

DAFTAR PUSTAKA

- Adán, V., Crown, L.A., 2003. Diagnosis and treatment of sick sinus syndrome. *Am. Fam. Physician* 67, 1725-1732+1738.
- Akpan, A., Roberts, C., Bandeen-Roche, K., Batty, B., Bausewein, C., Bell, D., *et al.*, 2018. Standard set of health outcome measures for older persons. *BMC Geriatr.* 18, 1–10.
- Armstrong, J.J., Mitnitski, A., Launer, L.J., White, L.R., Rockwood, K., 2015. Frailty in the Honolulu-Asia aging study: Deficit accumulation in a male cohort followed to 90% mortality. *Journals Gerontol. - Ser. A Biol. Sci. Med. Sci.* 70, 125–131.
- Aucoin, S.D., Aucoin, S.D., Aucoin, S.D., Hao, M., Sohi, R., Shaw, J., Bentov, I., Walker, D., McIsaac, D.I., McIsaac, D.I., McIsaac, D.I., McIsaac, D.I., 2020. Accuracy and feasibility of clinically applied frailty instruments before surgery: A systematic review and meta-analysis. *Anesthesiology* 78–95.
- Bailey, S.M., Wilkoff, B.L., 2006. Complications of pacemakers and defibrillators in the elderly. *Am. J. Geriatr. Cardiol.* 15, 102–107.
- Bandeen-Roche, K., Xue, Q.L., Ferrucci, L., Walston, J., Guralnik, J.M., Chaves, P., Zeger, S.L., Fried, L.P., 2006. Phenotype of frailty: Characterization in the Women’s Health and Aging Studies. *Journals Gerontol. - Ser. A Biol. Sci. Med. Sci.* 61, 262–266.
- Bauman, A., Merom, D., Bull, F.C., Buchner, D.M., Fiatarone Singh, M.A., 2016. Updating the Evidence for Physical Activity: Summative Reviews of the Epidemiological Evidence, Prevalence, and Interventions to Promote “active Aging.” *Gerontologist* 56, S268–S280.
- Bibas, L., Levi, M., Touchette, J., Mardigyan, V., Bernier, M., Essebag, V., Afilalo, J., 2016. Implications of Frailty in Elderly Patients With Electrophysiological Conditions. *JACC Clin. Electrophysiol.* 2, 288–294.
- Bilotta, C., Bowling, A., Casè, A., Nicolini, P., Mauri, S., Castelli, M., Vergani, C., 2010. Dimensions and correlates of quality of life according to frailty status: A cross-sectional study on community-dwelling older adults referred to an outpatient geriatric service in Italy. *Health Qual. Life Outcomes* 8, 1–10.
- Bodyak, N., Kang, P.M., Hiromura, M., Suljoadikusumo, I., Horikoshi, N., Khrapko, K., Usheva, A., 2002. Gene expression profiling of the aging mouse cardiac myocytes. *Nucleic Acids Res.* 30, 3788–3794.
- Borregaard, B., Dahl, J.S., Lauck, S.B., Ryg, J., Berg, S.K., Ekholm, O., Hendriks, J.M., Riber, L.P.S., Norekvål, T.M., Møller, J.E., 2020. Association between frailty and self-reported health following heart valve surgery. *IJC Hear. Vasc.* 31, 100671.
- Bradshaw, P.J., Stobie, P., Knuiman, M.W., Briffa, T.G., Hobbs, M.S.T., 2015. Life expectancy after implantation of a first cardiac permanent pacemaker (1995-2008): A population-based study. *Int. J. Cardiol.* 190, 42–46.
- Brenner, R., Ammann, P., Yoon, S. Il, Christen, S., Hellermann, J., Girod, G., *et al.*, 2017. Reduction of falls and fractures after permanent pacemaker implantation in elderly patients with sinus node dysfunction. *Europace* 19,

1220–1226.

- Buza, V., Rajagopalan, B., Curtis, A.B., 2017. Cancer Treatment-Induced Arrhythmias: Focus on Chemotherapy and Targeted Therapies. *Circ. Arrhythmia Electrophysiol.* 10, 1–12.
- Castelnuovo, E., Stein, K., Pitt, M., Garside, R., Payne, E., 2005. E Castelnuovo, K Stein, M Pitt, R Garside and E Payne 9.
- Chang, Y.W., Chen, W.L., Lin, F.G., Fang, W.H., Yen, M.Y., Hsieh, C.C., Kao, T.W., 2012. Frailty and its impact on health-related quality of life: A cross-sectional study on elder community-dwelling preventive health service users. *PLoS One* 7, 1–5.
- Cheitlin, M.D., 2003. Cardiovascular Physiology— Changes With Aging. *Cardiovasc. Physiol.* 12, 9–13.
- Chu, W.M., Nishita, Y., Tange, C., Zhang, S., Furuya, K., Shimokata, H., Lee, M.C., Arai, H., Otsuka, R., 2024. Effects of cigarette smoking and secondhand smoke exposure on physical frailty development among community-dwelling older adults in Japan: Evidence from a 10-year population-based cohort study. *Geriatr. Gerontol. Int.* 24, 142–149.
- Church, S., Rogers, E., Rockwood, K., Theou, O., 2020. A scoping review of the Clinical Frailty Scale. *BMC Geriatr.* 20, 1–18.
- Clegg, A.P., Dunhill, M., Trust, M., 2016. Europe PMC Funders Group Do home-based exercise interventions improve outcomes for frail older people? Findings from a systematic review 22, 68–78.
- Csepe, T.A., Kalyanasundaram, A., Hansen, B.J., Zhao, J., Fedorov, V. V., 2015. Fibrosis: A structural modulator of sinoatrial node physiology and dysfunction. *Front. Physiol.* 6, 1–8.
- Curtis, A.B., Karki, R., Hattoum, A., Sharma, U.C., 2018. Arrhythmias in Patients ≥ 80 Years of Age. *J. Am. Coll. Cardiol.*
- De Lepeleire, J., Iliffe, S., Mann, E., Degryse, J.M., 2009. Frailty: An emerging concept for general practice. *Br. J. Gen. Pract.* 59, 364–369.
- De Ponti, R., Marazzato, J., Bagliani, G., Leonelli, F.M., Padeletti, L., 2018. Sick Sinus Syndrome. *Card. Electrophysiol. Clin.* 10, 183–195.
- Dugravot, A., Fayosse, A., Dumurgier, J., Bouillon, K., Rayana, T. Ben, Schnitzler, A., Kivimaki, M., Sabia, S., Singh-Manoux, A., 2020. Social inequalities in multimorbidity, frailty, disability, and transitions to mortality: a 24-year follow-up of the Whitehall II cohort study. *Lancet Public Heal.* 5, e42–e50.
- Dun, W., Boyden, P.A., 2009. Aged atria: Electrical remodeling conducive to atrial fibrillation. *J. Interv. Card. Electrophysiol.* 25, 9–18.
- Düngen, H.D., Apostolović, S., Inkrot, S., Tahirović, E., Töpper, A., Mehrhof, F., et al., 2011. Titration to target dose of bisoprolol vs. carvedilol in elderly patients with heart failure: The CIBIS-ELD trial. *Eur. J. Heart Fail.* 13, 670–680.
- Endo, T., Lee, X.J., Clemens, S.L., 2024. EQ-5D-5L Population Norms and Quality-Adjusted Life Expectancy by Sociodemographic Characteristics and Modifiable Risk Factors for Adults in Queensland, Australia. *Value Heal.* 27, 633–641.
- Faddis, M.N., Rich, M.W., 2002. Pacing interventions for falls and syncope in the

- elderly. *Clin. Geriatr. Med.* 18, 279–294.
- Fedarko, N.A., 2012. The biology of aging and frailty. *Clin Geriatr Med.* 27, 27–37.
- Fratiglioni, L., Paillard-Borg, S., Winblad, B., 2004. An active and socially integrated lifestyle in late life might protect against dementia. *Lancet Neurol.* 3, 343–353.
- Fried, L.P., Tangen, C.M., Walston, J., Newman, A.B., Hirsch, C., Gottdiener, J., Seeman, T., Tracy, R., Kop, W.J., Burke, G., 2001. Frailty in Older Adults : Evidence for a Phenotype 56, 146–157.
- Fuster, V., Rydén, L.E., Cannom, D.S., Crijns, H.J., Curtis, A.B., Ellenbogen, K.A., *et al.*, 2011. 2011 ACCF/AHA/HRS focused updates incorporated into the ACC/AHA/ESC 2006 guidelines for the management of patients with atrial fibrillation: A report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidel. *Circulation* 123, 104–123.
- Glikson, M., Nielsen, J.C., Kronborg, M.B., Michowitz, Y., Auricchio, A., Barbash, I.M., 2021. 2021 ESC Guidelines on cardiac pacing and cardiac resynchronization therapy. *Eur. Heart J.* 42, 3427–3520.
- Go, A.S., Mozaffarian, D., Roger, V.L., Benjamin, E.J., Berry, J.D., Borden, W.B., *et al.*, 2013. Heart disease and stroke statistics-2013 update: A Report from the American Heart Association. *Circulation* 127.
- Gonçalo, S. dos S., Grotti, E.M. de O., Furuia, R.K., Dantas, R.A.S., Rossi, L.A., Dessotte, C.A.M., 2020. Health-related quality of life of patients with permanent cardiac pacing. *Texto e Context. Enferm.* 29, 1–12.
- Grundy, E., Holt, G., 2001. The socioeconomic status of older adults: How should we measure it in studies of health inequalities? *J. Epidemiol. Community Health* 55, 895–904.
- Haagsma, J., Bonsel, G., De Jongh, M., Polinder, S., 2019. Agreement between retrospectively assessed health-related quality of life collected 1 week and 12 months post-injury: An observational follow-up study. *Health Qual. Life Outcomes* 17, 1–10.
- Halter, Jeffrey B ; Woolard, N., 2016. Hazzard’s Geriatric Medicine and Gerontology, 7 th editi. ed. McGraw Hill LLC.
- Hammami, S., Ghzaïel, I., Hammouda, S., Sakly, N., Hammami, M., Zarrouk, A., 2020. Evaluation of pro-inflammatory cytokines in frail Tunisian older adults. *PLoS One* 15, 1–13.
- Hanafy, D.A., Rahdian, A., Tondas, A.E., Hartono, B., Tanubudi, D., Munawar, M., Yamin, M., Raharjo, S.B., Yuniadi, Y., 2014. Pedoman Terapi Memakai Alat Elektronik Kardiovaskular Implan (ALEKA), Perhimpunan Dokter Spesialis Kardiovaskular Indonesia.
- Hawks, M.K., Paul, M.L.B., Malu, O.O., 2021. Sinus Node Dysfunction. *Am. Fam. Physician* 104, 179–185.
- Hayajneh, A.A., Rababa, M., 2022. The Association of Frailty with Poverty in Older Adults: A Systematic Review. *Dement. Geriatr. Cogn. Disord.* 50, 407–413.
- Hays, R.D., Reeve, B.B., 2008. Measurement and modeling of health-related

- quality of life. *Int. Encycl. Public Heal.* 241–252.
- He, B., Ma, Y., Wang, C., Jiang, M., Geng, C., Chang, X., Ma, B., Han, L., 2019. Prevalence and Risk Factors for Frailty Among Community-Dwelling Older People in China: A Systematic Review and Meta-Analysis. *J. Nutr. Heal. Aging* 23, 442–450.
- Hiriscanu, E.I., Buzdugan, E.C., Hui, L.A., Bodolea, C., 2022. Exploring the Relationship between Frailty, Functional Status, Polypharmacy, and Quality of Life in Elderly and Middle-Aged Patients with Cardiovascular Diseases: A One-Year Follow-Up Study. *Int. J. Environ. Res. Public Health* 19.
- Ho, K., Mallery, L., Trenaman, S., Searle, S., Bata, I., 2024. Deprescribing Cardiovascular Medications in Older Adults Living with Frailty. *CJC Open*.
- Inácio, N.A., Neto, M.M., Da Silva Menezes Junior, A., Fernandes, J.F., Barbosa, V.A., De Almeida Laranjeira, T., Arruda, M., 2021. Health-related quality of life in elderly patients with pacemakers. *Brazilian J. Cardiovasc. Surg.* 36, 639–647.
- Iqbal, J., Serruys, P.W., Taggart, D.P., 2013. Optimal revascularization for complex coronary artery disease. *Nat. Rev. Cardiol.* 10, 635–647.
- Karimi, M., Brazier, J., 2016. Health, Health-Related Quality of Life, and Quality of Life: What is the Difference? *Pharmacoeconomics* 34, 645–649.
- Kerr, C.R., Connolly, S.J., Abdollah, H., Roberts, R.S., Gent, M., Yusuf, S., Gillis, A.M., Tang, A.S.L., Talajic, M., Klein, G.J., Newman, D.M., 2004. Canadian Trial of Physiological Pacing: Effects of Physiological Pacing during Long-Term Follow-Up. *Circulation* 109, 357–362.
- Kementrian Kesehatan RI, 2016. Penyelenggaraan Pelayanan Geriatri di Rumah Sakit Peraturan Menteri Kesehatan Respublik Indonesia Nomor 79 Tahun 2014.
- Khan, M.A., Masood, N., Husain, N., Ahmad, B., Aziz, T., Naeem, A., 2012. A retrospective study of cardiotoxicities induced by 5-fluouracil (5-FU) and 5-FU based chemotherapy regimens in pakistani adult cancer patients at shaukat khanum memorial cancer hospital & research center. *J. Pak. Med. Assoc.* 62, 430–434.
- Kistler, P.M., Sanders, P., Fynn, S.P., Stevenson, I.H., Spence, S.J., Vohra, J.K., Sparks, P.B., Kalman, J.M., 2004. Electrophysiologic and electroanatomic changes in the human atrium associated with age. *J. Am. Coll. Cardiol.* 44, 109–116.
- Kojima, G., Iliffe, S., Jivraj, S., Liljas, A., Walters, K., 2018. Does current smoking predict future frailty? The English longitudinal study of ageing. *Age Ageing* 47, 126–131.
- Krawczyk-Suszek, M., Kleinrok, A., 2022. Health-Related Quality of Life (HRQoL) of People over 65 Years of Age. *Int. J. Environ. Res. Public Health* 19.
- Kumar, P., Kusumoto, F.M., Goldschlager, N., 2012. Bradyarrhythmias in the Elderly. *Clin. Geriatr. Med.* 28, 703–715.
- Kusumoto, F.M., Schoenfeld, M.H., Barrett, C., Edgerton, J.R., Ellenbogen, K.A., Gold, M.R., *et al.*, 2019. 2018 ACC/AHA/HRS Guideline on the Evaluation and Management of Patients With Bradycardia and Cardiac Conduction

- Delay: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm, Circulation.
- Kuyken, W., 1995. The World Health Organization Quality of Life Assessment (WHOQOL): Position Paper From The World Health Organization. *Soc.Sci.Med* 41, 1403–1409.
- Lawson, A., Tan, A.C., Naylor, J., Harris, I.A., 2020. Is retrospective assessment of health-related quality of life valid? *BMC Musculoskelet. Disord.* 21, 1–10.
- Lazzeroni, D., Villatore, A., Souryal, G., Pili, G., Peretto, G., 2022. The Aging Heart: A Molecular and Clinical Challenge. *Int. J. Mol. Sci.* 23.
- Lee, Joo Hyun, Lee, Ji Hyun, Park, S.H., 2014. Leisure Activity Participation as Predictor of Quality of Life in Korean Urban-dwelling Elderly. *Occup. Ther. Int.* 21, 124–132.
- Lenardt, M.H., Carneiro, N.H.K., Binotto, M.A., Willig, M.H., Lourenço, T.M., Albino, J., 2016. Frailty and quality of life in elderly primary health care users. *Rev. Bras. Enferm.* 69, 478–483.
- Liang, H., Li, X., Lin, X., Ju, Y., Leng, J., 2021. The correlation between nutrition and frailty and the receiver operating characteristic curve of different nutritional indexes for frailty. *BMC Geriatr.* 21, 1–7.
- Liberale, L., Montecucco, F., Tardif, J.C., Libby, P., Camici, G.G., 2020. Inflamm-aging: The role of inflammation in age-dependent cardiovascular disease. *Eur. Heart J.* 41, 2974–2982.
- Liu, Y., Huang, L., Hu, F., Zhang, X., 2023. Frailty, polypharmacy, malnutrition, chronic conditions, and quality of life in the elderly: Large population-based study (Preprint). *JMIR Public Heal. Surveill.* 10, 1–22.
- Lloyd-Sherlock, P., McKee, M., Ebrahim, S., Gorman, M., Greengross, S., Prince, M., Pruchno, R., Gutman, G., Kirkwood, T., O’Neill, D., Ferrucci, L., Kritchevsky, S.B., Vellas, B., 2012. Population ageing and health. *Lancet* 379, 1295–1296.
- Manoj, P., Kim, J.A., Kim, S., Li, T., Sewani, M., Chelu, M.G., Li, N., 2023. Sinus node dysfunction: current understanding and future directions. *Am. J. Physiol. Heart Circ. Physiol.* 324, H259–H278.
- Masel, M.C., Graham, J.E., Reistetter, T.A., Markides, K.S., Ottenbacher, K.J., 2009. Frailty and health related quality of life in older Mexican Americans. *Health Qual. Life Outcomes* 7, 1–7.
- Miguelena-hycka, J., Lopez-menendez, J., Prada, P., Rodriguez-roda, J., Martin, M., Vigil-escalera, C., Hernandez-vaquero, D., Miguelena, J.M., Silva, J., Gonzalez-colac, M., 2019. Influence of Preoperative Frailty on Health-Related Quality of Life After.
- Min, D., Cho, E., 2018. Patterns in quality of life according to employment among the older adults: The Korean longitudinal study of aging (2008-2014). *BMC Public Health* 18, 1–10.
- Mlynarska, A; Mlynarski, R; Golba, K., 2018. Influence of Frailty on the Quality of Life Patients Qualified for Pacemaker Implantation. *J Clin Nurs* 27, 555–560.
- Mlynarska, A., Mlynarski, R., Golba, K.S., 2017. Frailty syndrome in patients with

- heart rhythm disorders. *Geriatr. Gerontol. Int.* 17, 1313–1318.
- Moghtadaei, M., Jansen, H.J., Mackasey, M., Rafferty, S.A., Bogachev, O., 2016. The impacts of age and frailty on heart rate and sinoatrial node function.
- Mohammed Weheida, S., Gebril, H., Mohamed Mohamed, H., Fathy, Y., 2021. Quality of Life of Patients pre/post Pacemaker Implantation. *Egypt. J. Heal. Care* 12, 1491–1502.
- Morley, J., 2014. NIH Public Access Frailty consensus. *J Am Med Dir Assoc* 14, 392–397.
- Muszalik, M., Kotarba, A., Borowiak, E., Puto, G., Cybulski, M., Kędziora-Kornatowska, K., 2021. Socio-Demographic, Clinical and Psychological Profile of Frailty Patients Living in the Home Environment and Nursing Homes: A Cross-Sectional Study. *Front. Psychiatry* 12, 1–9.
- Newman, A.B., Gottdiener, J.S., McBurnie, M.A., Hirsch, C.H., Kop, W.J., Tracy, R., Walston, J.D., Fried, L.P., 2001. Associations of subclinical cardiovascular disease with frailty. *Journals Gerontol. - Ser. A Biol. Sci. Med. Sci.* 56, M158–M166.
- Nguyen, A.T., Nguyen, L.H., Nguyen, T.X., Nguyen, T.T.H., Nguyen, H.T.T., Nguyen, T.N., *et al.*, 2019. Frailty prevalence and association with health-related quality of life impairment among rural community-dwelling older adults in Vietnam. *Int. J. Environ. Res. Public Health* 16.
- Nielsen, J.C., Thomsen, P.E.B., Højberg, S., Møller, M., Vesterlund, T., Dalsgaard, D., *et al.*, 2011. A comparison of single-lead atrial pacing with dual-chamber pacing in sick sinus syndrome. *Eur. Heart J.* 32, 686–696.
- Oemar, M., Janssen, B., 2013. EQ-5D-5L User Guide.
- Owczarek, K., 2010. The concept of quality of life. *Acta Neuropsychol.* 8, 207–213.
- Papageorgiou, D., Kosenai, K., Gika, E., Alefragkis, D., Keskou, D., Mandila, C., 2020. Quantification of Frailty Syndrome in ICU Patients with Clinical Frailty Scale. *Folia Med. (Plovdiv)*. 62, 655–661.
- Petty, Duncan R; House, Alan;Knapp, Peter;Raynor, Theo;Zrmansky, A., 2006. Validity and Reliability of the Edmonton Frail Scale. *Age Ageing* 35, 523–526.
- Proietti, R., Manzoni, G., Di Biase, L., Castelnovo, G., Lombardi, L., Fundarò, *et al.*, 2012. Closed loop stimulation is effective in improving heart rate and blood pressure response to mental stress: Report of a single-chamber pacemaker study in patients with chronotropic incompetent atrial fibrillation. *PACE - Pacing Clin. Electrophysiol.* 35, 990–998.
- Purba, F.D., Hunfeld, J.A.M., Iskandarsyah, A., Fitriana, T.S., Sadarjoen, S.S., Ramos-Goñi, J.M., Passchier, J., Busschbach, J.J.V., 2017. The Indonesian EQ-5D-5L Value Set. *Pharmacoeconomics* 35, 1153–1165.
- Quinten, C., Coens, C., Ghislain, I., Zikos, E., Sprangers, M.A.G., Ringash, J., Martinelli, F., *et al.*, 2015. The effects of age on health-related quality of life in cancer populations: A pooled analysis of randomized controlled trials using the European Organisation for Research and Treatment of Cancer (EORTC) QLQ-C30 involving 6024 cancer patients. *Eur. J. Cancer* 51, 2808–2819.
- Rajan, S.S., Wang, M., Singh, N., Jacob, A.P., Parker, S.A., Czap, A.L., Bowry, R., Grotta, J.C., Yamal, J.M., 2021. Retrospectively Collected EQ-5D-5L Data as Valid Proxies for Imputing Missing Information in Longitudinal Studies.

- Value Heal.* 24, 1720–1727.
- Rajkumar, S. V., Gertz, M.A., Lacy, M.Q., Dispenzieri, A., Fonseca, R., Geyer, S.M., Iturria, N., Kumar, S., Lust, J.A., Kyle, R.A., Greipp, P.R., Witzig, T.E., 2003. Thalidomide as initial therapy for early-stage myeloma. *Leukemia* 17, 775–779.
- Richter, D., Guasti, L., Walker, D., Lambrinou, E., Lionis, C., Abreu, A., Savelieva, I., *et al.*, 2022. Frailty in cardiology: Definition, assessment and clinical implications for general cardiology. A consensus document of the Council for Cardiology Practice (CCP), Association for Acute Cardio Vascular Care (ACVC), Association of Cardiovascular Nursing and. *Eur. J. Prev. Cardiol.* 29, 216–227.
- Roberts, P.R., 2005. Follow up and optimisation of cardiac pacing. *Heart* 91, 1229–1234.
- Rockwood, K., Theou, O., 2020. Using the clinical frailty scale in allocating scarce health care resources. *Can. Geriatr. J.* 23, 254–259.
- Rowe, R., Iqbal, J., Murali-Krishnan, R., Sultan, A., Orme, R., Briffa, N., Denvir, M., Gunn, J., 2014. Role of frailty assessment in patients undergoing cardiac interventions. *Open Hear.* 1.
- Sari, Nindya Riana; Yulianto, Kurniawan Tri; Agustina, Rida; Wilson, H., 2023. Statistik Penduduk Lanjut Usia 2023.
- Saum, K.U., Schöttker, B., Meid, A.D., Holleczeck, B., Haefeli, W.E., Hauer, K., Brenner, H., 2017. Is Polypharmacy Associated with Frailty in Older People? Results From the ESTHER Cohort Study. *J. Am. Geriatr. Soc.* 65, e27–e32.
- Savelieva, I., Anker, S., Benetos, A., Boriani, G., Bunch, J., Dagres, N., *et al.*, 2023. expert consensus document on the management of arrhythmias in frailty syndrome , endorsed by the Heart Rhythm Society (HRS), Asia Pacific Heart Rhythm Society (APHRS), Latin America Heart Rhythm Society (LAHRS), and Cardiac Arrhyt. *Europace* 25, 1249–1276.
- Schmier, J., Halpern, M.T., 2004. Patient recall and recall bias of health state and health status. *Expert Rev. Pharmacoeconomics Outcomes Res.* 4, 159–163.
- Semelka, M., Gera, J., Usman, S., 2013. Sick sinus syndrome: A review. *Am. Fam. Physician* 87, 691–696.
- Seto, E., Setiati, S., Laksmi, P.W., Tamin, T.Z., 2015. Diagnostic Test of a Scoring System for Frailty Syndrome in the Elderly According to Cardiovascular Health Study, Study of Osteoporotic Fracture and Comprehensive Geriatric Assessment Based Frailty Index Compared with Frailty Index 40 Items. *Acta Med. Indones.* 47, 183–187.
- Shaw, D.B., Gowers, J.I., Kekwick, C.A., New, K.H.J., Whistance, A.W.T., 2004. Is Mobitz type I atrioventricular block benign in adults? *Heart* 90, 169–174.
- Shin, J., Kim, K.J., Choi, J., 2020. Smoking, alcohol intake, and frailty in older Korean adult men: cross-sectional study with nationwide data. *Eur. Geriatr. Med.* 11, 269–277.
- Sinai, M., Beach, M., Hospital, C.L., Appli-, C., Heart, N., Beach, M., Mcanulty, J., Ellenbogen, K., Ehlert, F., Freedman, R.A., 2010. The New England Journal of Medicine Ventricular Pacing or Dual Chamber pacing for Sinus Node Dysfunction 346, 1854–1862.

- Slotwiner, D., Varma, N., Akar, J.G., Annas, G., Beardsall, M., Fogel, R.I., *et al.*, 2015. HRS expert consensus statement on remote interrogation and monitoring for cardiovascular implantable electronic devices. *Hear. Rhythm* 12, e69–e100.
- Sobocki, P., Ekman, M., Ågren, H., Krakau, I., Runeson, B., Mårtensson, B., Jönsson, B., 2007. Health-related quality of life measured with EQ-5D in patients treated for depression in primary care. *Value Heal.* 10, 153–160.
- Stenholm, S., Head, J., Kivimaki, M., Kawachi, I., Aalto, V., Zins, M., *et al.*, 2016. Smoking, physical inactivity and obesity as predictors of healthy and disease-free life expectancy between ages 50 and 75: A multicohort study. *Int. J. Epidemiol.* 45, 1260–1270.
- Strait, J.B., Lakatta, E.G., 2012. Aging-Associated Cardiovascular Changes and Their Relationship to Heart Failure. *Heart Fail. Clin.* 8, 143–164.
- Su, S.F., Wu, M.S., 2021. Arrhythmia Perception and Quality of Life in Bradyarrhythmia Patients Following Permanent Pacemaker Implantation. *Clin. Nurs. Res.* 30, 183–192.
- Sun, X., Di Fusco, M., Puzniak, L., Coetzer, H., Zamparo, J.M., Tabak, Y.P., Cappelleri, J.C., 2023. Assessment of retrospective collection of EQ-5D-5L in a US COVID-19 population. *Health Qual. Life Outcomes* 21, 1–7.
- Tazzeo, C., Rizzuto, D., Calderón-Larrañaga, A., Roso-Llorach, A., Marengoni, A., Welmer, A.K., Onder, G., Trevisan, C., Vetrano, D.L., 2021. Multimorbidity patterns and risk of frailty in older community-dwelling adults: A population-based cohort study. *Age Ageing* 50, 2183–2191.
- Tellez, J.O., Maczewski, M., Yanni, J., Sutyagin, P., 2011. Ageing-dependent remodelling of ion channel and Ca²⁺ clock genes underlying sino-atrial node pacemaking. *Exp. Physiol.* 96, 1163–1178.
- Tocchi, C., 2016. The Frailty Index for Elders (FIFE). *Best Pract. Nurs. Care to Older Adults* 173, 2–3.
- Toff, W.D., Camm, A.J., Skehan, J.D., 2005. Single-Chamber versus Dual-Chamber Pacing for High-Grade Atrioventricular Block. *N. Engl. J. Med.* 353, 145–155.
- Udo, E.O., Van Hemel, N.M., Zuithoff, N.P.A., Nijboer, H., Taks, W., Doevendans, P.A., Moons, K.G.M., 2013. Long term quality-of-life in patients with bradycardia pacemaker implantation. *Int. J. Cardiol.* 168, 2159–2163.
- van Eck, J.W.M., van Hemel, N.M., van den Bos, A., Taks, W., Grobbee, D.E., Moons, K.G.M., 2008. Predictors of improved quality of life 1 year after pacemaker implantation. *Am. Heart J.* 156, 491–497.
- Van Nguyen, T., Ly, T.T., Nguyen, T.N., 2020. A pilot study of the clinical frailty scale to predict frailty transition and readmission in older patients in Vietnam. *Int. J. Environ. Res. Public Health* 17, 1–9.
- Vardas, P.E., Auricchio, A., Blanc, J.J., Daubert, J.C., Drexler, H., Ector, H., *et al.*, 2008. Guidelines for cardiac pacing and cardiac resynchronization therapy [49]. *Rev. Port. Cardiol.* 27, 639–687.
- Veronese, N., Cereda, E., Stubbs, B., Solmi, M., Luchini, C., Manzato, E., Sergi, G., Manu, P., Harris, T., Fontana, L., Strandberg, T., Amieva, H., Dumurgier, J., Elbaz, A., Tzourio, C., Eicholzer, M., Rohrmann, S., Moretti, C.,

- D'Ascenzo, F., Quadri, G., Polidoro, A., Lourenço, R.A., Moreira, V.G., Sanchis, J., Scotti, V., Maggi, S., Correll, C.U., 2017. Risk of cardiovascular disease morbidity and mortality in frail and pre-frail older adults: Results from a meta-analysis and exploratory meta-regression analysis. *Ageing Res. Rev.* 35, 63–73.
- Vitale, C., Jankowska, E., Hill, L., Piepoli, M., Doehner, W., Anker, S.D., Lainscak, M., Jaarsma, T., Ponikowski, P., Rosano, G.M.C., Seferovic, P., Coats, A.J., 2019. Heart Failure Association/European Society of Cardiology position paper on frailty in patients with heart failure. *Eur. J. Heart Fail.* 21, 1299–1305.
- Vogler, J., Breithardt, G., Eckardt, L., 2012. Bradyarrhythmias and conduction blocks. *Rev. Esp. Cardiol.* 65, 656–667.
- Volkova, M., Garg, R., Dick, S., Boheler, K.R., 2005. Aging-associated changes in cardiac gene expression. *Cardiovasc. Res.* 66, 194–204.
- Wæhler, I.S., Saltvedt, I., Lydersen, S., Fure, B., Askim, T., Einstad, M.S., Thingstad, P., 2021. Association between in-hospital frailty and health-related quality of life after stroke: the Nor-COAST study. *BMC Neurol.* 21, 1–12.
- Wang, H.Y., Huang, Y., Zhou, M.R., Jiang, H.Y., Zong, Y.H., Zhu, X.H., Sun, X., 2024. Socioeconomic support, quality of life, and prognosis of frailty among the older adults. *Heal. Care Sci.* 3, 101–113.
- Wojarska, I., Polewczyk, A., 2021. Quality of life of patients with implanted devices for permanent cardiac pacing assessed with the SF-36v2 Health Survey. *Med. Ogólna i Nauk. o Zdrowiu* 27, 169–174.
- Xu, R.H., Sun, R., Tian, L., Cheung, A.W. ling, Wong, E.L., 2024. Health-related quality of life in primary care patients: a comparison between EQ-5D-5L utility score and EQ-visual analogue scale. *Health Qual. Life Outcomes* 22, 1–11.
- Xu, R.H., Wong, E.L. yi, Jin, J., Huang, H., Dong, D., 2021. Health-related quality of life measured using EQ-5D in patients with lymphomas. *Support. Care Cancer* 29, 2549–2560.
- Xu, W., Li, Y.X., Hu, Y., Wu, C., 2020. Association of Frailty with recovery from disability among community-dwelling Chinese older adults: China health and retirement longitudinal study. *BMC Geriatr.* 20, 1–7.
- Xue, H., Huang, C., Zhu, Q., Zhou, S., Ji, Y., Ding, X., Zhang, D., Gu, D., 2022. Relationships Among Cognitive Function, Frailty, and Health Outcome in Community-Dwelling Older Adults. *Front. Aging Neurosci.* 13, 1–8.
- Yin, S., Njai, R., Barker, L., Siegel, P.Z., Liao, Y., 2016. Summarizing health-related quality of life (HRQOL): Development and testing of a one-factor model. *Popul. Health Metr.* 14, 1–9.