

## DAFTAR PUSTAKA

- Aguero, J., Galan-Arriola, C., Fernandez-Jimenez, R., Sanchez-Gonzalez, J., Ajmone, N., Delgado, V., Solis, J., Lopez, G.J., De Molina-Iracheta, A., Hajjar, R.J., Bax, J.J., Fuster, V., Ibáñez, B., 2017. Atrial Infarction and Ischemic Mitral Regurgitation Contribute to Post-MI Remodeling of the Left Atrium. *J. Am. Coll. Cardiol.* 70: 2878–2889. doi:10.1016/j.jacc.2017.10.013
- Ahn, H.J., Lee, S.R., Choi, E.K., Lee, S.W., Han, K.D., Kwon, S., Oh, S., Gregory, L.I.P., 2022. Paradoxical association between lipid levels and incident atrial fibrillation according to statin usage. *Eur. Heart J.* 43: ehac544.539. doi:10.1093/eurheartj/ehac544.539
- Alasady, M., Abhayaratna, W.P., Leong, D.P., Lim, H.S., Abed, H.S., Brooks, A.G., Mattchoss, S., Roberts-Thomson, K.C., Worthley, M.I., Chew, D.P., Sanders, P., 2011. Coronary artery disease affecting the atrial branches is an independent determinant of atrial fibrillation after myocardial infarction. *Heart Rhythm* 8: 955–960. doi:10.1016/j.hrthm.2011.02.016
- Alasady, M., Shipp, N.J., Brooks, A.G., Lim, H.S., Lau, D.H., Barlow, D., Kuklik, P., Worthley, M.I., Roberts-Thomson, K.C., Saint, D.A., Abhayaratna, W., Sanders, P., 2013. Myocardial Infarction and Atrial Fibrillation: Importance of Atrial Ischemia. *Circ. Arrhythm. Electrophysiol.* 6: 738–745. doi:10.1161/CIRCEP.113.000163
- Allessie, M.A., De Groot, N.M.S., Houben, R.P.M., Schotten, U., Boersma, E., Smeets, J.L., Crijns, H.J., 2010. Electropathological Substrate of Long-Standing Persistent Atrial Fibrillation in Patients With Structural Heart Disease: Longitudinal Dissociation. *Circ. Arrhythm. Electrophysiol.* 3: 606–615. doi:10.1161/CIRCEP.109.910125
- Alonso, A., Yin, X., Roetker, N.S., Magnani, J.W., Kronmal, R.A., Ellinor, P.T., Chen, L.Y., Lubitz, S.A., McClelland, R.L., McManus, D.D., Soliman, E.Z., Huxley, R.R., Nazarian, S., Szklo, M., Heckbert, S.R., Benjamin, E.J., 2014. Blood Lipids and the Incidence of Atrial Fibrillation: The Multi-Ethnic Study of Atherosclerosis and the Framingham Heart Study. *J. Am. Heart Assoc.* 3: e001211. doi:10.1161/JAHA.114.001211
- Ardhianto, P., Yuniadi, Y., 2019. Biomarkers of Atrial Fibrillation: Which One Is a True Marker? *Cardiol. Res. Pract.* 2019: 1–8. doi:10.1155/2019/8302326
- Arso, I.A., Ambari, A.M., Hartopo, A.B., Santoso, A., Radi, B., Sarvasti, D., 2022. *Panduan Prevensi Penyakit Kardiovaskular Aterosklerosis*. Perhimpunan Dokter Spesialis Kardiovaskular Indonesia.
- Backhaus, S.J., Rösel, S.F., Stiermaier, T., Schmidt-Rimpler, J., Evertz, R., Schulz, A., Lange, T., Kowallick, J.T., Kutty, S., Bigalke, B., Gutberlet, M., Hasenfuß, G., Thiele, H., Eitel, I., Schuster, A., 2022. Left-atrial long-axis shortening allows effective quantification of atrial function and optimized

- risk prediction following acute myocardial infarction. *Eur. Heart J. Open* 2: oead053. doi:10.1093/ehjopen/oead053
- Badano, L.P., Kolias, T.J., Muraru, D., Abraham, T.P., Aurigemma, G., Edvardsen, T., D'Hooge, J., Donal, E., Fraser, A.G., Marwick, T., Mertens, L., Popescu, B.A., Sengupta, P.P., Lancellotti, P., Thomas, J.D., Voigt, J.-U., Industry representatives, Prater, D., Chono, T., Mumm, B., Houle, H., Healthineers, S., Hansen, G., Abe, Y., Pedri, S., Reviewers: This document was reviewed by members of the 2016–2018 EACVI Scientific Documents Committee, Delgado, V., Gimelli, A., Cosyns, B., Gerber, B., Flachskampf, F., Haugaa, K., Galderisi, M., Cardim, N., Kaufmann, P., Masci, P.G., Marsan, N.A., Rosca, M., Cameli, M., Sade, L.E., 2018. Standardization of left atrial, right ventricular, and right atrial deformation imaging using two-dimensional speckle tracking echocardiography: a consensus document of the EACVI/ASE/Industry Task Force to standardize deformation imaging. *Eur. Heart J. - Cardiovasc. Imaging* 19: 591–600. doi:10.1093/ehjci/jey042
- Biccirè, F.G., Tanzilli, G., Prati, F., Sammartini, E., Gelfusa, M., Celeski, M., Budassi, S., Barillà, F., Lip, G.Y.H., Pastori, D., 2023. Prediction of new onset atrial fibrillation in patients with acute coronary syndrome undergoing percutaneous coronary intervention using the C2HEST and mC2HEST scores: A report from the multicenter REALE-ACS registry. *International Journal of Cardiology* 386: 45–49. doi:10.1016/j.ijcard.2023.05.023
- Blume, G.G., Mcleod, C.J., Barnes, M.E., Seward, J.B., Pellikka, P.A., Bastiansen, P.M., Tsang, T.S.M., 2011. Left atrial function: physiology, assessment, and clinical implications. *Eur. J. Echocardiogr.* 12: 421–430. doi:10.1093/ejechocard/jeq175
- Boppana, V.S., Castaño, A., Avula, U.M.R., Yamazaki, M., Kalifa, J., 2011. Atrial Coronary Arteries: Anatomy And Atrial Perfusion Territories. *J. Atr. Fibrillation* 4: 375. doi:10.4022/jafib.375
- Brandes, A., Department of Cardiology, Cardiology Research Unit, Odense University Hospital, University of Southern Denmark, Odense, Denmark, Smit, M.D., Thoraxcentre, University of Groningen, University Medical Centre, Groningen, The Netherlands, Nguyen, B.O., Thoraxcentre, University of Groningen, University Medical Centre, Groningen, The Netherlands, Rienstra, M., Thoraxcentre, University of Groningen, University Medical Centre, Groningen, The Netherlands, Van Gelder, I.C., Thoraxcentre, University of Groningen, University Medical Centre, Groningen, The Netherlands, 2018. Risk Factor Management in Atrial Fibrillation. *Arrhythmia Electrophysiol. Rev.* 7: 118. doi:10.15420/aer.2018.18.2
- Cameli, M., Lisi, M., Righini, F.M., Mondillo, S., 2012. Novel echocardiographic techniques to assess left atrial size, anatomy and function. *Cardiovasc. Ultrasound* 10: 4. doi:10.1186/1476-7120-10-4
- Cameli, M., Mandoli, G.E., Loiacono, F., Sparla, S., Iardino, E., Mondillo, S., 2016. Left atrial strain: A useful index in atrial fibrillation. *Int. J. Cardiol.* 220: 208–213. doi:10.1016/j.ijcard.2016.06.197

- Chamberlain, A.M., Agarwal, S.K., Folsom, A.R., Duval, S., Soliman, E.Z., Ambrose, M., Eberly, L.E., Alonso, A., 2011. Smoking and incidence of atrial fibrillation: Results from the Atherosclerosis Risk in Communities (ARIC) Study. *Heart Rhythm* 8: 1160–1166. doi:10.1016/j.hrthm.2011.03.038
- Chen, Q., Yi, Z., Cheng, J., 2018. Atrial fibrillation in aging population. *AGING Med.* 1: 67–74. doi:10.1002/agm2.12015
- Choi, E.-K., Shen, M.J., Han, S., Kim, D., Hwang, S., Sayfo, S., Piccirillo, G., Frick, K., Fishbein, M.C., Hwang, C., Lin, S.-F., Chen, P.-S., 2010. Intrinsic Cardiac Nerve Activity and Paroxysmal Atrial Tachyarrhythmia in Ambulatory Dogs. *Circulation* 121: 2615–2623. doi:10.1161/CIRCULATIONAHA.109.919829
- Choi, S.H., Yang, P.-S., Kim, D., Sung, J.-H., Jang, E., Yu, H.T., Kim, T.-H., Pak, H.-N., Lee, M.-H., Lip, G.Y.H., Joung, B., 2023. Association of obesity with incident atrial fibrillation in Korea and the United Kingdom. *Sci. Rep.* 13: 5197. doi:10.1038/s41598-023-32229-9
- Chung, M.K., Eckhardt, L.L., Chen, L.Y., Ahmed, H.M., Gopinathannair, R., Joglar, J.A., Noseworthy, P.A., Pack, Q.R., Sanders, P., Trulock, K.M., On behalf of the American Heart Association Electrocardiography and Arrhythmias Committee and Exercise, Cardiac Rehabilitation, and Secondary Prevention Committee of the Council on Clinical Cardiology; Council on Arteriosclerosis, Thrombosis and Vascular Biology; Council on Cardiovascular and Stroke Nursing; and Council on Lifestyle and Cardiometabolic Health, 2020. Lifestyle and Risk Factor Modification for Reduction of Atrial Fibrillation: A Scientific Statement From the American Heart Association. *Circulation* 141. doi:10.1161/CIR.0000000000000748
- Congo, K.H., Belo, A., Carvalho, J., Neves, D., Guerreiro, R., Pais, J.A., Brás, D., Carrington, M., Piçarra, B., Santos, A.R., Aguiar, J., 2019. New-Onset Atrial Fibrillation in St-Segment Elevation Myocardial Infarction: Predictors and Impact on Therapy And Mortality. *Arq. Bras. Cardiol.* doi:10.5935/abc.20190190
- Dinarti, L.K., Hartopo, A.B., Anggrahini, D.W., Sadewa, A.H., Setianto, B.Y., Wahab, A.S., 2020. Profile of Endothelin-1, Nitric Oxide, and Prostacyclin Levels in Pulmonary Arterial Hypertension Related to Uncorrected Atrial Septal Defect: Results from a Single Center Study in Indonesia. *Cardiology Research and Practice* 2020: 1–10. doi:10.1155/2020/7526508
- Donal, E., Lip, G.Y.H., Galderisi, M., Goette, A., Shah, D., Marwan, M., Lederlin, M., Mondillo, S., Edvardsen, T., Sitges, M., Grapsa, J., Garbi, M., Senior, R., Gimelli, A., Potpara, T.S., Van Gelder, I.C., Gorenek, B., Mabo, P., Lancellotti, P., Kuck, K.-H., Popescu, B.A., Hindricks, G., Habib, G., Cosyns, B., Delgado, V., Haugaa, K.H., Muraru, D., Nieman, K., Cohen, A., 2016. EACVI/EHRA Expert Consensus Document on the role of multi-modality imaging for the evaluation of patients with atrial fibrillation. *Eur. Heart J. – Cardiovasc. Imaging* 17: 355–383. doi:10.1093/ehjci/jev354
- Farsalinos, K.E., Daraban, A.M., Ünü, S., Thomas, J.D., Badano, L.P., Voigt, J.-U., 2015. Head-to-Head Comparison of Global Longitudinal Strain

- Measurements among Nine Different Vendors. *J. Am. Soc. Echocardiogr.* 28: 1171-1181.e2. doi:10.1016/j.echo.2015.06.011
- Feng, L., Nian, S., Tong, Z., Zhu, Y., Li, Y., Zhang, C., Bai, X., Luo, X., Wu, M., Yan, Z., 2020. Age-related trends in lipid levels: a large-scale cross-sectional study of the general Chinese population. *BMJ Open* 10: e034226. doi:10.1136/bmjopen-2019-034226
- Frederiksen, T.C., Dahm, C.C., Preis, S.R., Lin, H., Trinquart, L., Benjamin, E.J., Kornej, J., 2023. The bidirectional association between atrial fibrillation and myocardial infarction. *Nat. Rev. Cardiol.* 20: 631–644. doi:10.1038/s41569-023-00857-3
- Gan, G.C.H., Ferkh, A., Boyd, A., Thomas, L., 2018. Left atrial function: evaluation by *strain* analysis. *Cardiovasc. Diagn. Ther.* 8: 29–46. doi:10.21037/cdt.2017.06.08
- Gorenk, B., Kudaiberdieva, G., 2012. Atrial Fibrillation in Acute St-Elevation Myocardial Infarction: Clinical and Prognostic Features. *Curr. Cardiol. Rev.* 8: 281–289. doi:10.2174/157340312803760857
- Halpin, D.M.G., Celli, B.R., Criner, G.J., Frith, P., López Varela, M.V., Salvi, S., Vogelmeier, C.F., Chen, R., Mortimer, K., Montes De Oca, M., Aisanov, Z., Obaseki, D., Decker, R., Agusti, A., 2019. The GOLD Summit on chronic obstructive pulmonary disease in low- and middle-income countries. *Int. J. Tuberc. Lung Dis.* 23: 1131–1141. doi:10.5588/ijtld.19.0397
- Harrison, S.L., Lane, D.A., Banach, M., Mastej, M., Kasperczyk, Sławomir, Józwiak, Jacek J., Lip, G.Y.H., Al-Shaer, B., 2021. 2020 ESC Guidelines for the diagnosis and management of atrial fibrillation developed in collaboration with the European Association for Cardio-Thoracic Surgery (EACTS). *Eur. Heart J.* 42: 373–498. doi:10.1093/eurheartj/ehaa612
- Heijman, J., Guichard, J.-B., Dobrev, D., Nattel, S., 2018. Translational Challenges in Atrial Fibrillation. *Circ Res* 122: 752–773. doi:10.1161/CIRCRESAHA.117.311081
- Hirose, T., Kawasaki, M., Tanaka, R., Ono, K., Watanabe, T., Iwama, M., Noda, T., Watanabe, S., Takemura, G., Minatoguchi, S., 2012. Left atrial function assessed by speckle tracking echocardiography as a predictor of new-onset non-valvular atrial fibrillation: results from a prospective study in 580 adults. *Eur. Heart J. - Cardiovasc. Imaging* 13: 243–250. doi:10.1093/ejehocardi/jer251
- Hoit, B.D., 2014. Left Atrial Size and Function. *J. Am. Coll. Cardiol.* 63: 493–505. doi:10.1016/j.jacc.2013.10.055
- Hopman, L.H.G.A., Mulder, M.J., Van Der Laan, A.M., Demirkiran, A., Bhagirath, P., Van Rossum, A.C., Allaart, C.P., Götte, M.J.W., 2021. Impaired left atrial reservoir and conduit *strain* in patients with atrial fibrillation and extensive left atrial fibrosis. *J. Cardiovasc. Magn. Reson.* 23: 131. doi:10.1186/s12968-021-00820-6
- Ibanez, B., James, S., Agewall, S., Antunes, M.J., Bucciarelli-Ducci, C., Bueno, H., Caforio, A.L.P., Crea, F., Goudevenos, J.A., Halvorsen, S., Hindricks, G., Kastrati, A., Lenzen, M.J., Prescott, E., Roffi, M., Valgimigli, M.,

- Varenhorst, C., Vranckx, P., 2018. 2017 ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation. *Eur. Heart J.* 39: 119–177. doi:10.1093/eurheartj/ehx393
- Iwasaki, Y., Nishida, K., Kato, T., Nattel, S., 2011. Atrial Fibrillation Pathophysiology: Implications for Management. *Circulation* 124: 2264–2274. doi:10.1161/CIRCULATIONAHA.111.019893
- Jabre, P., Roger, V.L., Murad, M.H., Chamberlain, A.M., Prokop, L., Adnet, F., Jouven, X., 2011. Mortality Associated With Atrial Fibrillation in Patients With Myocardial Infarction: A Systematic Review and Meta-Analysis. *Circulation* 123: 1587–1593. doi:10.1161/CIRCULATIONAHA.110.986661
- Jiang, Q., Yang, L., Chen, M.-L., Hua, F., Li, J.-J., 2022. Lipid Profile and Atrial Fibrillation: Is There Any Link? *Rev. Cardiovasc. Med.* 23: 272. doi:10.31083/j.rcm2308272
- Kamel, H., Okin, P.M., Elkind, M.S.V., Iadecola, C., 2016. Atrial Fibrillation and Mechanisms of Stroke: Time for a New Model. *Stroke* 47: 895–900. doi:10.1161/STROKEAHA.115.012004
- Kim, D.-W., Her, S.-H., Park, M.-W., Cho, J.S., Kim, T.-S., Kang, H., Sim, D.S., Hong, Y.J., Kim, J.H., Ahn, Y., Chang, K., Chung, W.-S., Seung, K.-B., Jeong, M.-H., Rho, T.-H., 2017. Impact of Postprocedural TIMI Flow on Long-Term Clinical Outcomes in Patients with Acute Myocardial Infarction: Five Year Follow-Up Results in the Corea-AMI Registry. *Int. Heart J.* 58: 674–685. doi:10.1536/ihj.16-448
- Kornej, J., Börschel, C.S., Benjamin, E.J., Schnabel, R.B., 2020. Epidemiology of Atrial Fibrillation in the 21st Century: Novel Methods and New Insights. *Circ. Res.* 127: 4–20. doi:10.1161/CIRCRESAHA.120.316340
- Kusunose, K., Takahashi, H., Nishio, S., Hirata, Y., Zheng, R., Ise, T., Yamaguchi, K., Yagi, S., Fukuda, D., Yamada, H., Soeki, T., Wakatsuki, T., Shimada, K., Kanematsu, Y., Takagi, Y., Sata, M., 2021. Predictive value of left atrial function for latent paroxysmal atrial fibrillation as the cause of embolic stroke of undetermined source. *J. Cardiol.* 78: 355–361. doi:10.1016/j.jjcc.2021.05.005
- Lancini, D., Prasad, A., Thomas, L., Atherton, J., Martin, P., Prasad, S., 2023. Predicting new onset atrial fibrillation post acute myocardial infarction: Echocardiographic assessment of left atrial size. *Echocardiography* 40: 456–463. doi:10.1111/echo.15574
- Lang, R., Bierig, M., Devereux, R., Flachskampf, F., Foster, E., Pellikka, P., Picard, M., Roman, M., Seward, J., Shanewise, J., 2006. Recommendations for chamber quantification☆. *Eur. J. Echocardiogr.* 7: 79–108. doi:10.1016/j.euje.2005.12.014
- Leung, M., Abou, R., Van Rosendaal, P.J., Van Der Bijl, P., Van Wijngaarden, S.E., Regeer, M.V., Podlesnikar, T., Ajmone Marsan, N., Leung, D.Y., Delgado, V., Bax, J.J., 2018. Relation of Echocardiographic Markers of Left Atrial Fibrosis to Atrial Fibrillation Burden. *Am. J. Cardiol.* 122: 584–591. doi:10.1016/j.amjcard.2018.04.047

- Levey, A.S., Eckardt, K.-U., Tsukamoto, Y., Levin, A., Coresh, J., Rossert, J., Zeeuw, D.D.E., Hostetter, T.H., Lameire, N., Eknoyan, G., 2005. Definition and classification of chronic kidney disease: A position statement from Kidney Disease: Improving Global Outcomes (KDIGO). *Kidney Int.* 67: 2089–2100. doi:10.1111/j.1523-1755.2005.00365.x
- Li, X., Gao, L., Wang, Z., Guan, B., Guan, X., Wang, B., Han, X., Xiao, X., Waleed, K.B., Chandran, C., Wu, S., Xia, Y., 2018. Lipid profile and incidence of atrial fibrillation: A prospective cohort study in China. *Clin. Cardiol.* 41: 314–320. doi:10.1002/clc.22864
- Li, Z., Liu, Q., Liu, F., Hidru, T.H., Yang, Y., Wang, S., Bai, L., Chen, J., Yang, X., Xia, Y., 2022. Atrial cardiomyopathy markers and new-onset atrial fibrillation risk in patients with acute myocardial infarction. *Eur. J. Intern. Med.* 102: 72–79. doi:10.1016/j.ejim.2022.04.019
- Liu, H.-H., Li, J.-J., 2015. Aging and dyslipidemia: A review of potential mechanisms. *Ageing Res. Rev.* 19: 43–52. doi:10.1016/j.arr.2014.12.001
- Lopez, F.L., Agarwal, S.K., MacLehose, R.F., Soliman, E.Z., Sharrett, A.R., Huxley, R.R., Konety, S., Ballantyne, C.M., Alonso, A., 2012. Blood Lipid Levels, Lipid-Lowering Medications, and the Incidence of Atrial Fibrillation: The Atherosclerosis Risk in Communities Study. *Circ. Arrhythm. Electrophysiol.* 5: 155–162. doi:10.1161/CIRCEP.111.966804
- Meris, A., Amigoni, M., Uno, H., Thune, J.J., Verma, A., Kober, L., Bourgoun, M., McMurray, J.J., Velazquez, E.J., Maggioni, A.P., Ghali, J., Arnold, J.M.O., Zelenkofske, S., Pfeffer, M.A., Solomon, S.D., 2008. Left atrial remodelling in patients with myocardial infarction complicated by heart failure, left ventricular dysfunction, or both: the VALIANT Echo Study. *Eur. Heart J.* 30: 56–65. doi:10.1093/eurheartj/ehn499
- Modin, D., Olsen, F.J., Pedersen, S., Jensen, J.S., Biering-Sørensen, T., 2018. Measures of left atrial function predict incident atrial fibrillation in STEMI patients treated with primary percutaneous coronary intervention. *Int. J. Cardiol.* 263: 1–6. doi:10.1016/j.ijcard.2018.03.013
- Montero-Cabezas, J.M., Abou, R., Chimed, S., Fortuni, F., Goedemans, L., Ajmone Marsan, N., Bax, J.J., Delgado, V., 2023. Effects of Atrial Ischemia on Left Atrial Remodeling in Patients with ST-Segment Elevation Myocardial Infarction. *J. Am. Soc. Echocardiogr.* 36: 163–171. doi:10.1016/j.echo.2022.08.006
- Morris, D.A., Takeuchi, M., Krisper, M., Kohncke, C., Bekfani, T., Carstensen, T., Hassfeld, S., Dorenkamp, M., Otani, K., Takigiku, K., Izumi, C., Yuda, S., Sakata, K., Ohte, N., Tanabe, K., Osmanoglou, E., Kuhnle, Y., Dungen, H.-D., Nakatani, S., Otsuji, Y., Haverkamp, W., Boldt, L.-H., 2015. Normal values and clinical relevance of left atrial myocardial function analysed by speckle-tracking echocardiography: multicentre study. *Eur. Heart J. - Cardiovasc. Imaging* 16: 364–372. doi:10.1093/ehjci/jeu219
- Nagueh, S.F., Smiseth, O.A., Appleton, C.P., Byrd, B.F., Dokainish, H., Edvardsen, T., Flachskampf, F.A., Gillebert, T.C., Klein, A.L., Lancellotti, P., Marino, P., Oh, J.K., Popescu, B.A., Waggoner, A.D., 2016. Recommendations for the Evaluation of Left Ventricular Diastolic Function by Echocardiography:

- An Update from the American Society of Echocardiography and the European Association of Cardiovascular Imaging. *J. Am. Soc. Echocardiogr.* 29: 277–314. doi:10.1016/j.echo.2016.01.011
- Nattel, S., Dobrev, D., 2012. The multidimensional role of calcium in atrial fibrillation pathophysiology: mechanistic insights and therapeutic opportunities. *Eur. Heart J.* 33: 1870–1877. doi:10.1093/eurheartj/ehs079
- Nattel, S., Harada, M., 2014. Atrial Remodeling and Atrial Fibrillation. *J. Am. Coll. Cardiol.* 63: 2335–2345. doi:10.1016/j.jacc.2014.02.555
- Niiyama, M., Koeda, Y., Suzuki, M., Shibuya, T., Kinuta, M., Tosaka, K., Fujiwara, J., Kanehama, N., Sasaki, W., Shimoda, Y., Ishida, M., Itoh, T., Morino, Y., 2021. Coronary Flow Disturbance Phenomenon After Percutaneous Coronary Intervention Is Associated with New-Onset Atrial Fibrillation in Patients with Acute Myocardial Infarction. *Int. Heart. J.* 62: 305–311. doi:10.1536/ihj.20-560
- Nso, N., Bookani, K.R., Metzl, M., Radparvar, F., 2021. Role of inflammation in atrial fibrillation: A comprehensive review of current knowledge. *J. Arrhythmia* 37: 1–10. doi:10.1002/joa3.12473
- Ozturk, U., Ozturk, O., 2021. Assessment of left atrial function by *strain* in patients with acute ischemic stroke left atrial function and acute stroke. *Rev. Assoc. Médica Bras.* 67: 71–76. doi:10.1590/1806-9282.67.01.20200303
- Pan, L., Yan, B., Zhu, J., Lu, Q., Hui, J., 2024. Effects of using primary percutaneous coronary interventions on the incidence of new-onset atrial fibrillation following an acute myocardial infarction. *Clin. Cardiol.* 47: e24167. doi:10.1002/clc.24167
- Pathan, F., D’Elia, N., Nolan, M.T., Marwick, T.H., Negishi, K., 2017. Normal Ranges of Left Atrial *Strain* by Speckle-Tracking Echocardiography: A Systematic Review and Meta-Analysis. *J. Am. Soc. Echocardiogr.* 30: 59–70.e8. doi:10.1016/j.echo.2016.09.007
- Petre, I., Onciul, S., Iancovici, S., Zamfir, D., Stoian, M., Scărlătescu, A., Diaconeasa, A., Acatrinei, C., Dorobanțu, M., 2019. Left Atrial *Strain* for Predicting Atrial Fibrillation Onset in Hypertensive Patients. *High Blood Press. Cardiovasc. Prev.* 26: 331–337. doi:10.1007/s40292-019-00326-4
- Prabowo, W., Dinarti, L.K., Ismail, M.T., 2022. Hubungan Nilai *Strain* Atrium Kiri dengan Fibrilasi Atrium pada Pasien Stroke Iskemik Akut, Tesis, Sp.JP, Departemen Kardiologi dan Kedokteran Vaskular Fakultas Kedokteran Kesehatan Masyarakat dan Keperawatan Universitas Gadjah Mada, Yogyakarta.
- Proietti, M., Raparelli, V., Basili, S., Olshansky, B., Lip, G.Y.H., 2016. Relation of female sex to left atrial diameter and cardiovascular death in atrial fibrillation: The AFFIRM Trial. *Int. J. Cardiol.* 207: 258–263. doi:10.1016/j.ijcard.2016.01.169
- Rasmussen, S.M.A., Olsen, F.J., Jørgensen, P.G., Fritz-Hansen, T., Jespersen, T., Gislason, G., Biering-Sørensen, T., 2019. Utility of left atrial *strain* for predicting atrial fibrillation following ischemic stroke. *Int. J. Cardiovasc. Imaging* 35: 1605–1613. doi:10.1007/s10554-019-01601-0

- Reinstadler, S.J., Stiermaier, T., Eitel, C., Fuernau, G., Saad, M., Pöss, J., De Waha, S., Mende, M., Desch, S., Metzler, B., Thiele, H., Eitel, I., 2018. Impact of Atrial Fibrillation During ST-Segment–Elevation Myocardial Infarction on Infarct Characteristics and Prognosis. *Circ. Cardiovasc. Imaging* 11: e006955. doi:10.1161/CIRCIMAGING.117.006955
- Russo, C., Hahn, R.T., Jin, Z., Homma, S., Sacco, R.L., Di Tullio, M.R., 2010. Comparison of Echocardiographic Single-Plane versus Biplane Method in the Assessment of Left Atrial Volume and Validation by Real Time Three-Dimensional Echocardiography. *J. Am. Soc. Echocardiogr.* 23: 954–960. doi:10.1016/j.echo.2010.06.010
- Sagris, D., Harrison, S.L., Lip, G.Y.H., 2022. Lipids and atrial fibrillation: New insights into a paradox. *PLOS Med.* 19: e1004067. doi:10.1371/journal.pmed.1004067
- Schmidt, M., Bøtker, H.E., Pedersen, L., Sørensen, H.T., 2014. Comparison of the Frequency of Atrial Fibrillation in Young Obese Versus Young Nonobese Men Undergoing Examination for Fitness for Military Service. *Am. J. Cardiol.* 113: 822–826. doi:10.1016/j.amjcard.2013.11.037
- Segan, L., Canovas, R., Nanayakkara, S., Chieng, D., Prabhu, S., Voskoboinik, A., Sugumar, H., Ling, L.-H., Lee, G., Morton, J., LaGerche, A., Kaye, D.M., Sanders, P., Kalman, J.M., Kistler, P.M., 2023. New-onset atrial fibrillation prediction: the HARMS2-AF risk score. *Eur. Heart J.* 44: 3443–3452. doi:10.1093/eurheartj/ehad375
- Seko, Y., Kato, T., Haruna, T., Izumi, T., Miyamoto, S., Nakane, E., Inoko, M., 2018. Association between atrial fibrillation, atrial enlargement, and left ventricular geometric remodeling. *Sci. Rep.* 8: 6366. doi:10.1038/s41598-018-24875-1
- Simons, S.O., Elliott, A., Sastry, M., Hendriks, J.M., Arzt, M., Rienstra, M., Kalman, J.M., Heidbuchel, H., Nattel, S., Wesseling, G., Schotten, U., Van Gelder, I.C., Franssen, F.M.E., Sanders, P., Crijns, H.J.G.M., Linz, D., 2021. Chronic obstructive pulmonary disease and atrial fibrillation: an interdisciplinary perspective. *Eur. Heart J.* 42: 532–540. doi:10.1093/eurheartj/ehaa822
- Sinno, H., Derakhchan, K., Libersan, D., Merhi, Y., Leung, T.K., Nattel, S., 2003. Atrial Ischemia Promotes Atrial Fibrillation in Dogs. *Circulation* 107: 1930–1936. doi:10.1161/01.CIR.0000058743.15215.03
- Sun, B.J., Park, J.-H., 2021. Echocardiographic Measurement of Left Atrial Strain — A Key Requirement in Clinical Practice —. *Circ. J.* 86: 6–13. doi:10.1253/circj.CJ-21-0373
- Svartstein, A.-S.W., Lassen, M.H., Skaarup, K.G., Grove, G.L., Vyff, F., Ravnkilde, K., Pedersen, S., Galatius, S., Modin, D., Biering-Sørensen, T., 2022. Predictive value of left atrial strain in relation to atrial fibrillation following acute myocardial infarction. *Int. J. Cardiol.* 364: 52–59. doi:10.1016/j.ijcard.2022.05.026
- Thomas, L., Abhayaratna, W.P., 2017. Left Atrial Reverse Remodeling. *JACC Cardiovasc. Imaging* 10: 65–77. doi:10.1016/j.jcmg.2016.11.003

- Thygesen, K., Alpert, J.S., Jaffe, A.S., Chaitman, B.R., Bax, J.J., Morrow, D.A., White, H.D., 2018. Fourth Universal Definition of Myocardial Infarction (2018). *J. Am. Coll. Cardiol.* 72: 2231–2264. doi:10.1016/j.jacc.2018.08.1038
- Tsang, T.S.M., Abhayaratna, W.P., Barnes, M.E., Miyasaka, Y., Gersh, B.J., Bailey, K.R., Cha, S.S., Seward, J.B., 2006. Prediction of Cardiovascular Outcomes With Left Atrial Size. *J. Am. Coll. Cardiol.* 47: 1018–1023. doi:10.1016/j.jacc.2005.08.077
- van der Does, L.J.M.E., Lanters, E.A.H., Teuwen, C.P., Mouws, E.M.J.P., Yaksh, A., Knops, P., Kik, C., Bogers, A.J.J.C., de Groot, N.M.S., 2020. The Effects of Valvular Heart Disease on Atrial Conduction During Sinus Rhythm. *J. Cardiovasc. Transl. Res.* 13: 632–639. doi:10.1007/s12265-019-09936-8
- Verdecchia, P., Angeli, F., Reboldi, G., 2018. Hypertension and Atrial Fibrillation: Doubts and Certainties From Basic and Clinical Studies. *Circ. Res.* 122: 352–368. doi:10.1161/CIRCRESAHA.117.311402
- Verheule, S., Tuyls, E., Gharaviri, A., Hulsmans, S., Van Hunnik, A., Kuiper, M., Serroyen, J., Zeemering, S., Kuijpers, N.H.L., Schotten, U., 2013. Loss of Continuity in the Thin Epicardial Layer Because of Endomysial Fibrosis Increases the Complexity of Atrial Fibrillatory Conduction. *Circ. Arrhythm. Electrophysiol.* 6: 202–211. doi:10.1161/CIRCEP.112.975144
- Voigt, N., Heijman, J., Wang, Q., Chiang, D.Y., Li, N., Karck, M., Wehrens, X.H.T., Nattel, S., Dobrev, D., 2014. Cellular and Molecular Mechanisms of Atrial Arrhythmogenesis in Patients With Paroxysmal Atrial Fibrillation. *Circulation* 129: 145–156. doi:10.1161/CIRCULATIONAHA.113.006641
- Voigt, N., Li, N., Wang, Q., Wang, W., Trafford, A.W., Abu-Taha, I., Sun, Q., Wieland, T., Ravens, U., Nattel, S., Wehrens, X.H.T., Dobrev, D., 2012. Enhanced Sarcoplasmic Reticulum Ca<sup>2+</sup> Leak and Increased Na<sup>+</sup>-Ca<sup>2+</sup> Exchanger Function Underlie Delayed Afterdepolarizations in Patients With Chronic Atrial Fibrillation. *Circulation* 125: 2059–2070. doi:10.1161/CIRCULATIONAHA.111.067306
- Vukmirović, M., Bošković, A., Tomašević Vukmirović, I., Vujadinovic, R., Fatić, N., Bukumirić, Z., Vukmirović, F., 2017. Predictions and outcomes of atrial fibrillation in the patients with acute myocardial infarction. *Open Med.* 12: 115–124. doi:10.1515/med-2017-0018
- Wakili, R., Voigt, N., Kääh, S., Dobrev, D., Nattel, S., 2011. Recent advances in the molecular pathophysiology of atrial fibrillation. *J. Clin. Invest.* 121: 2955–2968. doi:10.1172/JCI46315
- Wanamaker, B., Cascino, T., McLaughlin, V., Oral, H., Latchamsetty, R., Siontis, K.C., 2018. Atrial Arrhythmias in Pulmonary Hypertension: Pathogenesis, Prognosis and Management. *Arrhythmia Electrophysiol. Rev.* 7: 43. doi:10.15420/aer.2018.3.2
- Wasmer, K., Eckardt, L., Breithardt, G., 2017. Predisposing factors for atrial fibrillation in the elderly. *J. Geriatr. Cardiol. JGC* 14: 179–184. doi:10.11909/j.issn.1671-5411.2017.03.010

- Westerman, S., Wenger, N., 2019. Gender Differences in Atrial Fibrillation: A Review of Epidemiology, Management, and Outcomes. *Curr. Cardiol. Rev.* 15: 136–144. doi:10.2174/1573403X15666181205110624
- Xue, Y., Zhou, Q., Shen, J., Liu, G., Zhou, W., Wen, Y., Luo, S., 2019. Lipid Profile and New-Onset Atrial Fibrillation in Patients With Acute ST-Segment Elevation Myocardial Infarction (An Observational Study in Southwest of China). *Am. J. Cardiol.* 124: 1512–1517. doi:10.1016/j.amjcard.2019.07.070
- Yuda, S., Muranaka, A., Miura, T., 2016. Clinical implications of left atrial function assessed by speckle tracking echocardiography. *J. Echocardiogr.* 14: 104–112. doi:10.1007/s12574-016-0283-7
- Zhang, L., Cardiovascular Centre, First Affiliated Hospital of Xinjiang Medical University, Xinjiang, China, Hou, Y., Department of Cardiovascular Diseases, Sixth People' s Hospital Affiliated to Shanghai Jiaotong University, Shanghai, China, Po, S.S., Heart Rhythm Institute, University of Oklahoma Health Sciences Center, 1200 Everett Dr (6E103), Oklahoma City, OK, US. E: sunny-po@ouhsc.edu, 2015. Obstructive Sleep Apnoea and Atrial Fibrillation. *Arrhythmia Electrophysiol. Rev.* 4: 14. doi:10.15420/aer.2015.4.1.14