulos OJ, Hein S, Siemons T, Bramlage P, Schönburg M, Choi YH, Richter M. Pulmonary herniation after minimally invasive cardiac surgery: review and implications from a series of 20 cases. *J Surg Case Rep.* 2020 Nov 10;2020(11):rjaa415. doi: 10.1093/jscr/rjaa415. eCollection 2020 Nov.PMID: 33214867
4. Cetinkaya A, Zerriouh M, Liakopoulos OJ, Hein S, Siemons T, Bramlage P, Schönburg M, Choi YH, Richter M. Minimally invasive left atrial appendage (LAA) clip insertion after challenging LAA occluder implantation to minimize the risk of stroke. *J Surg Case Rep.* 2020 Nov 27;2020(11):rjaa432. doi: 10.1093/jscr/rjaa432. eCollection 2020 Nov.PMID: 33269069
5. Cetinkaya A, Ebraheem E, Bramlage K, Hein S, Bramlage P, Choi YH, Schönburg M, Richter M. Long-term results of endoclamping in patients undergoing minimally invasive mitral valve surgery where external aortic clamping cannot be used - a propensity matched analysis. *J Cardiothorac Surg.* 2020 Oct 14;15(1):313. doi: 10.1186/s13019-020-01363-0.PMID: 33054852
6. Weber C, Esser M, Eghbalzadeh K, Sabashnikov A, Djordjevic I, Maier J, Merkle J, Choi YH, Madershahian N, Liakopoulos O, Deppe AC, Wahlers TCW Levosimendan Reduces Mortality and Low Cardiac Output Syndrome in Cardiac Surgery. *Thorac Cardiovasc Surg.* 2020 Aug;68(5):401-409. doi: 10.1055/s-0039-3400496. Epub 2019 Nov 26.PMID: 31770777
7. Schlachtenberger G, Deppe AC, Gerfer S, Choi YH, Zerriouh M, Liakopoulos O, Wahlers TCW. Major Bleeding after Surgical Revascularization with Dual Antiplatelet Therapy *Thorac Cardiovasc Surg.* 2020 Dec;68(8):714-722. doi: 10.1055/s-0040-1710508. Epub 2020 Jun 27.PMID: 32593177
8. Liakopoulos OJ, Gerfer S, Rahmanian P, Eghbalzadeh K, Djordjevic I, Schlachtenberger G, Zerriouh M, Mader N, Choi YH, Wahlers T. Rapid Deployment Aortic Valve Replacement with the Perceval S and Intuity Elite. *Thorac Cardiovasc Surg.* 2020 Oct 25. doi: 10.1055/s-0040-1716892. Online ahead of print.PMID: 33099764
9. Kuhn EW, Liakopoulos OJ, Choi YH, Rahmanian P, Eghbalzadeh K, Slottosch I, Deppe AC, Wahlers TCW Preoperative Statin Therapy for Atrial Fibrillation and Renal Failure after Cardiac Surgery. *Thorac Cardiovasc Surg.* 2021 Mar;69(2):141-147. doi: 10.1055/s-0040-1710322. Epub 2020 Jun 7.PMID: 32506416
10. Liakopoulos OJ, Slottosch I, Wendt D, Welp H, Schiller W, Martens S, Choi YH, Welz A, Pisarenko J, Neuhäuser M, Jakob H, Ruhparwar A, Wahlers T, Thielmann M. Surgical revascularization for acute coronary syndromes: a report from the North Rhine-Westphalia surgical myocardial infarction registry. *Eur J Cardiothorac Surg.* 2020 Dec 1;58(6):1137-1144. doi: 10.1093/ejcts/ezaa260.PMID: 33011789
11. Kim WK, Hengstenberg C, Hilker M, Schäfer U, Rudolph TK, Toggweiler S, Rück A, Søndergaard L, Conradi L, Doss M, Hamm C, Walther T, Möllmann H; Transcatheter aortic valve implantation with the ACURATE neo valve: indications, procedural aspects and clinical outcomes. *EuroIntervention.* 2020 Apr 3;15(18):e1571-e1579.
12. Dangas GD, Tijssen JGP, Wöhrle J, Søndergaard L, Gilard M, Möllmann H, Makkar RR, Herrmann HC, Giustino G, Baldus S, De Backer O, Guimarães AHC, Gullestad L, Kini A, von Lewinski D, Mack M, Moreno R, Schäfer U, Seeger J, Tchétché D, Thomitzek K, Valgimigli M, Vranckx P, Welsh RC, Wildgoose P, Volkl AA, Zazula A, van Amsterdam RGM, Mehran R, Doss M, Windecker S; GALILEO Investigators. A Controlled Trial of Rivaroxaban after Transcatheter Aortic-Valve Replacement. *N Engl J Med.* 2020 Jan 9;382(2):120-129.
13. Kim WK, Liebetrau C, Fischer-Rasokat U, Renker M, Rolf A, Doss M, Möllmann H, Nef H, Walther T, Hamm CW. Challenges of recognizing bicuspid aortic valve in elderly patients undergoing TAVR. *Int J Cardiovasc Imaging.* 2020 Feb;36(2):251-256.



14. Pecha S, Ziegelhoeffer T, Yildirim Y, Choi YH, Willems S, Reichenspurner H, Burger H, Hakmi S. Safety and efficacy of transvenous lead extraction of very old leads. *Interact Cardiovasc Thorac Surg* 2020 Nov 30;ivaa278.
15. Burger H, Richter M, Classen K, Schönburg M, Choi YH, Ziegelhoeffer T. Transvenous Endomyocardial Biopsy: A Comparison of two Approaches. *Transpl. Proceed.* 2020; DOI: 10.1016/j.transproceed.2020.07.006
16. Burger H, Pecha S, Hakmi S, Opalka B, Schoenburg M, Ziegelhoeffer T. Five-year follow-up of transvenous and epicardial left-ventricular leads: Experience with more than one thousand leads. *Interact Cardiovasc Thorac Surg* 2020; 30(1): 74-80
17. Ziegelhoeffer T, Pecha S, Rahmani R, Thaqi N, Ackermann X, Hakmi S, Choi YH, Burger H. Probability of sinus rhythm conversion and maintenance in cardiac re-synchronization therapy patients with atrial fibrillation during 5-year follow-up. *J Cardiovasc Electrophysiol* 2020; 31(9): 2393-2402.
18. Kihn C, Rellecke P, Joskowiak D, Erler S, Garbade J, Eifert S, Grieshaber P, Hain A, Burger H, Knaut M. Multicenter experience with wearable cardioverter defibrillators following cardiac surgery. *Thorac Cardiovasc Surg* 2020; 68(S1): S72
19. Chung D, Pecha S, Burger H, Miller V, Madej T et al. Comprehensive analysis of pacemaker patients with and without abandoned leads undergoing transvenous lead extraction: A GALLERY subgroup analysis. *Europace* 2020; 22(S1): i364
20. Heiko Burger, Manfred Richter, Katharina Classen, Markus Schönburg, Yeong-Hoon Choi, Tibor Ziegelhoeffer Transvenous Endomyocardial Biopsy: A Comparison of 2 Approaches <https://doi.org/10.1016/j.transproceed.2020.07.006>
21. Cetinkaya A, Ganchewa N, Hein S, Bramlage K, Bramlage P, Schönburg M, Richter M Long-term outcomes of concomitant tricuspid valve repair in patients undergoing mitral valve surgery. *J Cardiothorac Surg.* 2020;15(1):210.
22. Kubin N, Richter M\*, Sen-Hild B, Akintürk H, Schönburg M, Kubin T, Cetinkaya A. (equal contribution) Macrophages Represent the Major Pool of IL-7R $\alpha$  Expressing Cells in Patients With Myocarditis Cytokine. 2020 Mar 20;130:155053.
23. Cetinkaya, A, Bär, S, Hein, S, Bramlage, K, Bramlage, P, Schönburg, M, Richter, M Mitral valve repair for posterior leaflet prolapse: Longterm comparison of loop implantation vs resection. *JCardSurg.* 2020; 35: 11– 20. <https://doi.org/10.1111/jocs.14388>
24. Van Linden A, Hecker F, Lehmann-Grube J, Arsalan M, Richter M, Matzke B, Holubec T, Walther T. Randomized Trial of 2 Endoscopic Radial Artery Harvesting Devices-Immunofluorescence Assessment *Ann Thorac Surg.* 2020 Feb 10;S0003-4975(20)30182-X.
25. Weber C, Rahmanian PB, Nitsche M, Gassa A, Eghbalzadeh K, Hamacher S, Merkle J, Deppe AC, Sabashnikov A, Kuhn EW, Liakopoulos OJ, Wahlers T. Higher incidence of perivalvular abscess determines perioperative clinical outcome in patients undergoing surgery for prosthetic valve endocarditis. *BMC Cardiovasc Disord.* 2020 Feb 3;20(1):47.
26. Djordjevic I, Rahmanian P, Zeriuoh M, Eghbalzadeh K, Sangsari S, Merkle J, Kuhn E, Deppe AC, Weber C, Sabashnikov A, Liakopoulos O, Wahlers T. Treatment of cardiogenic shock in peripartum cardiomyopathy: Case series from a tertiary ECMO center. *J Card Surg.* 2020 Jan;35(1):254-257.
27. Ahmad W, Liakopoulos OJ, Mylonas S, Wegner M, Brunkwall J, Dorweiler B. Long-Term Outcomes after Thoracic Endovascular Aortic Repair Using Chimney Grafts for Aortic Arch Pathologies: 10 Years of Single-Center Experience. *Ann Vasc Surg.* 2020 Sep 12;S0890-5096(20)30814-1.
28. Caliskan E, de Souza DR, Böning A, Liakopoulos OJ, Choi YH, Pepper J, Gibson CM, Perrault LP, Wolf RK, Kim KB, Emmert MY. Saphenous vein grafts in contemporary coronary artery bypass graft surgery. *Nat Rev Cardiol.* 2020 Mar;17(3):155-169.
29. Liakopoulos OJ, Choi YH. Commentary: Progressive aortic valve regurgitation after replacement of the dissected ascending aorta: An unsolved dilemma. *J Thorac Cardiovasc Surg.* 2020 Dec;160(6):1432-1433.
30. Liakopoulos OJ. Commentary: Spinal cord injury after the frozen elephant trunk procedure: Are we really safe now? *J Thorac Cardiovasc Surg.* 2020 Apr;159(4):1199-1200.
31. Liakopoulos OJ. Commentary: Extracellular matrix tube graft in the mitral position: It's feasible, but is it durable? *J Thorac Cardiovasc Surg.* 2020 Jul;160(1):113-114. doi: 10.1016/j.jtcvs.2019.08.096. Epub 2019 Sep 20. PMID: 31627950.
32. Liakopoulos OJ, Choi YH. Commentary: Tricuspid valve disease at the time of surgical aortic valve replacement: Treat it or leave it? *J Thorac Cardiovasc Surg.* 2020 Mar 9;S0022-5223(20)30545-6.
33. Liakopoulos OJ. Commentary: Two-year outcomes after surgical aortic valve replacement with a new bioprostheses-The data are still good! *J Thorac Cardiovasc Surg.* 2020 Aug;160(2):382-383.

34. Liakopoulos OJ, Choi YH. Commentary: Minimally invasive coronary bypass or percutaneous coronary intervention for complex left anterior descending artery stenosis: A never-ending battle. *J Thorac Cardiovasc Surg.* 2020 Jul 10;S0022-5223(20)32008-0.
35. Liakopoulos OJ. Commentary: Early surgery versus conservative management of asymptomatic severe aortic stenosis: Is it time to rethink the guidelines? *J Thorac Cardiovasc Surg.* 2020 Aug 20;S0022-5223(20)32423-5.
36. Liakopoulos OJ. Commentary: Prosthesis-Patient Mismatch Increases Early and Late Mortality Low-Risk Isolated Aortic Valve Replacement: Does it Finally Matter? *Semin Thorac Cardiovasc Surg.* 2020 Jun 28;S1043-0679(20)30211-2.
37. Liakopoulos OJ. Commentary: Postconditioning of the injured spinal cord: Can we do more? *J Thorac Cardiovasc Surg.* 2020 Mar;159(3):827-828.
38. Djordjevic I, Eghbalzadeh K, Heinen S, Schlachtenberger G, Gerfer S, Sabashnikov A, Merkle J, Weber C, Kuhn E, Zeriuoh M, Rahmanian P, Mader N, Liakopoulos OJ, Wahlers T. Risk Factors Associated with In-Hospital Mortality for Patients with Acute Abdomen After Cardiac Surgery. *World J Surg.* 2020 Jan;44(1):277-284.
39. Liakopoulos OJ, Kroener A, Sabashnikov A, Zeriuoh M, Ahmad W, Choi YH, Wahlers T. Single-center experience with the frozen elephant trunk procedure in 111 patients with complex aortic disease. *J Thorac Dis.* 2020 Oct;12(10):5387-5397.
40. Djordjevic I, Eghbalzadeh K, Sabashnikov A, Deppe AC, Kuhn EW, Seo J, Weber C, Merkle J, Adler C, Rahmanian PB, Liakopoulos OJ, Mader N, Kuhn-Regnier F, Zeriuoh M, Wahlers T. Single center experience with patients on veno arterial ECMO due to postcardiotomy right ventricular failure. *J Card Surg.* 2020 Jan;35(1):83-88.
41. Weber C, Rahmanian PB, Nitsche M, Gassa A, Eghbalzadeh K, Hamacher S, Merkle J, Deppe AC, Sabashnikov A, Kuhn EW, Liakopoulos OJ, Wahlers T. Higher incidence of perivalvular abscess determines perioperative clinical outcome in patients undergoing surgery for prosthetic valve endocarditis. *BMC Cardiovasc Disord.* 2020 Feb 3;20(1):47.
42. Djordjevic I, Rahmanian P, Zeriuoh M, Eghbalzadeh K, Sangsari S, Merkle J, Kuhn E, Deppe AC, Weber C, Sabashnikov A, Liakopoulos O, Wahlers T. Treatment of cardiogenic shock in peripartum cardiomyopathy: Case series from a tertiary ECMO center. *J Card Surg.* 2020 Jan;35(1):254-257.
43. Ahmad W, Liakopoulos OJ, Mylonas S, Wegner M, Brunkwall J, Dorweiler B. Long-Term Outcomes after Thoracic Endovascular Aortic Repair Using Chimney Grafts for Aortic Arch Pathologies: 10 Years of Single-Center Experience. *Ann Vasc Surg.* 2020 Sep 12;S0890-5096(20)30814-1.





# Rheumazentrum

## Rheumatologie & Klinische Immunologie

Direktor: Univ.- Prof. Dr. med. U. Müller-Ladner

## Physikalische Medizin & Osteologie

Direktor: Univ.- Prof. Dr. med. U. Lange



## PUBLIKATIONEN 2020

### Originalarbeiten & Übersichtsartikel

1. Belz D, Moinzadeh P, Riemekasten G, Henes J, Müller-Ladner U, Blank N, Koetter I, Siegert E, Pfeiffer C, Schmalzing M, Zeidler G, Schmeiser T, Worm M, Guenther C, Susok L, Kreuter A, Sunderkoetter C, Juche A, Aberer E, Gaebelein-Wissing N, Ramming A, Kuhr K, Hunzelmann N.  
Large variability of frequency and type of physical therapy in patients of the German Network for Systemic Sclerosis. *Arthritis Care Res* 2020; 72:1041-1048
2. Blagojevic J, Abignano G, Avouac J, Cometi L, Frerix M, Bellando-Randone S, Guiducci S, Bruni C, Huscher D, Jaeger VK, Lóránd V, Maurer B, Nihtyanova S, Riemekasten G, Siegert E, Tarner IH, Vettori S, Walker UA, Cziráj L, Denton CP, Distler O, Allanore Y, Müller-Ladner U, Moggi-Pignone A, Matucci-Cerinic M, Del Galdo F; EUSTAR co-workers. Use of vasoactive/vasodilating drugs for systemic sclerosis (SSc)-related digital ulcers (DUs) in expert tertiary centres: results from the analysis of the observational real-life DeSScIPHER study. *Clin Rheumatol* 2020; 39:27-36
3. Braun J, Kiltz U, Müller-Ladner U. Is complete immunity against measles a realistic target for patients with rheumatic diseases and how can it possibly be achieved? *Z Rheumatol* 2020; 79:922-928
4. Bütikofer L, Varisco PA, Distler O, Kowal-Bielecka O, Allanore Y, Riemekasten G, Villiger PM, Adler S; EUSTAR collaborators (..Müller-Ladner U..). ACE inhibitors in SSc patients display a risk factor for scleroderma renal crisis-a EUSTAR analysis. *Arthritis Res Ther* 2020; 59:22
5. Decker E, Basten O, Librizzi D, Müller-Ladner U. Hand ischemia and increased CRP level in a 75-year-old female patient. *Z Rheumatol* 2020; 79: 280-285
6. Dischereit G, Klemm P, Lange U. Wirkung der Kältekammer bei entzündlich-rheumatischen Erkrankungen. *arthritis + rheuma* 2020; 40:25-30
7. Dischereit G, Lange U. Rheuma und Knochenstoffwechsel. *J Miner Stoffwechsel Muskuloskeletal Erkrank* 2020; 27:52-57
8. Dischereit G, Klemm P, Lange U. Wirksamkeit der Kältekammer bei entzündlich-rheumatischen Erkrankungen. *Morbus-Bechterew- Journal* 2020; 163:16-18
9. Distler O, Assassi S, Cottin V, Cutolo M, Danoff SK, Denton CP, Distler JHW, Hoffmann-Vold AM, Johnson SR, Müller-Ladner U, Smith V, Volkman ER, Maher TM. Predictors of progression in systemic sclerosis patients with interstitial lung disease. *Eur Respir J.* 2020; 55:1902026
10. Frommer KW, Neumann E, Müller-Ladner U. Role of adipokines in systemic sclerosis pathogenesis. *Eur J Rheumatol* 2020; 7(Suppl 3):165-172
11. Furer V, Rondaan C, Heijstek MW, Agmon-Levin N, van Assen S, Bijl M, Breedveld FC, D'Amelio R, Dougados M, Kapetanovic MC, van Laar JM, de Thurah A, Landewé RB, Molto A, Müller-Ladner U, Schreiber K, Smolar L, Walker J, Warnatz K, Wulfraat NM, Elkayam O. 2019 update of EULAR recommendations for vaccination in adult patients with autoimmune inflammatory rheumatic diseases. *Ann Rheum Dis* 2020; 79:39-52
12. Gutenbrunner C, Best N, Glaesener JJ, Lange U, Lemhöfer C, Lichti G, Liebl M, Reishauer A, Schwarzkopf S, Steinmetz A, Sturm C, Weigl M, Winkelmann A, Krischak G. Warum der rehabilitativen Versorgung auch und gerade während der COVID-19 Pandemie besondere Beachtung geschenkt werden muss: Ein Statement der Deutschen Gesellschaft für Physikalische und Rehabilitative Medizin (DGPRM). *Phys Med Rehab Kuror* 2020; 30:283-286
13. Gutenbrunner C, Egen C, Glaesener JJ, Lange U, Liebl M, Reißhauer A, Schwarzkopf S, Steinmetz A, Sturm C, Weigl M, Krischak G. Notwendigkeit der Verankerung der Physikalischen und Rehabilitativen Medizin an Universitäten – ein Positionspapier der Deutschen Gesellschaft für Physikalische und Rehabilitative Medizin (DGPRM). *Phys Med Rehab Kuror* 2020 , DOI 10.1055/a-1266-7381

15. Hasseli R, Pfeiffer S, Kappesser J, Hermann C, Richter-Bastian K, Sattler T, Tschernatsch M, Hoffmann U, Müller-Ladner U, Lange U. Model project on interdisciplinary university teaching - medical and psychology students learn together for the first time. *Z Rheumatol* 2020; 79:200-202
16. Hasseli R, Frommer KW, Schwarz M, Hülser ML, Schreyäck C, Arnold M, Diller M, Tarner IH, Lange U, Pons-Kühnemann J, Schönburg M, Rehart S, Müller-Ladner U, Neumann E.. Adipokines and Inflammation Alter the Interaction Between Rheumatoid Arthritis Synovial Fibroblasts and Endothelial Cells. *Front Immunol* 2020; 11:925
17. Hasseli R, Müller-Ladner U, Schmeiser T, Hoyer BF, Krause A, Lorenz H-M, Regierer AC, Richter JG, Strangfeld A, Voll RE, Schulze-Koops H, Specker C\* for the COVID-19 Task Force of the German Society for Rheumatology. The national registry for patients with inflammatory rheumatic diseases (IRD) infected with SARS-CoV-2 in Germany (ReCoVery): A valuable mean to gain rapid and reliable knowledge of the clinical course of SARS-CoV-2 infections in patients with IRD. *RMD open* 2020; 6:e001332
18. Hudowenz O, De Groot K, Müller-Ladner U, Lange U, Klemm P. 80-jähriger dialysepflichtiger Patient mit Schwellungen der Gelenke. *Nephrologe* 2020; 15:105-109
19. Hudowenz O, Lange U, Klemm P. Mediquiz: 59-jährige Patientin mit plantaren Pusteln und Brustschmerzen. *Dtsch Med Wochenschr* 2020; 145:481-482
20. Hudowenz O, Müller-Ladner U, Klemm P. B symptoms and gastric pain. *Dtsch Arztebl Int* 2020; 117:420, 2020
21. Hudowenz O, Klemm P, Lange U, Rolf A, Schultheiss HP, Hamm C, Müller-Ladner U, Wegner F. Case report of severe PCR-confirmed COVID-19 myocarditis in a European patient manifesting in mid January 2020. *Eur Heart J Case Rep* 2020; 4:1-6
22. Hudowenz O, Lange U, Klemm P. 74-jähriger Patient mit Nasenbluten und Hämoptysen. *Dtsch Med Wochenschr* 2020; 142:961-962
23. Hudowenz O, Klemm P, Lange U, Müller-Ladner U. Widespread soft tissue calcification in systemic sclerosis, polymyositis, and polyarthritis. *The Lancet* 2020, Vol 367 (accepted, in press)
24. Hughes M, Heal C, Siegert E, Hachulla E, Airò P, Riccardi A, Distler O, Matucci-Cerinic M; EUSTAR Collaborators (...Müller-Ladner U...) Significant weight loss in systemic sclerosis: a study from the EULAR Scleroderma Trials and Research (EUSTAR) database. *Ann Rheum Dis* 2020; 79:1123-1125
25. Jaeger VK, Tikly M, Xu D, Siegert E, Hachulla E, Airò P, Valentini G, Matucci Cerinic M, Distler O, Cozzi F, Carreira P, Allanore Y, Müller-Ladner U, Ananieva LP, Balbir-Gurman A, Distler JHW, Cziráková L, Li M, Henes J, Jimenez SA, Smith V, Damjanov N, Denton CP, DelGaldo F, Saketkoo LA, Walker UA; EUSTAR co-authors. Racial differences in systemic sclerosis disease presentation: a European Scleroderma Trials and Research group study. *Rheumatology* 2020; 59:1684-1694
26. Khanna D, Lin CJF, Furst DE, Goldin J, Kim G, Kuwana M, Allanore Y, Matucci-Cerinic M, Distler O, Shima Y, van Laar JM, Spotswood H, Wagner B, Siegel J, Jahreis A, Denton CP; focuSSced investigators (...Müller-Ladner U). Tocilizumab in systemic sclerosis: a randomised, double-blind, placebo-controlled, phase 3 trial. *Lancet Respir Med* 2020; 8:963-974
27. Klemm P, Müller-Ladner U, Tarner IH, Lange U, Hudowenz O. Belimumab reduces antiphospholipid antibodies in primary triple-positive antiphospholipid syndrome. *Autoimmun Rev* 2020; 19:102594
28. Klemm P, Hudowenz O, Asendorf T, Dischereit G, Müller-Ladner U, Lange U, Tarner IH. Evaluation of a special concept of physical therapy in spondyloarthritis: German multimodal rheumatologic complex treatment for spondyloarthritis. *Clin Rheumatol* 2020; 39:1513-1520
29. Klemm P, Dischereit G, Lange U. Genetic predisposition for adult lactose intolerance and relation to marker of bone metabolism and bone mineral density in Turkish immigrants living in Germany. *J Bone Miner Metabol* 2020; 38:378-384
30. Klemm P, Landvogt R, Lange U. Mediquiz: 51-jähriger Patient mit Akrozyanose. *Dtsch Med Wochenschr* 2020; 145: 187-188

31. Klemm P, Eichelmann M, Aykara I, Hudowenz O, Dischereit G, Lange U. Serial locally applied water-filtered infrared A radiation in axial spondyloarthritis – a randomized controlled trial. *Int J Hyperthermia* 2020; 37(1):965-970
32. Klemm P, Hudowenz O, Asendorf T, Dischereit G, Müller-Ladner U, Tarner ICH, Lange U. Multimodale rheumatologische Komplexbehandlung – Von der Konzeption erfolgreich in die Klinikrealität? *Phys Med Rehab Kuror* 2020; 30:317-326
33. Klemm P, Hudowenz O, Asendorf T, Dischereit G, Müller-Ladner U, Lange U, Tarner I. Multimodal physical therapy for treating primary and secondary fibromyalgia – German multimodal rheumatologic complex treatment. *Eur J Physiotherapy* 2020; DOI 10.1080/21679169.2020.1821767 (online published 24.09.2020)
34. Klemm P, Becker J, Dischereit G, Asendorf T, Neumann E, Müller-Ladner U, Lange U. Serial whole-body cryotherapy in fibromyalgia is effective and alters cytokine profiles. *Advances in Rheumatology* 2020 (accepted, in press)
35. Klemm P, Lange U. Multimodale rheumatologische Komplexbehandlung – eine Übersicht. *Internistische Praxis* 2020 (accepted, in press)
36. Klemm P, von Gerlach S, Dischereit G, Lange U. Morbus Paget des Knochens – eine aktuelle Übersicht zu Klinik, Diagnostik und Therapie. *Z Rheumatol* 2020; (in press, online 8.9.2020)
37. Krusche M, Klemm P, Grahammer M, Mucke J, Vossen D, Kleyer A, Sewerin P, Knitza J. Acceptance, Usage, and Barriers of Electronic Patient-Reported Outcomes Among German Rheumatologists: Survey Study *JMIR Mhealth Uhealth* 2020;8(7):e18117
38. Kneitz C, Müller-Ladner U. Die wichtigsten Impfungen bei Patienten mit rheumatischen Erkrankungen. *Z Rheumatol* 2020; 79:855-864
39. Kracht M, Müller-Ladner U, Schmitz L. Mutual regulation of metabolic processes and proinflammatory NF- $\kappa$ B signaling. *J Allerg Clin Immunol* 2020;146:694-705
40. Lambova SN, Müller-Ladner U. Inhomogeneity of capillaroscopic findings in systemic sclerosis. *Int J Rheum Dis* 2020; 23:207-215
41. Landewé RB, Machado PM, Kroon F, Bijlsma HW, Burmester GR, Carmona L, Combe B, Galli M, Gossec L, Iagnocco A, Isaacs JD, Mariette X, McInnes I, Müller-Ladner U, Openshaw P, Smolen JS, Stamm TA, Wiek D, Schulze-Koops H. EULAR provisional recommendations for the management of rheumatic and musculoskeletal diseases in the context of SARS-CoV-2. *Ann Rheum Dis* 2020; 79:851-858
42. Lange U, Dischereit G, Klemm P. Hyperostosis corticalis generalisata – Worth-Syndrom. *Akt Rheumatol* 2020; 45:227-231
43. Lange U. Alter schützt vor Rheuma nicht.....Nicht immer steckt eine rheumatoide Arthritis dahinter. *Orthopädie & Rheuma* 2020; 23(4):66
44. Lange U, Fetaj S, Ehnert M, Klemm P, Dischereit G. Serial mud packs induce anti-inflammatory effects in knee osteoarthritis – a randomized, prospective clinical study. *Phys Med Rehab Kuror* 2020; DOI: 10.1055/a-1217-0749 (online 05.08.2020)
45. Lange U, Klemm P, Dischereit G. Physikalische Therapie bei rheumatischen Erkrankungen – was gibt es an Evidenz? *arthritis + rheuma* 2020; 40:9-14
46. Lange U, Richter K, Dischereit G. Rheumatoide Arthritis – Funktionserhalt und Rolle der Bewegungstherapie. *chirurgische Praxis* 2020; 86:506-511
47. Lange U, Klemm P, Dischereit G. Physikalische Therapie bei rheumatischen Erkrankungen. Bedeutung und Möglichkeiten. *Morbus-Bechterew-Journal* 2020; 161(Juni 2020):13-15
48. Lange U, Dischereit G, Klemm P. Kristallarthropathien – nicht immer ist es eine Gicht! Chondro-calcinose („Pseudogicht“). *Orthopädie & Rheuma* 2020; 23:34-36
49. Löffler F, Lange U, Klemm P. 65-jähriger Patient mit entzündeten Fingern. *Dtsch Med Wochenschr* 2020; 145:1793-1794
50. Mihai C, Distler O, Gheorghiu AM, Constantin PI, Dobrota R, Jordan S, Smith V, Hachulla E, Henes J, Siegert E, Vettori S, Müller-Ladner U, Matucci Cerinic M, Allanore Y. Incidence and risk factors for gangrene in patients with systemic sclerosis from the EUSTAR cohort. *Rheumatology* 2020; 59:2016-2023



51. Moinzadeh P, Kuhr K, Siegert E, Blank N, Sunderkoetter C, Henes J, Krusche M, Schmalzing M, Worm M, Schmeiser T, Günther C, Aberer E, Susok L, Riemekasten G, Kreuter A, Zeidler G, Juche A, Hadjiski D, Müller-Ladner U, Gaebelein-Wissing N, Distler JHW, Sárdy M, Krieg T, Hunzelmann N. Scleroderma renal crisis (SRC): risk factors for an increasingly rare organ complication. *J Rheumatol* 2020; 47:241-248
52. Pedraz-Petrozzi B, Neumann E, Sammer G. Pro-inflammatory markers and fatigue in patients with depression: A case-control study. *Sci Rep* 2020; 10(1):9494
53. Peek V, Neumann E, Inoue T, Koenig S, Pflieger FJ, Gerstberger R, Roth J, Matsumura K, Rummel C. Age-Dependent Changes of Adipokine and Cytokine Secretion From Rat Adipose Tissue by Endogenous and Exogenous Toll-Like Receptor Agonists. *Front Immunol* 2020; 11:1800
54. Prasse A, Bonella F, Müller-Ladner U, Witte T, Hunzelmann N, Distler J. Die Behandlung der SSC-assoziierten interstitiellen Lungenfibrose. *Z Rheumatol* 2020; 79:294-303
55. Schmeiser T, Broll M, Dormann A, Fräbel C, Hermann W, Hudowenz O, Keil F, Müller-Ladner U, Özden F, Pfeiffer U, Saech J, Schwarting A, Stapfer G, Steinchen N, Storck-Müller K, Strunk J, Thiele A, Triantafyllias K, Wassenberg S, Wilden E, Hasseli R. A cross sectional study on patients with inflammatory rheumatic diseases in terms of their compliance to their immunosuppressive medication during COVID-19 pandemic. *Z Rheumatol* 2020; 79, 379-384
56. Smith V, Herrick AL, Ingegnoli F, Damjanov N, De Angelis R, Denton CP, Distler O, Espejo K, Foeldvari I, Frech T, Garro B, Gutierrez M, Gyger G, Hachulla E, Hesselstrand R, Iagnocco A, Kayser C, Melsens K, Müller-Ladner U, Paolino S, Pizzorni C, Radic M, Riccieri V, Snow M, Stevens W, Sulli A, van Laar JM, Vonk MC, Vanhaecke A, Cutolo M; EULAR Study Group on Microcirculation in Rheumatic Diseases and the Scleroderma Clinical Trials Consortium Group on Capillaroscopy. Standardisation of nailfold capillaroscopy for the assessment of patients with raynaud's phenomenon and systemic sclerosis. *Autoimmun Rev* 2020; 19:102458
57. Smolen JS, Landewé RBM, Bijlsma JWJ, Burmester GR, Dougados M, Kerschbaumer A, McInnes IB, Sepriano A, van Vollenhoven RF, de Wit M, Aletaha D, Aringer M, Askling J, Balsa A, Boers M, den Broeder AA, Buch MH, Buttgereit F, Caporali R, Cardiel MH, De Cock D, Codreanu C, Cutolo M, Edwards CJ, van Eijk-Hustings Y, Emery P, Finckh A, Gossec L, Gottenberg JE, Hetland ML, Huizinga TWJ, Koloumas M, Li Z, Mariette X, Müller-Ladner U, Mysler EF, da Silva JAP, Poór G, Pope JE, Rubbert-Roth A, Ruyssen-Witrand A, Saag KG, Strangfeld A, Takeuchi T, Voshaar M, Westhovens R, van der Heijde D. EULAR recommendations for the management of rheumatoid arthritis with synthetic and biological disease-modifying antirheumatic drugs: 2019 update. *Ann Rheum Dis* 2020; 79:685-699
58. Steinchen N, Müller-Ladner U, Lange U. Biologikatherapie nach COVID-19 Infektion. *Z Rheumatol* 2020; 79:574-577
59. van Nie L, Salinas-Tejedor L, Dychus N, Fasbender F, Hülser ML, Cutolo M, Rehart S, Neumann E, Müller-Ladner U, Capellino S. Dopamine induces in vitro migration of synovial fibroblast from patients with rheumatoid arthritis. *Sci Rep* 2020; 10:11928

## Buchartikel - Bücher

1. Lange U. Rheumatisch bedingtes Ödem. Leitfaden Lymphologie (Hrsg. Gültig O, Miller A, Zöltzer H). Elsevier 2. Auflage, in press
2. Lange U. Sport bei anderen Erkrankungen und Einschränkungen. Rheuma. Sportorthopädie und -Traumatologie im Kindes- und Jugendalter. Schmitt H (Hrsg.), Springer-Verlag

## Preise

### 1. Hench Preis der DGRh

stellvertretend an P. Klemm et al. für herausragende wissenschaftliche Leistung auf dem Gebiet der internistischen rheumatologischen Rehabilitation und Versorgungsforschung für die Arbeit:

„Evaluation of a special concept of physical therapy in spondyloarthritis – German multimodal rheumatologic complex treatment for spondyloarthritis“

Clin Rheumatol 2020 (Autoren: Klemm P, Hudowenz O, Asendorf T, Lange U, Müller-Ladner U, Tarner I)

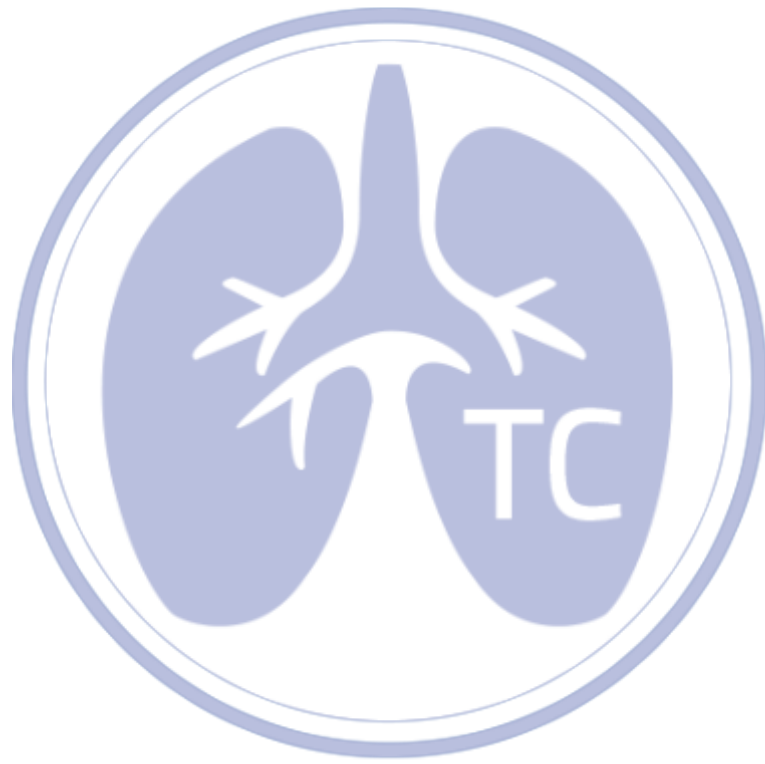
### 2. Dr. Heinz- und Helene-Adam-Preis der Deutschen Gesellschaft für Physikalische und Rehabilitative Medizin e.V.

stellvertretend an P. Klemm et al. für die wissenschaftliche Arbeit:

„Evaluation of a special concept of physical therapy in spondyloarthritis – German multimodal rheumatologic complex treatment for spondyloarthritis“

Clin Rheumatol 2020 (Autoren: Klemm P, Hudowenz O, Asendorf T, Lange U, Müller-Ladner U, Tarner I), aufgrund neuer Erkenntnisse auf dem Gebiet der Physikalischen Medizin und Rehabilitation





# Lungenzentrum Thoraxchirurgie

Direktor: Dr. med. S. Guth

# Allgemeine Pneumologie

Direktor: Univ.- Prof. Dr. med. A. H. Ghofrani

# Pneumologische Onkologie

Direktor: Univ.- Prof. Dr. med. Dr. rer. nat. F. Grimminger



## PUBLIKATIONEN 2020

### Originalarbeiten & Übersichtsartikel

1. Delcroix M, Torbicki A, Gopalan D, Sitbon O, Klok FA, Lang I, Jenkins D, Kim NH, Humbert M, Jais X, Noordegraaf AV, Pepke-Zaba J, Brénot P, Dorfmueller P, Fadel E, Ghofrani HA, Hoepfer MM, Jansa P, Madani M, Matsubara H, Ogo T, Grünig E, D'Armini A, Galie N, Meyer B, Corkery P, Meszaros G, Mayer E, Simonneau G. ERS Statement on Chronic Thromboembolic Pulmonary Hypertension. *Eur Respir J.* 2020; 2002828
2. Keranov S, Dörr O, Jafari L, Troidl C, Liebetrau C, Kriechbaum S, Keller T, Voss S, Bauer T, Lorenz J, Richter MJ, Tello K, Gall H, Ghofrani HA, Mayer E, Wiedenroth CB, Guth S, Lörchner H, Pöling J, Chelladurai P, Pullamsetti SS, Braun T, Seeger W, Hamm CW, Nef H. CILP1 as a biomarker for right ventricular maladaptation in pulmonary hypertension. *Eur Respir J.* 2020; 1901192
2. Kriechbaum SD, Scherwitz L, Wiedenroth CB, Rudolph F, Wolter JS, Haas M, Fischer-Rasokat U, Rolf A, Hamm CW, Mayer E, Guth S, Keller T, Konstantinides SV, Lankeit M, Liebetrau C. Mid-regional pro-atrial natriuretic peptide and copeptin as indicators of disease severity and therapy response in CTEPH. *ERJ Open Res.* 2020; 6(4): 00356-2020
3. Kriechbaum SD, Wiedenroth CB, Peters K, Barde MA, Ajnwojner R, Wolter JS, Haas M, Roller FC, Guth S, Rieth AJ, Rolf A, Hamm CW, Mayer E, Keller T, Liebetrau C. Galectin-3, GDF-15, and sST2 for the assessment of disease severity and therapy response in patients suffering from inoperable chronic thromboembolic pulmonary hypertension. *Biomarkers.* 2020; 25(7): 578-586
4. Kriechbaum SD, Rudolph F, Wiedenroth CB, Mielzarek L, Haas M, Guth S, Hamm CW, Mayer E, Liebetrau C, Keller T. Pregnancy-associated plasma protein A - a new indicator of pulmonary vascular remodeling in chronic thromboembolic pulmonary hypertension? *Respir Res.* 2020; 21(1): 204
5. Eichstaedt CA, Verweyen J, Halank M, Benjamin N, Fischer C, Mayer E, Guth S, Wiedenroth CB, Egenlauf B, Harutyunova S, Xanthouli P, Marra AM, Wilkens H, Ewert R, Hinderhofer K, Grünig E. Myeloproliferative Diseases as Possible Risk Factor for Development of Chronic Thromboembolic Pulmonary Hypertension-A Genetic Study. *Int J Mol Sci.* 2020; 21(9): 3339
6. Krieg VJ, Hobohm L, Liebetrau C, Guth S, Kölmel S, Troidl C, Mayer E, Konstantinides SV, Wiedenroth CB\*, Lankeit M\*. Risk factors for chronic thromboembolic pulmonary hypertension - Importance of thyroid disease and function. *Thromb Res.* 2020; 185: 20-26
7. Nagel C, Nasereddin M, Benjamin N, Egenlauf B, Harutyunova S, Eichstaedt CA, Xanthouli P, Mayer E, Grünig E, Guth S. Supervised Exercise Training in Patients with Chronic Thromboembolic Pulmonary Hypertension as Early Follow-Up Treatment after Pulmonary Endarterectomy: A Prospective Cohort Study. *Respiration.* 2020; 99(7): 577-588
8. Bochenek ML, Leidinger C, Rosinus NS, Gogiraju R, Guth S, Hobohm L, Jurk K, Mayer E, Münzel T, Lankeit M, Bosmann M, Konstantinides S, Schäfer K. Activated Endothelial TGFβ1 Signaling Promotes Venous Thrombus Nonresolution in Mice Via Endothelin-1: Potential Role for Chronic Thromboembolic Pulmonary Hypertension. *Circ Res.* 2020; 126(2): 162-181

## PUBLIKATIONEN 2020

## Originalarbeiten &amp; Übersichtsartikel

1. Gierhardt M, Pak O, Sydykov A, Kraut S, Schäffer J, Garcia C, Veith C, Zeidan EM, Brosien M, Quanz K, Esfandiary A, Saraji A, Hadzic S, Kojonazarov B, Wilhelm J, Ghofrani HA, Schermuly RT, Seeger W, Grimminger F, Herden C, Schulz R, Weissmann N, Heger J, Sommer N. Genetic Deletion of p66shc and/or Cyclophilin D Results in Decreased Pulmonary Vascular Tone. *Cardiovasc Res.* 2020 Oct 29;cvaa310. doi: 10.1093/cvr/cvaa310. Epub ahead of print. PMID: 33119054.
2. Yogeswaran A, Richter MJ, Sommer N, Ghofrani HA, Seeger W, Tello K, Gall H. Advanced risk stratification of intermediate risk group in pulmonary arterial hypertension. *Pulm Circ.* 2020 Oct 7;10(4):2045894020961739. doi: 10.1177/2045894020961739. PMID: 33088480; PMCID: PMC7545769.
3. Hoepfer MM, Pausch C, Grünig E, Klose H, Staehler G, Huscher D, Pittrow D, Olsson KM, Vizza CD, Gall H, Benjamin N, Distler O, Opitz C, Gibbs JSR, Delcroix M, Ghofrani HA, Rosenkranz S, Ewert R, Kaemmerer H, Lange TJ, Kabitz HJ, Skowasch D, Skride A, Jureviciene E, Paleviciute E, Miliauskas S, Claussen M, Behr J, Milger K, Halank M, Wilkens H, Wirtz H, Pfeuffer-Jovic E, Harbaum L, Scholtz W, Dumitrescu D, Bruch L, Coghlan G, Neurohr C, Tsangaris I, Gorenflo M, Scelsi L, Vonk-Noordegraaf A, Ulrich S, Held M. Idiopathic pulmonary arterial hypertension phenotypes determined by cluster analysis from the COMPERA registry. *J Heart Lung Transplant.* 2020 Dec;39(12):1435-1444. doi: 10.1016/j.healun.2020.09.011. Epub 2020 Sep 30. PMID: 33082079.
4. Biswas S, Kojonazarov B, Hadzic S, Majer M, Bajraktari G, Novoyatleva T, Ghofrani HA, Grimminger F, Seeger W, Weissmann N, Schlossmann J, Schermuly RT. RAG1 Deficient Mice Develop PKG1 $\beta$  Dependent Pulmonary Hypertension. *Cells.* 2020 Oct 13;9(10):2280. doi: 10.3390/cells9102280. PMID: 33066124; PMCID: PMC7601978.
5. Yerabolu D, Weiss A, Kojonazarov B, Boehm M, Schlueter BC, Ruppert C, Günther A, Jonigk D, Grimminger F, Ghofrani HA, Seeger W, Weissmann N, Schermuly RT. Targeting Jak-Stat Signaling in Experimental Pulmonary Hypertension. *Am J Respir Cell Mol Biol.* 2021 Jan;64(1):100-114. doi: 10.1165/rcmb.2019-0431OC.PMID: 33052714.
6. Yogeswaran A, Gall H, Tello K, Grünig E, Xanthouli P, Ewert R, Kamp JC, Olsson KM, Wißmüller M, Rosenkranz S, Klose H, Harbaum L, Lange TJ, Opitz CF, Waelde A, Milger K, Sommer N, Seeger W, Ghofrani HA, Richter MJ. Impact of SARS-CoV-2 pandemic on pulmonary hypertension out-patient clinics in Germany: a multi-centre study. *Pulm Circ.* 2020 Jul 23;10(3):2045894020941682. doi: 10.1177/2045894020941682. PMID: 32754309; PMCID: PMC7378724.
7. Ghofrani HA, Grünig E, Jansa P, Langleben D, Rosenkranz S, Preston IR, Rahaghi F, Sood N, Busse D, Meier C, Humbert M. Efficacy and safety of riociguat in combination therapy for patients with pulmonary arterial hypertension (PATENT studies). *Pulm Circ.* 2020 Jul 16;10(3):2045894020942121. doi: 10.1177/2045894020942121. PMID: 32728421; PMCID: PMC7366414.
8. Seimetz M, Sommer N, Bednorz M, Pak O, Veith C, Hadzic S, Gredic M, Parajuli N, Kojonazarov B, Kraut S, Wilhelm J, Knoepp F, Henneke I, Pichl A, Kanbagli ZI, Scheibe S, Fysikopoulos A, Wu CY, Klepetko W, Jaksch P, Eichstaedt C, Grünig E, Hinderhofer K, Geiszt M, Müller N, Rezende F, Buchmann G, Wittig I, Hecker M, Hecker A, Padberg W, Dorfmueller P, Gattenlöhner S, Vogelmeier CF, Günther A, Karnati S, Baumgart-Vogt E, Schermuly RT, Ghofrani HA, Seeger W, Schröder K, Grimminger F, Brandes RP, Weissmann N. Author Correction: NADPH oxidase subunit NOXO1 is a target for emphysema treatment in COPD. *Nat Metab.* 2020 Jul;2(7):648. doi: 10.1038/s42255-020-0248-z. Erratum for: *Nat Metab.* 2020 Jun;2(6):532-546. PMID: 32694792.
9. Seimetz M, Sommer N, Bednorz M, Pak O, Veith C, Hadzic S, Gredic M, Parajuli N, Kojonazarov B, Kraut S, Wilhelm J, Knoepp F, Henneke I, Pichl A, Kanbagli ZI, Scheibe S, Fysikopoulos A, Wu CY, Klepetko W, Jaksch P, Eichstaedt C, Grünig E, Hinderhofer K, Geiszt M, Müller N, Rezende F, Buchmann G, Wittig I, Hecker M, Hecker A, Padberg W, Dorfmueller P, Gattenlöhner S, Vogelmeier CF, Günther A, Karnati S, Baumgart-Vogt E, Schermuly RT, Ghofrani HA, Seeger W, Schröder K, Grimminger F, Brandes RP, Weissmann N. NADPH oxidase subunit NOXO1 is a target for emphysema treatment in COPD. *Nat Metab.* 2020 Jun;2(6):532-546. doi: 10.1038/s42255-020-0215-8. Epub 2020 Jun 8. Erratum in: *Nat Metab.* 2020 Jul;2(7):648. PMID: 32694733.

10. Yogeswaran A, Tello K, Faber M, Sommer N, Kuhnert S, Seeger W, Grimminger F, Ghofrani HA, Richter MJ, Gall H. Risk assessment in severe pulmonary hypertension due to interstitial lung disease. *J Heart Lung Transplant*. 2020 Oct;39(10):1118-1125. doi: 10.1016/j.healun.2020.06.014. Epub 2020 Jun 25. PMID: 32690230.
11. Richter MJ, Badagliacca R, Wan J, Vanderpool R, Dalmer A, Ghofrani HA, Harth S, Seeger W, Gall H, Naeije R, Tello K. Right ventricular dyssynchrony: from load-independent right ventricular function to wall stress in severe pulmonary arterial hypertension. *Pulm Circ*. 2020 May 18;12(2):2045894020925759. doi: 10.1177/2045894020925759. PMID: 32523688; PMCID: PMC7235672.
12. Strielkov I, Krause NC, Knoepp F, Alebrahimdehkordi N, Pak O, Garcia C, Ghofrani HA, Schermuly RT, Seeger W, Grimminger F, Sommer N, Weissmann N. Cytochrome P450 epoxygenase-derived 5,6-epoxyeicosatrienoic acid relaxes pulmonary arteries in normoxia but promotes sustained pulmonary vasoconstriction in hypoxia. *Acta Physiol (Oxf)*. 2020 Sep;230(1):e13521. doi: 10.1111/apha.13521. Epub 2020 Jun 22. PMID: 32506676.
13. Tello K, Richter MJ, Yogeswaran A, Ghofrani HA, Naeije R, Vanderpool R, Gall H, Tedford RJ, Seeger W, Lahm T. Sex Differences in Right Ventricular-Pulmonary Arterial Coupling in Pulmonary Arterial Hypertension. *Am J Respir Crit Care Med*. 2020 Oct 1;202(7):1042-1046. doi: 10.1164/rccm.202003-0807LE. PMID: 32501730; PMCID: PMC7528786.
14. Neupane B, Sydykov A, Pradhan K, Vroom C, Herden C, Karnati S, Ghofrani HA, Avdeev S, Ergün S, Schermuly RT, Kosanovic D. Influence of gender in monocrotaline and chronic hypoxia induced pulmonary hypertension in obese rats and mice. *Respir Res*. 2020 Jun 3;21(1):136. doi: 10.1186/s12931-020-01394-0. PMID: 32493503; PMCID: PMC7268383.
15. Benza RL, Corris PA, Klinger JR, Langleben D, Naeije R, Simonneau G, Ghofrani HA, Jansa P, Rosenkranz S, Scelsi L, Thenappan T, Raina A, Meier C, Busse D, Hoepfer MM. Identifying potential parameters associated with response to switching from a PDE5i to riociguat in RESPITE. *Int J Cardiol*. 2020 Oct 15;317:188-192. doi: 10.1016/j.ijcard.2020.05.044. Epub 2020 May 24. PMID: 32461118.
16. Ghio S, Mercurio V, Fortuni F, Forfia PR, Gall H, Ghofrani A, Mathai SC, Mazurek JA, Mukherjee M, Richter M, Scelsi L, Hassoun PM, Tello K; TAPSE in PAH investigators. A comprehensive echocardiographic method for risk stratification in pulmonary arterial hypertension. *Eur Respir J*. 2020 Sep 24;56(3):2000513. doi: 10.1183/13993003.00513-2020. PMID: 32430422.
17. Sommer N, Alebrahimdehkordi N, Pak O, Knoepp F, Strielkov I, Scheibe S, Dufour E, Andjelković A, Sydykov A, Saraji A, Petrovic A, Quanz K, Hecker M, Kumar M, Wahl J, Kraut S, Seeger W, Schermuly RT, Ghofrani HA, Ramser K, Braun T, Jacobs HT, Weissmann N, Szibor M. Bypassing mitochondrial complex III using alternative oxidase inhibits acute pulmonary oxygen sensing. *Sci Adv*. 2020 Apr 15;6(16):eaba0694. doi: 10.1126/sciadv.aba0694. PMID: 32426457; PMCID: PMC7159913.
18. Kaemmerer H, Gorenflo M, Huscher D, Pittrow D, Apitz C, Baumgartner H, Berger F, Bruch L, Brunner E, Budts W, Claussen M, Coghlan G, Dähnert I, D'Alto M, Delcroix M, Distler O, Dittrich S, Dumitrescu D, Ewert R, Faehling M, Germund I, Ghofrani HA, Grohé C, Grossekreymborg K, Halank M, Hansmann G, Harzheim D, Nemes A, Havasi K, Held M, Hoepfer MM, Hofbeck M, Hohenfrost-Schmidt W, Jurevičienė E, Gumbienė L, Kabitz HJ, Klose H, Köhler T, Konstantinides S, Köestenberger M, Kozlik-Feldmann R, Kramer HH, Kropf-Sanchen C, Lammers A, Lange T, Meyn P, Miera O, Milger-Kneidinger K, Neidenbach R, Neurohr C, Opitz C, Perings C, Remppis BA, Riemekasten G, Scelsi L, Scholtz W, Simkova I, Skowasch D, Skride A, Stähler G, Stiller B, Tsangaris I, Vizza CD, Vonk Noordegraaf A, Wilkens H, Wirtz H, Diller GP, Grünig E, Rosenkranz S. Pulmonary Hypertension in Adults with Congenital Heart Disease: Real-World Data from the International COMPERA-CHD Registry. *J Clin Med*. 2020 May 13;9(5):1456. doi: 10.3390/jcm9051456. PMID: 32414075; PMCID: PMC7290703.
19. Roy-Chowdhuri S, Dacic S, Ghofrani M, Illei PB, Layfield LJ, Lee C, Michael CW, Miller RA, Mitchell JW, Nikolic B, Nowak JA, Pastis NJ Jr, Rauch CA, Sharma A, Souter L, Billman BL, Thomas NE, VanderLaan PA, Voss JS, Wahidi MM, Yarmus LB, Gilbert CR. Collection and Handling of Thoracic Small Biopsy and Cytology Specimens for Ancillary Studies: Guideline From the College of American Pathologists in Collaboration With the American College of Chest Physicians, Association for Molecular Pathology, American Society of Cytopathology, American Thoracic Society, Pulmonary Pathology Society, Papanicolaou Society of Cytopathology, Society of Interventional Radiology, and Society of Thoracic Radiology. *Arch Pathol Lab Med*. 2020 May 13. doi: 10.5858/arpa.2020-0119-CP. Epub ahead of print. PMID: 32401054.



20. Yogeswaran A, Richter MJ, Sommer N, Ghofrani HA, Seeger W, Gall H, Tello K. Evaluation of pulmonary hypertension by right heart catheterisation: does timing matter? *Eur Respir J*. 2020 Sep 3;56(3):1901892. doi: 10.1183/13993003.01892-2019. PMID: 32350102.
21. Lasch F, Karch A, Koch A, Derlin T, Voskrebenez A, Alsady TM, Hoepfer MM, Gall H, Roller F, Harth S, Steiner D, Krombach G, Ghofrani HA, Rengier F, Heußel CP, Grünig E, Beitzke D, Hacker M, Lang IM, Behr J, Bartenstein P, Dinkel J, Schmidt KH, Kreitner KF, Frauenfelder T, Ulrich S, Hamer OW, Pfeifer M, Johns CS, Kiely DG, Swift AJ, Wild J, Vogel-Claussen J. Comparison of MRI and VQ-SPECT as a Screening Test for Patients With Suspected CTEPH: CHANGE-MRI Study Design and Rationale. *Front Cardiovasc Med*. 2020 Apr 9;7:51. doi: 10.3389/fcvm.2020.00051. PMID: 32328500; PMCID: PMC7161347.
22. Keranov S, Dörr O, Jafari L, Liebetrau C, Keller T, Troidl C, Kriechbaum S, Voss S, Richter M, Tello K, Gall H, Ghofrani HA, Mayer E, Seeger W, Hamm CW, Nef H. SPARCL1 as a biomarker of maladaptive right ventricular remodelling in pulmonary hypertension. *Biomarkers*. 2020 May;25(3):290-295. doi: 10.1080/1354750X.2020.1745889. Epub 2020 Apr 5. PMID: 32248722.
23. Richter MJ, Harutyunova S, Bollmann T, Classen S, Fuge J, Gall H, Gerhardt F, Ghofrani HA, Gunkel H, Grünig E, Halank M, Heine A, Klose H, Lange TJ, Neurohr C, Nickolaus K, Opitz CF, Rosenkranz S, Seyfarth HJ, Tello K, Ewert R, Olsson KM. Flow rate variance of a fully implantable pump for the delivery of intravenous treprostinil in pulmonary arterial hypertension. *Pulm Circ*. 2020 Mar 13;10(1):2045894020910136. doi: 10.1177/2045894020910136. PMID: 32206306; PMCID: PMC7074510.
24. Fysikopoulos A, Seimetz M, Hadzic S, Knoepp F, Wu CY, Malkmus K, Wilhelm J, Pichl A, Bednorz M, Tadele Roxlau E, Ghofrani HA, Sommer N, Gierhardt M, Schermuly RT, Seeger W, Grimminger F, Weissmann N, Kraut S. Amelioration of elastase-induced lung emphysema and reversal of pulmonary hypertension by pharmacological iNOS inhibition in mice. *Br J Pharmacol*. 2021 Jan;178(1):152-171. doi: 10.1111/bph.15057. Epub 2020 Apr 28. PMID: 32201936.
25. Luitel H, Novoyatleva T, Sydykov A, Petrovic A, Mamazhakypov A, Devkota B, Wygrecka M, Ghofrani HA, Avdeev S, Schermuly RT, Kosanovic D. Yarsagumba is a Promising Therapeutic Option for Treatment of Pulmonary Hypertension due to the Potent Anti-Proliferative and Vasorelaxant Properties. *Medicina (Kaunas)*. 2020 Mar 16;56(3):131. doi: 10.3390/medicina56030131. PMID: 32188043; PMCID: PMC7142425.
26. Sitbon O, Chin KM, Channick RN, Benza RL, Di Scala L, Gaine S, Ghofrani HA, Lang IM, McLaughlin VV, Preiss R, Rubin LJ, Simonneau G, Tapson VF, Galie N, Hoepfer MM. Risk assessment in pulmonary arterial hypertension: Insights from the GRIPHON study. *J Heart Lung Transplant*. 2020 Apr;39(4):300-309. doi: 10.1016/j.healun.2019.12.013. Epub 2020 Jan 21. PMID: 32061506.
27. Bandorski D, Bogossian H, Ghofrani A, Schmitt J, Höltgen R. Tachykardien bei pulmonaler arterieller Hypertonie [Tachycardia and pulmonary arterial hypertension]. *Herzschrittmachertherapie Elektrophysiol*. 2020 Mar;31(1):33-38. German. doi: 10.1007/s00399-020-00668-w. Epub 2020 Feb 11. PMID: 32048010.
28. Sommer N, Ghofrani HA, Pak O, Bonnet S, Provencher S, Sitbon O, Rosenkranz S, Hoepfer MM, Kiely DG. Current and future treatments of pulmonary arterial hypertension. *Br J Pharmacol*. 2021 Jan;178(1):6-30. doi: 10.1111/bph.15016. Epub 2020 Mar 23. PMID: 32034759.
29. Veith C, Neghabian D, Luitel H, Wilhelm J, Egemnazarov B, Muntanjoht C, Fischer JH, Dahal BK, Schermuly RT, Ghofrani HA, Grimminger F, Fink L, Kwapiszewska G, Weissmann N, Sydykov A. FHL-1 is not involved in pressure overload-induced maladaptive right ventricular remodeling and dysfunction. *Basic Res Cardiol*. 2020 Jan 24;115(2):17. doi: 10.1007/s00395-019-0767-5. PMID: 31980934; PMCID: PMC6981327.
30. Richter MJ, Fortuni F, Wiegand MA, Dalmer A, Vanderpool R, Ghofrani HA, Naeije R, Roller F, Seeger W, Sommer N, Gall H, Ghio S, Tello K. Association of right atrial conduit phase with right ventricular lusitropic function in pulmonary hypertension. *Int J Cardiovasc Imaging*. 2020 Apr;36(4):633-642. doi: 10.1007/s10554-019-01763-x. Epub 2020 Jan 8. PMID: 31912453.
31. Hodgson J, Swietlik EM, Salmon RM, Hadinnapola C, Nikolic I, Wharton J, Guo J, Liley J, Haimel M, Bleda M, Southgate L, Machado RD, Martin JM, Treacy CM, Yates K, Daugherty LC, Shamardina O, Whitehorn D, Holden S, Bogaard HJ, Church C, Coghlan G, Condliffe R, Corris PA, Danesino C, Eyries M, Gall H, Ghio S, Ghofrani HA, Gibbs JSR, Girerd B, Houweling AC, Howard L, Humbert M, Kiely DG, Kovacs G, Lawrie A, MacKenzie Ross RV, Moledina S, Montani D, Olschewski A, Olschewski H, Ouwehand WH, Peacock AJ, Pepke-Zaba J, Prokopenko I, Rhodes CJ, Scelsi L, Seeger W, Soubrier F, Suntharalingam J, Toshner MR, Trembath RC, Vonk Noordegraaf A, Wort SJ, Wilkins MR, Yu PB, Li W, Gräf S, Upton PD, Morrell NW. Characterization of GDF2 Mutations and Levels of BMP9 and BMP10 in Pulmonary Arterial Hypertension. *Am J Respir Crit Care Med*. 2020 Mar 1;201(5):575-585. doi: 10.1164/rccm.201906-1141OC. PMID: 31661308; PMCID: PMC7047445.

32. Richter MJ, Peters D, Ghofrani HA, Naeije R, Roller F, Sommer N, Gall H, Grimminger F, Seeger W, Tello K. Evaluation and Prognostic Relevance of Right Ventricular-Arterial Coupling in Pulmonary Hypertension. *Am J Respir Crit Care Med*. 2020 Jan 1;201(1):116-119. doi: 10.1164/rccm.201906-1195 LE. PMID: 31539478.
33. Hodgson J, Swietlik EM, Salmon RM, Hadinnapola C, Nikolic I, Wharton J, Guo J, Liley J, Haimel M, Bleda M, Southgate L, Machado RD, Martin JM, Treacy CM, Yates K, Daugherty LC, Shamardina O, Whitehorn D, Holden S, Bogaard HJ, Church C, Coghlan G, Condliffe R, Corris PA, Danesino C, Eyries M, Gall H, Ghio S, Ghofrani HA, Gibbs JSR, Girerd B, Houweling AC, Howard L, Humbert M, Kiely DG, Kovacs G, Lawrie A, MacKenzie Ross RV, Moledina S, Montani D, Olschewski A, Olschewski H, Ouwehand WH, Peacock AJ, Pepke-Zaba J, Prokopenko I, Rhodes CJ, Scelsi L, Seeger W, Soubrier F, Suntharalingam J, Toshner MR, Trembath RC, Vonk Noordegraaf A, Wort SJ, Wilkins MR, Yu PB, Li W, Gräf S, Upton PD, Morrell NW. Characterization of *GDF2* Mutations and Levels of BMP9 and BMP10 in Pulmonary Arterial Hypertension. *Am J Respir Crit Care Med*. 2020 Mar 1;201(5):575-585. doi: 10.1164/rccm.201906-1141OC. PMID: 31661308; PMCID:PMC7047445.





# Gefäßzentrum Gefäßchirurgie & Angiologie

Direktor: Dr. med. S. Classen



## PUBLIKATIONEN 2020

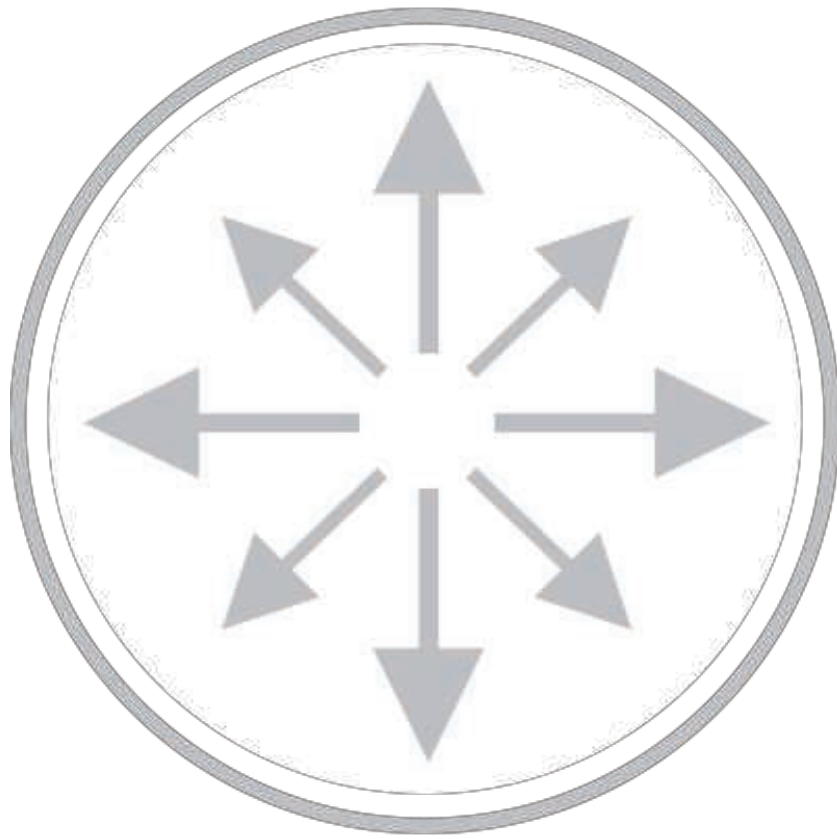
### Originalarbeiten & Übersichtsartikel

- 1. Single-cell profiling reveals heterogeneity and functional patterning of GPCR expression in the vascular system**  
Kaur H, Carvalho J, Looso M, Singh P, Chennupati R, Preussner J, Günther S, Albarrán-Juárez J, Tischner D, Classen S, Offermanns S, Wettschureck N. Nat Commun. 2020 Mar 28;10(1):1448.  
doi: 10.1038/s41467-019-09334-3.

### Buchartikel

- 1. Intermittierende pneumatische Kompressionstherapie**  
Ein Leitfaden für Klinik und Praxis (E. Rabe, S. Reich-Schupke (Hrsg.))  
S. Classen Kapitel 5.6. Diabetische Fußläsion  
WPV. Wirtschafts- und Praxisverlag, Köln 2020; ISBN 978-3-934371-65-1







# **Fachübergreifende Abteilungen**

**Anästhesiologie**

**Diagnostische Radiologie**

**Labormedizin & Krankenhaushygiene**

**Psychokardiologie**



## **Anästhesiologie**

**Originalarbeiten & Übersichtsartikel  
Keine Meldungen in 2020**

## **Diagnostische & Interventionelle Radiologie**

**Originalarbeiten & Übersichtsartikel  
Keine Meldungen in 2020**

## **Labormedizin & Krankenhaushygiene**

**Originalarbeiten & Übersichtsartikel  
Keine Meldungen in 2020**

## Psychokardiologie

### Originalarbeiten & Übersichtsartikel

1. Peregrinova L, Hamann B: Psychokardiologie bei koronaren Herzerkrankungen. EHK 2020; 69:16-22



# Rehabilitationszentrum Rehabilitationsmedizin

Ärztlicher Leiter: Prof. Dr. med. T. Mengden



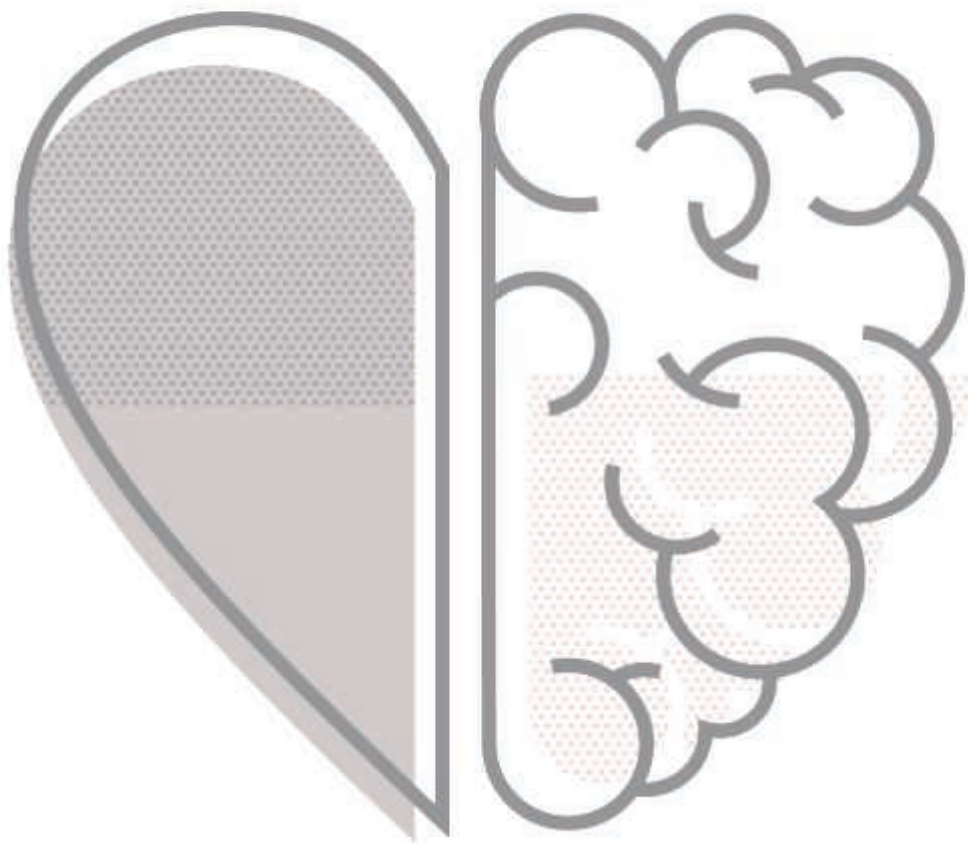
## PUBLIKATIONEN 2020

### Originalarbeiten & Übersichtsartikel

1. Non-invasive quantification of the effect of device-guided slow breathing with direct feedback to the patient to reduce blood pressure. Bachler M, Sehnert W, Mikisek I, Wassertheurer S, Mengden T. *Physiol Meas*. 2020 Nov 6;41(10):104002. doi: 10.1088/1361-6579/abb320. PMID: 33164912
2. Prehabilitation in patients awaiting elective coronary artery bypass graft surgery - effects on functional capacity and quality of life: a randomized controlled trial. Steinmetz C, Bjarnason-Wehrens B, Baumgarten H, Walther T, Mengden T, Walther C. *Clin Rehabil*. 2020 Oct;34(10):1256-1267. doi: 10.1177/0269215520933950. Epub 2020 Jun 16. PMID: 32546065  
Free PMC article. *Clinical Trial*.



# HEART AND BRAIN







## PUBLIKATIONEN 2020

### Originalarbeiten & Übersichtsartikel

1. Neuroprotective mechanisms of erythropoietin in a rat stroke model. Juenemann M, Braun T, Schleicher N, Yeniguen M, Schramm P, Gerriets T, Ritschel N, Bachmann G, Obert M, Schoenburg M, Kaps M, Tschernatsch M. *Transl Neurosci*. 2020 May 18;11(1):48-59.
2. Epileptic seizure discharges in patients after open chamber cardiac surgery-a prospective prevalence pilot study using continuous electroencephalography. Tschernatsch M, Juenemann M, Alhaidar F, El Shazly J, Butz M, Meyer M, Gerriets T, Schönburg M, Schramm P. *Intensive Care Med*. 2020 Jul;46(7):1418-1424.

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# Kerckhoff-Klinik Forschungsgesellschaft mbH

Medizinischer Direktor: Prof. Dr. med. V. Mitrovic  
Geschäftsführer: Prof. Dr. med. M. Schönburg

## PUBLIKATIONEN 2020

### Originalarbeiten & Übersichtsartikel

**Prof. Dr. med. Markus Schönburg**

1. Eggebrecht H, Schönburg M, Voigtländer T, Szalay Z, Chun J, Choi YH, Schmermund A. "Virtual" heart team through a secure instant messenger smartphone app. *Herz*. 2020 Dec 9. English. doi: 10.1007/s00059-020-05007-w. Epub ahead of print. PMID: 33296006.
2. Cetinkaya A, Zerouh M, Liakopoulos OJ, Hein S, Siemons T, Bramlage P, Schönburg M, Choi YH, Richter M. Minimally invasive left atrial appendage (LAA)clip insertion after challenging LAA occluder implantation to minimize the risk of stroke. *J Surg Case Rep*. 2020 Nov 27;2020(11):rjaa432. doi: 10.1093/jscr/rjaa432. PMID: 33269069; PMCID: PMC7695449.
3. Cetinkaya A, Zerouh M, Liakopoulos OJ, Hein S, Siemons T, Bramlage P, Schönburg M, Choi YH, Richter M. Pulmonary herniation after minimally invasive cardiac surgery: review and implications from a series of 20 cases. *J Surg Case Rep*. 2020 Nov 10;2020(11):rjaa415. doi: 10.1093/jscr/rjaa415. PMID: 33214867; PMCID: PMC7655012.
4. Cetinkaya A, Ebraheem E, Bramlage K, Hein S, Bramlage P, Choi YH, Schönburg M, Richter M. Long-term results of endoclamping in patients undergoing minimally invasive mitral valve surgery where external aortic clamping cannot be used – a propensity matched analysis. *J Cardiothorac Surg*. 2020 Oct 14;15(1):313. doi: 10.1186/s13019-020-01363-0. PMID: 33054852; PMCID: PMC7556976.
5. Kubin T, Cetinkaya A, Kubin N, Bramlage P, Sen-Hild B, Gajawada P, Akintürk H, Schönburg M, Schaper W, Choi YH, Barancik M, Richter M. The MEK/ERK Module Is Reprogrammed in Remodeling Adult Cardiomyocytes. *Int J Mol Sci*. 2020 Sep 1;21(17):6348. doi: 10.3390/ijms21176348. PMID: 32882982; PMCID: PMC7503571.
6. Burger H, Richter M, Classen K, Schönburg M, Choi YH, Ziegelhoeffer T. Transvenous Endomyocardial Biopsy: A Comparison of 2 Approaches. *Transplant Proc*. 2021 Jan-Feb; 53(1):324-328. doi:10.1016/j.transproceed.2020.07.006. Epub 2020 Aug 5. PMID: 32768285.
7. Cetinkaya A, Ganchewa N, Hein S, Bramlage K, Bramlage P, Schönburg M, Richter M. Long-term outcomes of concomitant tricuspid valve repair in patients undergoing mitral valve surgery. *J Cardiothorac Surg*. 2020 Aug 4;15(1):210. doi: 10.1186/s13019-020-01244-6. PMID: 32753053; PMCID: PMC7401208.
8. Cetinkaya A, Berge B, Sen-Hild B, Troidl K, Gajawada P, Kubin N, Valeske K, Schranz D, Akintürk H, Schönburg M, Kubin T, Choi YH, Richter M. Radixin Relocalization and Nonmuscle  $\alpha$ -Actinin Expression Are Features of Remodeling Cardiomyocytes in Adult Patients with Dilated Cardiomyopathy. *Dis Markers*. 2020 Jul 22;2020:9356738. doi: 10.1155/2020/9356738. PMID: 32774516; PMCID: PMC7395995.
9. Hasseli R, Frommer KW, Schwarz M, Hülser ML, Schreyäck C, Arnold M, Diller M, Tarner IH, Lange U, Pons-Kühnemann J, Schönburg M, Rehart S, Müller-Ladner U, Neumann E. Adipokines and Inflammation Alter the Interaction Between Rheumatoid Arthritis Synovial Fibroblasts and Endothelial Cells. *Front Immunol*. 2020 Jun 2;11:925. doi: 10.3389/fimmu.2020.00925. PMID: 32582145; PMCID: PMC7280538.
10. Juenemann M, Braun T, Schleicher N, Yeniguen M, Schramm P, Gerriets T, Ritschel N, Bachmann G, Obert M, Schoenburg M, Kaps M, Tschernatsch M. Neuroprotective mechanisms of erythropoietin in a rat stroke model. *Transl Neurosci*. 2020 May 18;11(1):48-59. doi: 10.1515/tnsci-2020-0008. PMID: 33312715; PMCID: PMC7702138.
11. Tschernatsch M, Juenemann M, Alhaidar F, El Shazly J, Butz M, Meyer M, Gerriets T, Schönburg M, Schramm P. Epileptic seizure discharges in patients after open chamber cardiac surgery - a prospective prevalence pilot study using continuous electroencephalography. *Intensive Care Med*. 2020 Jul;46(7):1418-1424. doi: 10.1007/s00134-020-06073-8. Epub 2020 May 13. PMID: 32405742; PMCID: PMC7334279.
12. Kubin N, Richter M, Sen-Hild B, Akintürk H, Schönburg M, Kubin T, Cetinkaya A. Macrophages represent the major pool of IL-7R $\alpha$  expressing cells in patients with myocarditis. *Cytokine*. 2020 Mar 20;130:155053. doi: 10.1016/j.cyto.2020.155053. Epub ahead of print. PMID: 32203694.

13. Burger H, Pecha S, Hakmi S, Opalka B, Schoenburg M, Ziegelhoeffer T. Five-year follow-up of transvenous and epicardial left ventricular leads: experience with more than 1000 leads. *Interact Cardiovasc Thorac Surg*. 2020 Jan 1;30(1):74-80. doi: 10.1093/icvts/ivz239. PMID: 31633187.
14. Cetinkaya A, Bär S, Hein S, Bramlage K, Bramlage P, Schönburg M, Richter M. Mitral valve repair for posterior leaflet prolapse: Long-term comparison of loop implantation vs resection. *J Card Surg*. 2020 Jan;35(1):11-20. doi: 10.1111/jocs.14388. Epub 2019 Dec 3. PMID: 31794075.

**Prof. Dr. med. Veselin Mitrovic**

1. Pranata R, Tondas AE, Huang I, Lim MA, Siswanto BB, Meyer M, Mitrovic V. Potential role of telemedicine in solving ST-segment elevation dilemmas in remote areas during the COVID-19 pandemic. *Am J Emerg Med*. 2020 Jun 6, doi: 10.1016/j.ajem.2020.06.012 (Epub ahead of print).
2. Rieth AJ, Hamm CW, Wanner C, Mitrovic V, Keller T. Herzinsuffizienzprotektion bei Patienten mit Diabetes mellitus Typ 2 durch SGLT2-Inhibitoren – Evidenzlage und mögliche Mechanismen. Systematische Übersicht. *Herz*. Published online: 12 October 2020. <https://doi.org/10.1007/s00059-020-04994-0>.

