

DAFTAR PUSTAKA

1. Oselin K, Girard N, Lepik K, et al. Pathological discrepancies in the diagnosis of thymic epithelial tumors: The Tallinn-Lyon experience. *J Thorac Dis.* 2019;11(2):456-464. doi:10.21037/jtd.2018.12.123
2. Wang ZM, Li F, Sarigül L, et al. A predictive model of lymph node metastasis for thymic epithelial tumours. *Eur J Cardio-thoracic Surg.* 2022;62(5):13-16. doi:10.1093/ejcts/ezac210
3. Arunachalam A, Zhang I, Zhao B, Frederickson AM, Catherine Pietanza M. Efficacy and safety of treatments for advanced thymic carcinoma after failure of first-line platinum-based chemotherapy: A systematic literature review and meta-analysis. *Lung Cancer.* 2023;176(September 2022):132-139. doi:10.1016/j.lungcan.2023.01.003
4. Gondhowiardjo S, Brohet K, Nugroho C, et al. Research Article Cancer Epidemiology Based on Hospital-Based Cancer Registry at National Referral Hospital of Indonesia. *Cancer Epidemiol Natl Ref Hosp eJKI.* 2021;9(1). doi:10.23886/ejki.9.31.Abstract
5. Bu MT, Chandrasekhar P, Ding L, Hugo W. The roles of TGF- β and VEGF pathways in the suppression of antitumor immunity in melanoma and other solid tumors. *Pharmacol Ther.* 2022;240:108211. doi:10.1016/j.pharmthera.2022.108211
6. Goldstein AJ, Oliva I, Honarpisheh H, Rubinowitz A. A tour of the thymus: A review of thymic lesions with radiologic and pathologic correlation. *Can Assoc Radiol J.* 2015;66(1):5-15. doi:10.1016/j.carj.2013.09.003
7. Girard N, Ruffini E, Marx A, Faivre-Finn C, Peters S. Thymic epithelial tumours: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Ann Oncol.* 2015;26(July):v40-v55. doi:10.1093/annonc/mdv277
8. Li H, Ren B, Yu S, Gao H, Sun PL. The clinicopathological significance of thymic epithelial markers expression in thymoma and thymic carcinoma. *BMC Cancer.* 2023;23(1):1-10. doi:10.1186/s12885-023-10619-6
9. Li J, Liu Q, Zheng Z, Li S. Prolonged survival time with surgical therapy in different types of thymoma: An analysis based on Surveillance Epidemiology and End Results Database. *Transl Cancer Res.* 2020;9(10):5893-5899. doi:10.21037/tcr-20-951
10. Hsu CH, Chan JK, Yin CH, Lee CC, Chern CU, Liao CI. Trends in the incidence of thymoma, thymic carcinoma, and thymic neuroendocrine tumor in the United States. *PLoS One.* 2019;14(12):1-13. doi:10.1371/journal.pone.0227197
11. Gerber TS, Strobl S, Marx A, Roth W, Porubsky S. Epidemiology of thymomas and thymic carcinomas in the United States and Germany, 1999-2019. *Front Oncol.* 2023;13(January):1-11. doi:10.3389/fonc.2023.1308989
12. Shin DW, Cho JH, Ha J, Jung KW. Trends in Incidence and Survival of Patients With Thymic Epithelial Tumor in a High-Incidence Asian Country: Analysis of the Korean Central Cancer Registry 1999 to 2017. *J Thorac Oncol.*

2022;17(6):827-837. doi:10.1016/j.jtho.2022.02.001

13. Vianney MM, Rachmadi L. Aspek Klinik dan Karakteristik Tipe Histopatologik Timoma. *Maj Patol Indones.* 2021;30(1):172-179. <https://majalahpatologiindonesia.com/p/index.php/patologi/article/view/455/319>
14. Brilliantino C, Rossi E, Minelli R, et al. Mediastinal thymoma: A difficult diagnosis in the pediatric age. *Radiol Case Reports.* 2021;16(9):2579-2585. doi:10.1016/j.radcr.2021.06.035
15. Ströbel P, Hohenberger P, Marx A. Thymoma and thymic carcinoma: Molecular pathology and targeted therapy. *J Thorac Oncol.* 2010;5(10 SUPPL. 4):286-290. doi:10.1097/JTO.0b013e3181f209a8
16. Tartarone A, Lerose R, Lettini AR, Tartarone M. Current Treatment Approaches for Thymic Epithelial Tumors. *Life.* 2023;13(5):1-13. doi:10.3390/life13051170
17. Borczuk AC, Chan JKC, Cooper WA, Dacic S, Kerr KM, Lantuejoul S, Marx A, Nicholson AG, Scagliotti GV, Thompson LDR, Travis WD, Tsao MS YY. WHO Classification of Tumours Editorial Board. *Thoracic Tumours.* 2021;2th:20-191. <https://publications.iarc.fr/581%0Ahttps://tumourclassification.iarc.who.int>
18. Roden AC, Ahmad U, Cardillo G, et al. Thymic Carcinomas—A Concise Multidisciplinary Update on Recent Developments From the Thymic Carcinoma Working Group of the International Thymic Malignancy Interest Group. *J Thorac Oncol.* 2022;17(5):637-650. doi:10.1016/j.jtho.2022.01.021
19. Alothaimeen HS, Memon MA. Treatment outcome and prognostic factors of malignant thymoma -a single institution experience. *Asian Pacific J Cancer Prev.* 2020;21(3):653-661. doi:10.31557/APJCP.2020.21.3.653
20. Giovani O, Agustina H, Djajakusumah TM. Characteristics of Mediastinal Tumors in Dr. Hasan Sadikin General Hospital, Periods of 2011-2016. *J Med Heal.* 2018;2(2):772-779. doi:10.28932/jmh.v2i2.1025
21. Chiappetta M, Lococo F, Zanfrini E, et al. The International Thymic Malignancy Interest Group Classification of Thymoma Recurrence: Survival Analysis and Perspectives. *J Thorac Oncol.* 2021;16(11):1936-1945. doi:10.1016/j.jtho.2021.07.004
22. Bae MK, Lee CY, Lee JG, et al. Predictors of recurrence after thymoma resection. *Yonsei Med J.* 2013;54(4):875-882. doi:10.3349/ymj.2013.54.4.875
23. Ballman M, Zhao C, McAdams MJ, Rajan A. Immunotherapy for Management of Thymic Epithelial Tumors: A Double-Edged Sword. *Cancers (Basel).* 2022;14(9). doi:10.3390/cancers14092060
24. Yan X, Feng J, Hong B, Qian Y. The Expression of PD-L1 and B7-H4 in Thymic Epithelial Tumor and Its Relationship With Tumor Immune-Infiltrating Cells. *Front Oncol.* 2021;11(July):1-14. doi:10.3389/fonc.2021.662010
25. Dapergola A, Gomatou G, Trontzas I, et al. Emerging therapies in thymic epithelial tumors (Review). Published online 2023. doi:10.3892/ol.2023.13670

26. Gong J, Chehrazi-Raffle A, Reddi S, Salgia R. Development of PD-1 and PD-L1 inhibitors as a form of cancer immunotherapy: A comprehensive review of registration trials and future considerations. *J Immunother Cancer*. 2018;6(1):1-18. doi:10.1186/s40425-018-0316-z
27. Song JS, Kim D, Kwon JH, Kim HR, Choi CM, Jang SJ. Clinicopathologic Significance and Immunogenomic Analysis of Programmed Death-Ligand 1 (PD-L1) and Programmed Death 1 (PD-1) Expression in Thymic Epithelial Tumors. *Front Oncol*. 2019;9(October):1-15. doi:10.3389/fonc.2019.01055
28. Rahayu A, Rahayu AS, Heriyanto DS. *Buku Panduan Pemeriksaan Diagnostik Pendamping Untuk Pengobatan Kemoterapi*. (Lisnawati, Heriyanto DS, eds.). Perhimpunan Dokter Spesialis Patologi Anatomik Indonesia; 2023.
29. Weissferdt A, Fujimoto J, Kalhor N, et al. Expression of PD-1 and PD-L1 in thymic epithelial neoplasms. *Mod Pathol*. 2017;30(6):826-833. doi:10.1038/modpathol.2017.6
30. Stergiou IE, Palamaris K, Levidou G, et al. PD-L1 Expression in Neoplastic and Immune Cells of Thymic Epithelial Tumors: Correlations with Disease Characteristics and HDAC Expression. *Biomedicines*. 2024;12(4). doi:10.3390/biomedicines12040772
31. Agrafiotis AC, Siozopoulou V, Hendriks JMH, Pauwels P, Koljenovic S, Van Schil PE. Prognostic factors and genetic markers in thymic epithelial tumors: A narrative review. *Thorac Cancer*. 2022;13(23):3242-3249. doi:10.1111/1759-7714.14725
32. Chen HF, Wu LX, Li XF, et al. PD-L1 expression level in different thymoma stages and thymic carcinoma: a meta-analysis. *Tumori*. 2020;106(4):306-311. doi:10.1177/0300891620915788
33. Liu D, Wang S, Bindeman W. Clinical applications of PD-L1 bioassays for cancer immunotherapy. *J Hematol Oncol*. 2017;10(1):1-6. doi:10.1186/s13045-017-0479-y
34. Girard N, Ponce Aix S, Cedres S, et al. Efficacy and safety of nivolumab for patients with pre-treated type B3 thymoma and thymic carcinoma: results from the EORTC-ETOP NIVOTHYM phase II trial. *ESMO Open*. 2023;8(3):101576. doi:10.1016/j.esmoop.2023.101576
35. Zhou Q, Ke X, Man J, Zhang B, Wang F, Zhou J. Predicting Masaoka-Koga Clinical Stage of Thymic Epithelial Tumors Using Preoperative Spectral Computed Tomography Imaging. *Front Oncol*. 2021;11(March):1-8. doi:10.3389/fonc.2021.631649
36. Rich AL. Epidemiology of thymoma. *J Thorac Dis*. 2020;12(12):7531-7535. doi:10.21037/jtd-2019-thym-02
37. Engels EA. Epidemiology of thymoma and associated malignancies. *J Thorac Oncol*. 2010;5(10 SUPPL. 4):S260-S265. doi:10.1097/JTO.0b013e3181f1f62d
38. Liu M, Wang C, Gao L, Lv C, Fu X. Clinical significance of age at diagnosis among patients with thymic epithelial tumors: A population-based study. *Aging (Albany NY)*. 2020;12(6):4815-4821. doi:10.18632/aging.102897
39. Altshuler E, Mathavan A, Mathavan A, et al. Clinical characteristics,

- prognostic factors, and long-term outcomes associated with epithelial malignancies of the thymus: A 20-year single-institution experience. *Cancer Rep.* 2023;6(3):1-10. doi:10.1002/cnr2.1750
40. Barachini S, Pardini E, Burzi IS, Sardo Infirri G, Montali M, Petrini I. Molecular and Functional Key Features and Oncogenic Drivers in Thymic Carcinomas. *Cancers (Basel)*. 2024;16(1):1-18. doi:10.3390/cancers16010166
41. Rimner A, Ruffini E, Cilento V, et al. The International Association for the Study of Lung Cancer Thymic Epithelial Tumors Staging Project: An Overview of the Central Database Informing Revision of the Forthcoming (Ninth) Edition of the TNM Classification of Malignant Tumors. *J Thorac Oncol.* 2023;18(10):1386-1398. doi:10.1016/j.jtho.2023.07.008
42. K. Kurokawa¹, T. Shukuya¹, R. A. Greenstein², B. G. Kaplan², H. Wakelee³, J. S. Ross^{2, 4}, K. Miura¹, K. Furuta⁵ SK, J. Suh⁷ SS, , E. S. Sokol² DPC& KT. Genomic characterization of thymic epithelial tumors in a real-world dataset. Published online 2023:1-10. doi:<https://doi.org/10.1016/j.esmoop.2023.101627>
43. Eriksson M, Kaerlev L, Johansen P, et al. Tobacco smoking and alcohol consumption as risk factors for thymoma – A European case-control study. *Cancer Epidemiol.* 2019;61(May):133-138. doi:10.1016/j.canep.2019.06.008
44. Lefevre CM, Payeta CA, Fayeta OM, et al. Risk factors associated with myasthenia gravis in thymoma patients: The potential role of thymic germinal centers. Published online 2019.
45. Phillips WD, Vincent A. Pathogenesis of myasthenia gravis: Update on disease types, models, and mechanisms. *F1000Research.* 2016;5(0):1-10. doi:10.12688/F1000RESEARCH.8206.1
46. Dresser L, Włodarski R, Rezania K, Soliven B. Myasthenia gravis: Epidemiology, pathophysiology and clinical manifestations. *J Clin Med.* 2021;10(11). doi:10.3390/jcm10112235
47. Massoth LR, Hung YP, Dias-Santagata D, et al. Pan-Cancer Landscape Analysis Reveals Recurrent KMT2A - MAML2 Gene Fusion in Aggressive Histologic Subtypes of Thymoma . *JCO Precis Oncol.* 2020;2(4):109-115. doi:10.1200/po.19.00288
48. Kim IK, Rao G, Zhao X, et al. Mutant GTF2I induces cell transformation and metabolic alterations in thymic epithelial cells. *Cell Death Differ.* 2020;27(7):2263-2279. doi:10.1038/s41418-020-0502-7
49. Elm L, Levidou G. The Molecular Landscape of Thymic Epithelial Tumors: A Comprehensive Review. *Int J Mol Sci.* 2024;25(3). doi:10.3390/ijms25031554
50. Oberndorfer F, Müllauer L. Genomic alterations in thymoma-molecular pathogenesis? *J Thorac Dis.* 2020;12(12):7536-7544. doi:10.21037/jtd.2019.12.52
51. Tateo V, Manuzzi L, Parisi C, et al. An overview on molecular characterization of thymic tumors: Old and new targets for clinical advances. *Pharmaceuticals.* 2021;14(4):1-24. doi:10.3390/ph14040316
52. Zhang X, Zhang P, Cong A, et al. Unraveling molecular networks in thymic

- epithelial tumors: deciphering the unique signatures. *Front Immunol.* 2023;14(October):1-15. doi:10.3389/fimmu.2023.1264325
53. Abul K. Abbas, Andrew H. Lichtman S pillai. *Cellular and Molecular Immunology*. 10th ed. Elsevier
 54. Riley RS, June CH, Langer R, Mitchell MJ. Delivery technologies for cancer immunotherapy. 2019;18(3):175-196. doi:10.1038/s41573-018-0006-z.Delivery
 55. Umemura S, Zhu J, Chahine JJ, et al. Downregulation of CYLD promotes IFN- γ mediated PD-L1 expression in thymic epithelial tumors. *Lung Cancer*. 2020;147(July):221-228. doi:10.1016/j.lungcan.2020.07.018
 56. Lomada D, Jain M, Bolner M, et al. Stat3 Signaling Promotes Survival And Maintenance Of Medullary Thymic Epithelial Cells. *PLoS Genet*. 2016;12(1). doi:10.1371/journal.pgen.1005777
 57. Abul K. Abbas AH \Li. *Basic Immunology Functions and Disorders of the Immune System*. 7th editio. Elsvier; 2024.
 58. Zhao J, Bhatnagar V, Ding L, et al. THORACIC : MEDIASTINUM A systematic review of paraneoplastic syndromes associated with thymoma : Treatment modalities , recurrence , and outcomes in resected cases. *J Thorac Cardiovasc Surg*. 2020;160(1):306-314.e14. doi:10.1016/j.jtcvs.2019.11.052
 59. Sugianto YM. The challenges in diagnosis of thymic carcinoma. 2022;6(April):588-595.
 60. Carcinoma T, Litvak AM, Woo K, Hayes S, Huang J, Rimner A. Clinical Characteristics and Outcomes for Patients With Evaluation of Masaoka Staging. *J Thorac Oncol*. 2014;9(12):1810-1815. doi:10.1097/JTO.0000000000000363
 61. Suster D, Miller JA, Pihan G, Mackinnon AC, Suster S. Expression patterns for Bcl-2, EMA, β -catenin, E-cadherin, PAX8, and MIB1 in thymomas. *Mod Pathol*. 2021;34(10):1831-1838. doi:10.1038/s41379-021-00839-1
 62. Kibler CE, Cecchini MJ, Aubry MC, Yassin SF, Harrington JK. A case of thymoma with type A and micronodular thymoma with lymphoid stroma elements. *Hum Pathol Case Reports*. 2021;23(February):200487. doi:10.1016/j.ehpc.2021.200487
 63. von der Thüsen J. Thymic epithelial tumours: histopathological classification and differential diagnosis. *Histopathology*. 2024;84(1):196-215. doi:10.1111/his.15097
 64. Rouquette I, Taranchon-Clermont E, Gilhodes J, et al. Immune biomarkers in thymic epithelial tumors: Expression patterns, prognostic value and comparison of diagnostic tests for PD-L1. *Biomark Res*. 2019;7(1):1-12. doi:10.1186/s40364-019-0177-8
 65. Ambrogi MC, Aprile V, Lenzini A, et al. TNM Staging System in Thymoma : A Critical Appraisal ? Published online 2024:1-10.
 66. Matsuda K, Miyoshi H, Moritsubo M, et al. Clinicopathological and immunohistochemical analysis of autoimmune regulator expression in patients with osteosarcoma. *Clin Exp Metastasis*. 2018;35(7):641-648.

- doi:10.1007/s10585-018-9928-4
- 67. Araujo-Filho JAB, Mayoral M, Zheng J, et al. CT Radiomic Features for Predicting Resectability and TNM Staging in Thymic Epithelial Tumors. *Ann Thorac Surg.* 2022;113(3):957-965. doi:10.1016/j.athoracsur.2021.03.084
 - 68. Perrino M, Cordua N, Vincenzo F De, et al. Thymic Epithelial Tumor and Immune System : The Role of Immunotherapy. Published online 2023.
 - 69. Isik GO, Turna A. Surgical treatment of thymic tumor and myasthenia gravis. *Front Surg.* Published online 2024. doi:10.3389/fsurg.2024.1467789
 - 70. Remon J, Bernabé R, Diz P, et al. SEOM-GECP-GETTHI Clinical Guidelines for the treatment of patients with thymic epithelial tumours (2021). *Clin Transl Oncol.* 2022;24(4):635-645. doi:10.1007/s12094-022-02788-w
 - 71. Han Y, Liu D, Li L. PD-1/PD-L1 pathway: current researches in cancer. *Am J Cancer Res.* 2020;10(3):727-742. <http://www.ncbi.nlm.nih.gov/pubmed/32266087>
 - 72. Mendelsohn J, Gray JW. *The Molecular Basis of Cancer.* 4th editio. Elsevier; 2015.
 - 73. Zak KM, Grudnik P, Magiera K, Domling A, Dubin G. Review Structural Biology of the Immune Checkpoint. 2017;2. doi:10.1016/j.str.2017.06.011
 - 74. Dermani FK, Samadi P, Rahmani G, Kohlan AK, Najafi R. PD-1/PD-L1 immune checkpoint: Potential target for cancer therapy. *J Cell Physiol.* 2019;234(2):1313-1325. doi:10.1002/jcp.27172
 - 75. Kythreotou A, Siddique A, Mauri FA, Bower M, Pinato DJ. Gene of the month : PD-L1. *J Clin Pathol.* 2018;71(3):189-194. doi:10.1136/jclinpath-2017-204853
 - 76. Tang Q, Chen Y, Li X, et al. The role of PD-1/PD-L1 and application of immune-checkpoint inhibitors in human cancers. *Front Immunol.* 2022;13(September):1-19. doi:10.3389/fimmu.2022.964442
 - 77. Chen DS, Irving BA, Hodi FS. Molecular pathways: Next-generation immunotherapy-inhibiting programmed death-ligand 1 and programmed death-1. *Clin Cancer Res.* 2012;18(24):6580-6587. doi:10.1158/1078-0432.CCR-12-1362
 - 78. Abaza A, Sid Idris F, Anis Shaikh H, et al. Programmed Cell Death Protein 1 (PD-1) and Programmed Cell Death Ligand 1 (PD-L1) Immunotherapy: A Promising Breakthrough in Cancer Therapeutics. *Cureus.* 2023;1(9):1-9. doi:10.7759/cureus.44582
 - 79. Zerde I, Matikas A, Bergh J, Rassidakis GZ, Foukakos T. Genetic, transcriptional and post-translational regulation of the programmed death protein ligand 1 in cancer: biology and clinical correlations. *Oncogene.* 2018;37(34):4639-4661. doi:10.1038/s41388-018-0303-3
 - 80. Ao YQ, Gao J, Wang S, et al. Immunotherapy of thymic epithelial tumors: molecular understandings and clinical perspectives. *Mol Cancer.* 2023;22(1):1-20. doi:10.1186/s12943-023-01772-4
 - 81. Nie RC, Chen GM, Wang Y, et al. Efficacy of Anti-PD-1/PD-L1 Monotherapy or Combinational Therapy in Patients Aged 75 Years or Older: A Study-Level

Meta-Analysis. *Front Oncol.* 2021;11(March):1-9.
doi:10.3389/fonc.2021.538174

82. Namikawa K, Mori T, Muto Y, et al. PD-L1 expression and clinical outcome after nivolumab monotherapy in various subtypes of melanoma: A single-institutional retrospective study. *Ann Oncol.* 2018;29(Supplement 9):ix105. doi:10.1093/annonc/mdy439.001
83. Andayani N, Julisafrida L. Peranan Immunoterapi Pada Kanker Paru. *J Kedokt Syiah Kuala.* 2020;20(2):70-77. doi:10.24815/jks.v20i2.18499
84. Koh HM. Prognostic and clinicopathological roles of programmed death-ligand 1 (PD-L1) expression in thymic epithelial tumors: A meta-analysis. 2020;1:3086-3098. doi:10.1111/1759-7714.13590
85. Knetki-wróblewska M, Kowalski DM, Olszyna-serementa M. Thymic epithelial tumors : Do we know all the prognostic factors ? 2021;12:339-348. doi:10.1111/1759-7714.13750
86. Liu W, Yang HS, Zheng SY, et al. Thymic epithelial tumors : examining the GTF2I mutation and developing a novel prognostic signature with LncRNA pairs to predict tumor recurrence. *BMC Genomics.* Published online 2022:1-13. doi:10.1186/s12864-022-08880-3
87. Alsaab HO, Sau S, Alzhrani R, et al. PD-1 and PD-L1 checkpoint signaling inhibition for cancer immunotherapy: mechanism, combinations, and clinical outcome. *Front Pharmacol.* 2017;8(AUG):1-15. doi:10.3389/fphar.2017.00561
88. Damayanti NMA, Dini MAR. Diagnosis dan tatalaksana massa di mediastinum anterior. *Intisari Sains Medis.* 2023;14(1):304-309. doi:10.15562/ism.v14i1.1481
89. Ishihara S, Okada S, Ogi H, et al. Programmed death-ligand 1 expression profiling in thymic epithelial cell tumors: Clinicopathological features and quantitative digital image analyses. *Lung Cancer.* 2020;145(April):40-47. doi:10.1016/j.lungcan.2020.04.038
90. Jöhrens K, Rüschoff J. The challenge to the pathologist of PD-L1 expression in tumor cells of non-small-cell lung cancer—An overview. *Curr Oncol.* 2021;28(6):5227-5239. doi:10.3390/curroncol28060437
91. Bedekovics J, Beke L, Mokanszki A. Programmed Death Ligand 1 (PD-L1) in Thymic Epithelial Tumors. *Appl Immunohistochem Mol Morphol?* 2018;00(00):1-9.
92. Ishihara S, Okada S, Ogi H, Kodama Y, Shimomura M. Lung Cancer Programmed death-ligand 1 expression profile in thymic epithelial cell tumors : Clinicopathological features and quantitative digital image analyses. *Lung Cancer.* 2020;145(December 2019):40-47. doi:10.1016/j.lungcan.2020.04.038
93. Thomas NS, Fahlevie F, Setijadi AR, Widiastuti W, Rakhma S. Thymoma Profile at Dr. Moewardi General Hospital: Does Thymoma Size Really Affect Distant Metastasis? *J Respirasi.* 2024;10(1):30-35. doi:10.20473/jr.v10-i.1.2024.30-35
94. Tamburini N, Maniscalco P, Migliorelli A, et al. Thymic Epithelial Tumors:

- Prognostic Significance and Relationship between Histology and the New TNM Staging System. *Thorac Cardiovasc Surg.* 2020;68(5):432-438. doi:10.1055/s-0039-1678612
95. Koyasu S. Imaging of thymic epithelial tumors—a clinical practice review. *Mediastinum.* 2024;8(1):1-13. doi:10.21037/med-23-66
 96. Wang Z, Chen Y, Shi Y, et al. Effect of Age on the Clinicopathological Characteristics and Survival Outcomes of Thymoma Patients. *Health (Irvine Calif).* 2022;14(06):650-659. doi:10.4236/health.2022.146047
 97. Rioja P, Ruiz R, Galvez-Nino M, et al. Epidemiology of thymic epithelial tumors: 22-years experience from a single-institution. *Thorac Cancer.* 2021;12(4):420-425. doi:10.1111/1759-7714.13760
 98. Wang TH, Hsia SM, Shih YH, Shieh TM. Association of smoking, alcohol use, and betel quid chewing with epigenetic aberrations in cancers. *Int J Mol Sci.* 2017;18(6). doi:10.3390/ijms18061210
 99. Lu Y, Di YP, Chang M, et al. Cigarette smoke-associated inflammation impairs bone remodeling through NF κ B activation. *J Transl Med.* 2021;19(1):1-16. doi:10.1186/s12967-021-02836-z
 100. Nakazono T, Yamaguchi K, Egashira R, et al. MRI Findings and Differential Diagnosis of Anterior Mediastinal Solid Tumors. *Magn Reson Med Sci.* 2023;22(4):415-433. doi:10.2463/mrms.rev.2021-0098
 101. Bernard C, Frih H, Pasquet F, et al. Thymoma associated with autoimmune diseases: 85 cases and literature review. *Autoimmun Rev.* 2016;15(1):82-92. doi:10.1016/j.autrev.2015.09.005
 102. Mouri Y, Nishijima H, Kawano H, et al. NF- κ B-Inducing Kinase in Thymic Stroma Establishes Central Tolerance by Orchestrating Cross-Talk with Not Only Thymocytes but Also Dendritic Cells. *J Immunol.* 2014;193(9):4356-4367. doi:10.4049/jimmunol.1400389
 103. Su XY, Wu WL, Liu N, Zhang SF, Li G Di. Thymic epithelial tumors: A clinicopathologic study of 249 cases from a single institution. *Int J Clin Exp Pathol.* 2014;7(11):7760-7767.
 104. Putz R, Pabst R. *Atlas Anatomi Manusia SOBOTTA Jilid 2. Edisi 21 (Batang Tubuh, Panggul, Ekstermitas Bawah)*. 21st ed. (Friedrich Paulsen, ed.). Urban and Schwazenbergs; 2000.
 105. Higuchi R, Goto T, Hirotsu Y, et al. PD-L1 expression and tumor-infiltrating lymphocytes in thymic epithelial neoplasms. *J Clin Med.* 2019;8(11):1-13. doi:10.3390/jcm8111833
 106. Wang X, Jin H, Feng X, Liang Z, Jin R, Li X. Depiction of the Genetic Alterations and Molecular Landscapes of Thymic Epithelial Tumors: A Systematic Review and Meta-Analysis. *Cancers (Basel).* 2024;16(17). doi:10.3390/cancers16172966
 107. Koh HM, Jang BG, Lee HJ, Hyun CL. Prognostic and clinicopathological roles of programmed death-ligand 1 (PD-L1) expression in thymic epithelial tumors: A meta-analysis. *Thorac Cancer.* 2020;11(11):3086-3098. doi:10.1111/1759-7714.13590

108. Wolf JL, van Nederveen F, Blaauwgeers H, et al. Interobserver variation in the classification of thymic lesions including biopsies and resection specimens in an international digital microscopy panel. *Histopathology*. 2020;77(5):734-741. doi:10.1111/his.14167
109. Agrawal M, Uppin MS, Uppin SG, Challa S, Sumeet A, Dharmrakshak A. Thymoma diagnosis and categorization in the current scenario: Morphological analysis based on interobserver variability. *Ann Thorac Medicine*. 2020;15(2):90-94. doi:10.4103/atm.ATM_350_19
110. Weissferdt A, Fujimoto J, Kalhor N, et al. Expression of PD-1 and PD-L1 in thymic epithelial neoplasms. *Mod Pathol*. 2017;30(6):826-833. doi:10.1038/modpathol.2017.6
111. Owen D, Chu B, Lehman AM, et al. Expression Patterns, Prognostic Value, and Intratumoral Heterogeneity of PD-L1 and PD-1 in Thymoma and Thymic Carcinoma. *J Thorac Oncol*. 2018;13(8):1204-1212. doi:10.1016/j.jtho.2018.04.013

