

REFERENCES

- Abdelaziz A. *Left atrial volume index in patients with asymptomatic severe aortic stenosis*. The Egyptian Heart Journal. 2014;66(1):55-62.
- Abhayaratna, W., Seward, J., Appleton, C., Douglas, P., Oh, J., Tajik, A. and Tsang, T. (2006). *Left Atrial Size*. Journal of the American College of Cardiology, 47(12), pp.2357-2363.
- Archana M, Chandrakanta M, Rama R, and Mrutyunjay B. (2008). *Study on the diagnostic accuracy of left atrial enlargement by resting electrocardiography and its echocardiographic correlation*. Indian J Physiol Pharmacol 2008; 52 (1) : 31–42
- Baumgartner H., Hung J., Bermejo J. *Echocardiographic assessment of valve stenosis: EAE/ASE recommendations for clinical practice*. J. Am. Soc. Echocardiogr. 2009;22:1–23.
- Braunwald, E., Bonow R.O. (2012). *Braunwald's Heart Disease: a textbook of cardiovascular medicine*. Philadelphia, Elsevier Saunders.
- Berker D, Işık S, Canbay A, Aydın Y, Tütüncü Y, Delibaşı T, Güler S.(2009). *Comparison of antithyroid drugs efficacy on P wave changes in patients with Graves' disease*.
- Binder T. 3.5.2 *Size of the right atrium and associated structures* [Internet]. 123sonography. 2018 [cited 27 November 2018]. Available from: <https://www.123sonography.com/ebook/size-right-atrium-and-associated-structures>
- Emedicine.medscape.com. (2018). *Mitral Stenosis: Background, Pathophysiology, Epidemiology*. [online] Available at: <https://emedicine.medscape.com/article/155724-overview#a6> [Accessed 18 April 2018].
- Fuster, V. and Kelly, B. (2011). *A Framework for Action to Promote Cardiovascular Health in the Developing World*. Global Heart, 6(4), pp.149-177.
- Harrison, T. and Kasper, D. (2015). *Harrison's principles of internal medicine*. New York: McGraw-Hill.
- Hajian-Tilaki, K. (2014). *Sample size estimation in diagnostic test studies of biomedical informatics*. Journal of Biomedical Informatics, 48, pp.193-204.
- Hazen, M., Marwick, T. and Underwood, D. (1991). *Diagnostic accuracy of the resting electrocardiogram in detection and estimation of left atrial enlargement: An echocardiographic correlation in 551 patients*. American Heart Journal, 122(3), pp.823-828.

- Human, G. and Snyman, H. (1963). *The Value of the Macruz Index in the Diagnosis of Atrial Enlargement*. *Circulation*, 27(5), pp.935-938.
- Isomaa, B., Almgren, P., Tuomi, T., Forsen, B., Lahti, K., Nissen, M., Taskinen, M. and Groop, L. (2001). *Cardiovascular Morbidity and Mortality Associated With the Metabolic Syndrome*. *Diabetes Care*, 24(4), pp.683-689.
- Kebed, K., Kruse, E., Addetia, K., Ciszek, B., Thykattil, M., Guile, B., Lang, R. and Mor-Avi, V. (2016). *Atrial-focused views improve the accuracy of two-dimensional echocardiographic measurements of the left and right atrial volumes: a contribution to the increase in normal values in the guidelines update*. *The International Journal of Cardiovascular Imaging*, 33(2), pp.209-218.
- Leung, D., Boyd, A., Ng, A., Chi, C. and Thomas, L. (2008). *Echocardiographic evaluation of left atrial size and function: Current understanding, pathophysiologic correlates, and prognostic implications*. *American Heart Journal*, 156(6), pp.1056-1064.
- Lotfis P. *The P Wave: Indicator of Atrial Enlargement* [Internet]. Epublications.marquette.edu. 2018 [cited 3 November 2018]. Available from: https://epublications.marquette.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1016&context=physician_asst_fac
- Love J, Enlow B, Howell J, Klein-Schwartz W, Litovitz T. *Electrocardiographic changes associated with β -blocker toxicity*. *Annals of Emergency Medicine*. 2002;40(6):603-610.
- Meel R, Khandheria B, Peters F, Libhaber E, Nel S, Essop M. *Effects of age on left atrial volume and strain parameters using echocardiography in a normal black population*. *Echo Research and Practice*. 2016;3(4):115-123.
- Messika-Zeitoun, D., Bellamy, M., Avierinos, J., Breen, J., Eusemann, C., Rossi, A., Behrenbeck, T., Scott, C., Tajik, J. and Enriquez-Sarano, M. (2007). *Left atrial remodeling in mitral regurgitation--methodologic approach, physiological determinants, and outcome implications: a prospective quantitative Doppler-echocardiographic and electron beam-computed tomographic study*. *European Heart Journal*, 28(14), pp.1773-1781.
- Nemoto, N., Lesser, J., Pedersen, W., Sorajja, P., Spinner, E., Garberich, R., Vock, D. and Schwartz, R. (2015). *Pathogenic structural heart changes in early tricuspid regurgitation*. *The Journal of Thoracic and Cardiovascular Surgery*, 150(2), pp.323-330.
- O'Gara, P., Grayburn, P., Badhwar, V., Afonso, L., Carroll, J., Elmariah, S.,

- Kithcart, A., Nishimura, R., Ryan, T., Schwartz, A. and Stevenson, L. (2018). 2017 ACC Expert Consensus Decision Pathway on the Management of Mitral Regurgitation.
- Omran, A., Arifi, A. and Mohamed, A. (2011). *Echocardiography in mitral stenosis*. Journal of the Saudi Heart Association, 23(1), pp.51-58
- Pearlman J.D., Triulzi M.O., King M.E., Abascal V.M., Newell J., Weyman A.E. (1990) *Left atrial dimensions in growth and development: normal limits for two-dimensional echocardiography*. J Am CollCardiol 16:1168–1174.
- Pibarot P, Dumesnil J. *Prosthetic Heart Valves*. *Circulation*. 2009;119(7):1034-1048.
- Pick A. *Digitalis and the Electrocardiogram*. *Circulation*. 1957;15(4):603-608.
- Rusinaru D, Bohbot Y, Salaun E, Donal E, Calsata A, Galli E et al. *Determinants of left atrial volume index in patients with aortic stenosis: A multicentre pilot study*. *Archives of Cardiovascular Diseases*. 2017;110(10):525-533.
- Schober, K., Maerz, I., Ludewig, E. and Stern, J. (2007). *Diagnostic Accuracy of Electrocardiography and Thoracic Radiography in the Assessment of Left Atrial Size in Cats: Comparison with Transthoracic 2-Dimensional Echocardiography*. *Journal of Veterinary Internal Medicine*, 21(4), pp.709-718.
- Seladi J. *Left Atrial Enlargement: Causes, Symptoms, and Treatment* [Internet]. Healthline. 2018 [cited 25 November 2018]. Available from: <https://www.healthline.com/health/left-atrial-enlargement>
- Simundic A. *Measures of Diagnostic Accuracy: Basic Definitions*. *International Federation of Clinical Chemistry and Laboratory Medicine Journal*. 2009 Jan; 19(4): 203–211
- Sherwood, L. (2015). *Human physiology*. Australia: Brooks/Cole.
- SOTO-BUSTOS, Á., CARO-VADILLO, A., MARTÍNEZ-DE-MERLO, E. and ALONSO-ALEGRE, E. (2017). *Diagnostic accuracy of electrocardiographic P wave related parameters in the assessment of left atrial size in dogs with degenerative mitral valve disease*. *Journal of Veterinary Medical Science*, 79(10), pp.1682-1689.
- Thaler, M. (2007). *The only EKG book you'll ever need*. Philadelphia: Lippincott Williams & Wilkins. *Anatol J Cardiol*9(4): 298-303
- Thomas L., Levett K., Boyd A., Leung D.Y.C., Schiller N.B., Ross D.L. (2003) *Changes in regional left atrial function with aging: evaluation by Doppler tissue imaging*. *Eur J Echocardiogr* 4:92–100
- Välimäki I. *Macruz index and measurement errors: A critical evaluation*. *Journal of Electrocardiology*. 1972;5(1):96-98.



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**Diagnostic Accuracy of Macruz Index of Left Atrial Size in Mitral Stenosis Patient In Dr. Sardjito
General Hospital**

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Universitas Gadjah Mada, 2018 | Diunduh dari <http://etd.repository.ugm.ac.id/>

World Health Organization. (2018). *Cardiovascular diseases (CVDs)*. [online]
Available at: http://www.who.int/cardiovascular_diseases/en/ [Accessed
11 Apr. 2018].