



## DAFTAR PUSTAKA

- Akbarzadeh-Jahromi, M., Zare, Z., Aslani, F.S., & Torabinezhad, S., 2020. Evaluation of pten and ki67 expression in typical and atypical endometriosis and endometriosis associated ovarian cancer. *Shiraz E Med. J.* 21: 1–7. doi:10.5812/semj.99291
- Arojo, O., Liu, D., Wan, L., Zhai, B., Yu, Y., Yuan, M., et al., 2014. inhibits downstream Akt signaling to suppress tumorigenesis 15: 1340–1350. doi:10.1038/ncb2860.Sin1
- Balan, R.A., Căruntu, I.D., Giușcă, S.E., Lozneanu, L., Păvăleanu, I., Socolov, R.V., et al., 2017. Immunohistochemical significance of ER alpha, inhibin a, calretinin, and Ki67 expression in granulosa cell ovarian tumors. *Rom. J. Morphol. Embryol.* 58: 753–760.
- Battifora, H., 1986. The multitumor (sausage) tissue block: novel method for immunohistochemical antibody testing. *Lab. Invest.* 55: 244–248.
- Blagden, S.P., 2015. Harnessing pandemonium: The clinical implications of tumor heterogeneity in ovarian cancer. *Front. Oncol.* 5: 1–6. doi:10.3389/fonc.2015.00149
- Booth, D.G., Takagi, M., Sanchez-Pulido, L., Petfalski, E., Vargiu, G., Samejima, K., et al., 2014. Ki-67 is a PP1-interacting protein that organises the mitotic chromosome periphery. *Elife* 3: 1–22. doi:10.7554/elife.01641
- Chang, L.C., Huang, C.F., Lai, M.S., Shen, L.J., Wu, F.L.L., & Cheng, W.F., 2018. Prognostic factors in epithelial ovarian cancer: A population-based study. *PLoS One* 13: 1–11. doi:10.1371/journal.pone.0194993
- Chen, A., Laskar-Levy, O., Ben-Aroya, N., & Koch, Y., 2001. Transcriptional regulation of the human GnRH II gene is mediated by a putative cAMP response element. *Endocrinology* 142: 3483–3492. doi:10.1210/endo.142.8.8302
- Chen, A., Ziv, K., Laskar-Levy, O., & Koch, Y., 2002. The transcription of the hGNRH-I and hGNRH-II genes in human neuronal cells is differentially regulated by estrogen. *J. Mol. Neurosci.* 18: 65–76. doi:10.1385/jmn:18:1-2:65
- Chen, C.-L., Cheung, L.W.T., Lau, M.-T., Choi, J.-H., Auersperg, N., Wang, H.-S., et al., 2007. Differential role of gonadotropin-releasing hormone on human ovarian epithelial cancer cell invasion. *Endocrine* 31: 311–320. doi:10.1007/s12020-007-0041-8
- Chen, C.P., & Lu, X., 2022. Gonadotropin-releasing hormone receptor inhibits triple-negative breast cancer proliferation and metastasis. *J. Int. Med. Res.* 50. doi:10.1177/03000605221082895



- Chen, M., Yao, S., Cao, Q., Xia, M., Liu, J., & He, M., 2017. The prognostic value of Ki67 in ovarian high-grade serous carcinoma: An 11-year cohort study of Chinese patients. *Oncotarget* 8: 107877–107885. doi:10.18632/oncotarget.14112
- Cheung, L.W.T., & Wong, A.S.T., 2008. Gonadotropin-releasing hormone: GnRH receptor signaling in extrapituitary tissues. *FEBS J.* 275: 5479–5495. doi:<https://doi.org/10.1111/j.1742-4658.2008.06677.x>
- Chierico, L., Rizzello, L., Guan, L., Joseph, A.S., Lewis, A., & Battaglia, G., 2017. The role of the two splice variants and extranuclear pathway on Ki-67 regulation in non-cancer and cancer cells. *PLoS One* 12: 1–20. doi:10.1371/journal.pone.0171815
- Choi, J.H., Choi, K.C., Auersperg, N., & Leung, P.C.K., 2006a. Differential regulation of two forms of gonadotropin-releasing hormone messenger ribonucleic acid by gonadotropins in human immortalized ovarian surface epithelium and ovarian cancer cells. *Endocr. Relat. Cancer* 13: 641–651. doi:10.1677/erc.1.01057
- Choi, J.H., Gilks, C.B., Auersperg, N., & Leung, P.C.K., 2006b. Immunolocalization of gonadotropin-releasing hormone (GnRH)-I, GnRH-II, and type I GnRH receptor during follicular development in the human ovary. *J. Clin. Endocrinol. Metab.* 91: 4562–4570. doi:10.1210/jc.2006-1147
- Choi, K.C., Auersperg, N., & Leung, P.C., 2001. Expression and antiproliferative effect of a second form of gonadotropin-releasing hormone in normal and neoplastic ovarian surface epithelial cells. *J. Clin. Endocrinol. Metab.* 86: 5075–5078. doi:10.1210/jcem.86.10.8100
- Chou, C.S., MacCalman, C.D., & Leung, P.C.K., 2003. Differential effects of gonadotropin-releasing hormone I and II on the urokinase-type plasminogen activator/plasminogen activator inhibitor system in human decidual stromal cells in vitro. *J. Clin. Endocrinol. Metab.* 88: 3806–3815. doi:10.1210/jc.2002-021955
- Currie, J.C., Demeule, M., Charfi, C., Zgheib, A., Larocque, A., Danalache, B.A., et al., 2022. The Peptide-Drug Conjugate TH1902: A New Sortilin Receptor-Mediated Cancer Therapeutic against Ovarian and Endometrial Cancers. *Cancers (Basel)*. 14. doi:10.3390/cancers14081877
- Cuylen, S., Blaukopf, C., Politi, A.Z., Muller-Reichert, T., Neumann, B., Poser, I., et al., 2016. Ki-67 acts as a biological surfactant to disperse mitotic chromosomes. *Nature* 535: 308–312. doi:10.1038/nature18610
- Darby, S., Stockley, J., Khan, M.M., Robson, C.N., Leung, H.Y., & Gnanapragasam, V.J., 2007. Expression of GnRH type II is regulated by the androgen receptor in prostate cancer. *Endocrine-Related Cancer Endocr Relat Cancer* 14: 613–624. doi:10.1677/ERC-07-0041



- Davis, S.R., Lambrinoudaki, I., Lumsden, M., Mishra, G.D., Pal, L., Rees, M., et al., 2015. Menopause. *Nat. Rev. Dis. Prim.* 1: 15004. doi:10.1038/nrdp.2015.4
- De Castro, I.J., Budzak, J., Di Giacinto, M.L., Ligammari, L., Gokhan, E., Spanos, C., et al., 2017. Repo-Man/PP1 regulates heterochromatin formation in interphase. *Nat. Commun.* 8. doi:10.1038/ncomms14048
- Densmore, V.S., & Urbanski, H.F., 2004. Effect of 17 $\beta$ -estradiol on hypothalamic GnRH-II gene expression in the female rhesus macaque. *J. Mol. Endocrinol.* 33: 145–153. doi:10.1677/jme.0.0330145
- Desaulniers, A.T., Cederberg, R.A., Lents, C.A., & White, B.R., 2017a. Expression and role of gonadotropin-releasing hormone 2 and its receptor in mammals. *Front. Endocrinol. (Lausanne)*. 8: 1–25. doi:10.3389/fendo.2017.00269
- Desaulniers, A.T., Cederberg, R.A., Lents, C.A., & White, B.R., 2017b. Expression and role of gonadotropin-releasing hormone 2 and its receptor in mammals. *Front. Endocrinol. (Lausanne)*. 8. doi:10.3389/fendo.2017.00269
- Devouassoux-Shisheboran, M., & Genestie, C., 2015. Pathobiology of ovarian carcinomas. *Chin. J. Cancer* 34: 50–55. doi:10.5732/cjc.014.10273
- Dewi, I.G.A.S.M., Susraini, A.A.A.N., & Ekawati, N.P., 2020. Her2/neu and ki-67 as prognostic factors in serous type ovarian carcinoma. *Bali Med. J.* 9: 567–571. doi:10.15562/bmj.v9i2.1926
- Dong-Ki, K., Ji, S.Y., Kaushik, M., Jong-Ik, H., Kyungjin, K., Dongseung, S., et al., 2009. A gonadotropin-releasing hormone-II antagonist induces autophagy of prostate cancer cells. *Cancer Res.* 69: 923–931. doi:10.1158/0008-5472.CAN-08-2115
- Dowsett, M., Nielsen, T.O., A'Hern, R., Bartlett, J., Coombes, R.C., Cuzick, J., et al., 2011. Assessment of Ki67 in Breast Cancer: Recommendations from the international Ki67 in breast cancer working Group. *J. Natl. Cancer Inst.* 103: 1656–1664. doi:10.1093/jnci/djr393
- Duffy, M.J., Harbeck, N., Nap, M., Molina, R., Nicolini, A., Senkus, E., et al., 2017. Clinical use of biomarkers in breast cancer: Updated guidelines from the European Group on Tumor Markers (EGTM). *Eur. J. Cancer* 75: 284–298. doi:10.1016/j.ejca.2017.01.017
- Edge, S.B., & Compton, C.C., 2010. The American Joint Committee on Cancer: the 7th edition of the AJCC cancer staging manual and the future of TNM. *Ann. Surg. Oncol.* doi:10.1245/s10434-010-0985-4
- Eicke, N., Günthert, A., Viereck, V., Sebold, D., Béhé, M., Becker, T., et al., 2005. GnRH-II receptor-like antigenicity in human placenta and in cancers of the human reproductive organs. *Eur. J. Endocrinol.* 153: 605–612. doi:10.1530/eje.1.02005
- Eicke, N., Günthert, A.R., Emons, G., & Gründker, C., 2006. GnRH-II agonist [D-



Lys6]GnRH-II inhibits the EGF-induced mitogenic signal transduction in human endometrial and ovarian cancer cells. *Int. J. Oncol.* 29: 1223–1229. doi:10.3892/ijo.29.5.1223

Elgamal, A., & Amin, L., 2022. Evaluation of Topical Application of Platelets Rich Plasma and Hyaluronic Acid on the Healing of Experimentally Induced Tongue Ulcer. *Egypt. Dent. J.* 68: 355–369. doi:10.21608/edj.2021.97512.1798

Emons, G., Ortmann, O., Schulz, K.D., & Schally, A. V, 1997. Growth-inhibitory actions of analogues of Luteinizing Hormone Releasing Hormone on tumor cells. *Trends Endocrinol. Metab.* 8: 355–362. doi:10.1016/s1043-2760(97)00155-0

Etikan, I., Musa, S.A., & Alkassim, R.S., 2017. Comparison of Convenience Sampling and Purposive Sampling Comparison of Convenience Sampling and Purposive Sampling. doi:10.11648/j.ajtas.20160501.11

Feng, Z., Wen, H., Bi, R., Ju, X., Chen, X., Yang, W., et al., 2016. A clinically applicable molecular classification for high-grade serous ovarian cancer based on hormone receptor expression. *Sci. Rep.* 6: 1–9. doi:10.1038/srep25408

Feng, Z., Wen, H., Ju, X., Bi, R., Chen, X., Yang, W., et al., 2017. Expression of hypothalamic-pituitary-gonadal axis-related hormone receptors in low-grade serous ovarian cancer (LGSC). *J. Ovarian Res.* 10: 1–8. doi:10.1186/s13048-016-0300-5

Fister, S., Günthert, A.R., Aicher, B., Paulini, K.W., Emons, G., & Gründker, C., 2009. GnRH-II antagonists induce apoptosis in human endometrial, ovarian, and breast cancer cells via activation of stress-induced MAPKs p38 and JNK and proapoptotic protein bax. *Cancer Res.* 69: 6473–6481. doi:10.1158/0008-5472.CAN-08-4657

Fister, S., Günthert, A.R., Emons, G., & Gründker, C., 2007. Gonadotropin-releasing hormone type II antagonists induce apoptotic cell death in human endometrial and ovarian cancer cells in vitro and in vivo. *Cancer Res.* 67: 1750–1756. doi:10.1158/0008-5472.CAN-06-3222

Fontana, F., Marzagalli, M., Marelli, M.M., Raimondi, M., Moretti, R.M., & Limonta, P., 2020. Gonadotropin-releasing hormone receptors in prostate cancer: Molecular aspects and biological functions. *Int. J. Mol. Sci.* 21: 1–23. doi:10.3390/ijms21249511

Gault, P.M., Maudsley, S., & Lincoln, G.A., 2003. Evidence that gonadotropin-releasing hormone II is not a physiological regulator of gonadotropin secretion in mammals. *J. Neuroendocrinol.* 15: 831–839. doi:10.1046/j.1365-2826.2003.01065.x

Gerdes, J., Li, L., Schlueter, C., Duchrow, M., Wohlenberg, C., Gerlach, C., et al., 1991. Immunobiochemical and molecular biologic characterization of the cell



proliferation-associated nuclear antigen that is defined by monoclonal antibody Ki-67. *Am. J. Pathol.* 138: 867–873.

Ghaly, H.S.A., & Varamini, P., 2021. New drug delivery strategies targeting the GnRH receptor in breast and other cancers. *Endocr. Relat. Cancer* 28: R251–R269. doi:10.1530/ERC-20-0442

Gong, T.-T., Wu, Q.-J., Vogtmann, E., Lin, B., & Wang, Y.-L., 2013. Age at menarche and risk of ovarian cancer: a meta-analysis of epidemiological studies. *Int. J. cancer* 132: 2894–2900. doi:10.1002/ijc.27952

Grabowski, J.P., Glajzer, J., Richter, R., Plett, H., Muallem, M.-Z., Braicu, E.I., et al., 2021. Lymphovascular space invasion and Ki67 as predictors of lymph node metastasis in primary low grade serous ovarian cancer. *Int. J. Gynecol. Cancer* 31: 98 LP – 103. doi:10.1136/ijgc-2020-001950

Grabowski, J.P., Martinez Vila, C., Richter, R., Taube, E., Plett, H., Braicu, E., et al., 2020. Ki67 expression as a predictor of chemotherapy outcome in low-grade serous ovarian cancer. *Int. J. Gynecol. cancer Off. J. Int. Gynecol. Cancer Soc.* 30: 498–503. doi:10.1136/ijgc-2019-000976

Gründker; Emons, G., 2021. Role of Gonadotropin-Releasing Hormone (GnRH) in Ovarian Cancer.

Gründker, C., & Emons, G., 2003. Role of gonadotropin-releasing hormone (GnRH) in ovarian cancer 7: 1–7.

Gründker, C., Günthert, A.R., Millar, R.P., & Emons, G., 2002a. Expression of gonadotropin-releasing hormone II (GnRH-II) receptor in human endometrial and ovarian cancer cells and effects of GnRH-II on tumor cell proliferation. *J. Clin. Endocrinol. Metab.* 87: 1427–1430. doi:10.1210/jc.87.3.1427

Gründker, C., Günthert, A.R., Millar, R.P., & Emons, G., 2002. Expression of Gonadotropin-Releasing Hormone II (GnRH-II) Receptor in Human Endometrial and Ovarian Cancer Cells and Effects of GnRH-II on Tumor Cell Proliferation. *J. Clin. Endocrinol. Metab.* 87: 1427–1430. doi:10.1210/jcem.87.3.8437

Gründker, C., Günthert, A.R., Westphalen, S., & Emons, G., 2002b. Biology of the gonadotropin-releasing hormone system in gynecological cancers. *Eur. J. Endocrinol.* 146: 1–14. doi:10.1530/eje.0.1460001

Gründker, C., Schlotawa, L., Viereck, V., Eicke, N., Horst, A., Kairies, B., et al., 2004. Antiproliferative effects of the GnRH antagonist cetrorelix and GnRH-II on human endometrial and ovarian cancer cells are not mediated through the GnRH type I receptor. *Eur. J. Endocrinol.* 151: 141–149. doi:10.1530/eje.0.1510141

Gründker, C., Völker, P., & Emons, G., 2001. Antiproliferative signaling of luteinizing hormone-releasing hormone in human endometrial and ovarian cancer cells through G protein  $\alpha$ I-mediated activation of phosphotyrosine



- phosphatase. *Endocrinology* 142: 2369–2380. doi:10.1210/endo.142.6.8190
- Gründker, C., Völker, P., Schulz, K.D., & Emons, G., 2000. Luteinizing hormone-releasing hormone agonist triptorelin and antagonist Cetrorelix inhibit EGF-induced c-fos expression in human gynecological cancers. *Gynecol. Oncol.* 78: 194–202. doi:10.1006/gyno.2000.5863
- Gulmann, C., Loring, P., O'Grady, A., & Kay, E., 2004. Miniature tissue microarrays for HercepTest standardisation and analysis. *J. Clin. Pathol.* 57: 1229–1231. doi:10.1136/jcp.2004.018689
- H.B. Çiftci, 2015. Structures, Functions and Expressions of GnRH and GnRH Receptor in Peripheral Reproductive Organs and Their Regulation by Estradiol-17 $\beta$ . *Iran. J. Appl. Anim. Sci.* 5: 775–786.
- Hall, J.E., 2015. Endocrinology of the Menopause. *Endocrinol. Metab. Clin. North Am.* 44: 485–496. doi:10.1016/j.ecl.2015.05.010
- Hanahan, D., 2022. Hallmarks of Cancer: New Dimensions. *Cancer Discov.* 12: 31–46. doi:10.1158/2159-8290.CD-21-1059
- Hsu, F.D., Nielsen, T.O., Alkushi, A., Dupuis, B., Huntsman, D., Liu, C.L., et al., 2002. Tissue microarrays are an effective quality assurance tool for diagnostic immunohistochemistry. *Mod. Pathol. an Off. J. United States Can. Acad. Pathol. Inc* 15: 1374–1380. doi:10.1097/01.MP.0000039571.02827.CE
- Huang, H., Li, Y.J., Lan, C.Y., Huang, Q.D., Feng, Y.L., Huang, Y.W., et al., 2013. Clinical significance of ascites in epithelial ovarian cancer. *Neoplasma* 60: 546–552. doi:10.4149/neo\_2013\_071
- Ibrahim, T.R., Raouf, S.M.A., Abdelgawad, M., & Elwan, A., 2020. Clinicopathological and Prognostic Value of Immunohistochemical Expression of CD44 (Stem Cell Marker) and Ki67 in Serous Ovarian Cancer. *J. Clin. Diagnostic Res.* 44: 1–7. doi:10.7860/jcdr/2020/43003.13453
- Jawhar, N.M.T., 2009. Tissue Microarray: A rapidly evolving diagnostic and research tool. *Ann. Saudi Med.* 29: 123–127. doi:10.4103/0256-4947.51806
- Kheiri, S.A., Kunna, A., Babiker, A.Y., Alsuhaibani, S.A., Ahmed, R.Y., & Alsammani, M.A., 2018. Histopathological pattern and age distribution, of malignant ovarian tumor among sudanese ladies. *Open Access Maced. J. Med. Sci.* 6: 237–241. doi:10.3889/OAMJMS.2018.067
- Khosravi, S., & Leung, P.C.K., 2003. Differential regulation of gonadotropin-releasing hormone (GnRH)I and GnRHII messenger ribonucleic acid by gonadal steroids in human granulosa luteal cells. *J. Clin. Endocrinol. Metab.* 88: 663–672. doi:10.1210/jc.2002-020866
- Köbel, M., Kaloger, S.E., Boyd, N., McKinney, S., Mehl, E., Palmer, C., et al., 2008. Ovarian carcinoma subtypes are different diseases: Implications for biomarker studies. *PLoS Med.* 5: 1749–1760.



doi:10.1371/journal.pmed.0050232

- Koshiyama, M., Matsumura, N., & Konishi, I., 2017. Subtypes of Ovarian Cancer and Ovarian Cancer Screening. *Diagnostics* 7: 1–10. doi:10.3390/diagnostics7010012
- Kuhn, E., Kurman, R.J., Sehdev, A.S., & Shih, I.-M., 2012. Ki-67 Labeling Index as an Adjunct in the Diagnosis of Serous Tubal Intraepithelial Carcinoma. *Int. J. Gynecol. Pathol.* 31.
- Kurman, R.J., & Shih, I.M., 2016. The dualistic model of ovarian carcinogenesis revisited, revised, and expanded. *Am. J. Pathol.* 186: 733–747. doi:10.1016/j.ajpath.2015.11.011
- Lheureux, S., Gourley, C., Vergote, I., & Oza, A.M., 2019. Epithelial ovarian cancer. *Lancet* 393: 1240–1253. doi:10.1016/S0140-6736(18)32552-2
- Limonta, P., Moretti, R.M., Marelli, M.M., & Motta, M., 2003. The biology of gonadotropin hormone-releasing hormone: role in the control of tumor growth and progression in humans. *Front. Neuroendocrinol.* 24: 279–295. doi:<https://doi.org/10.1016/j.yfrne.2003.10.003>
- Lin, T.C., Su, C.Y., Wu, P.Y., Lai, T.C., Pan, W.A., Jan, Y.H., et al., 2016. The nucleolar protein NIFK promotes cancer progression via ck1α/β-catenin in metastasis and ki-67-dependent cell proliferation. *eLife* 5: 1–21. doi:10.7554/eLife.11288
- Liu, J., MacCalman, C.D., Wang, Y.L., & Leung, P.C.K., 2009. Promotion of human trophoblasts invasion by gonadotropin-releasing hormone (GnRH) I and GnRH II via distinct signaling pathways. *Mol. Endocrinol.* 23: 1014–1021. doi:10.1210/me.2008-0451
- Liu, Q., Zhou, X., Feng, W., Pu, T., Li, X., Li, F., et al., 2020. Gonadotropin-Releasing Hormone Receptor-Targeted Near-Infrared Fluorescence Probe for Specific Recognition and Localization of Peritoneal Metastases of Ovarian Cancer. *Front. Oncol.* 10: 1–13. doi:10.3389/fonc.2020.00266
- Liu, Z., Wang, F., & Chen, X., 2008. Integrin alpha(v)beta(3)-Targeted Cancer Therapy. *Drug Dev. Res.* 69: 329–339. doi:10.1002/ddr.20265
- López-Reig, R., & López-Guerrero, J.A., 2020. The hallmarks of ovarian cancer: proliferation and cell growth. *Eur. J. Cancer, Suppl.* 15: 27–37. doi:10.1016/j.ejcsup.2019.12.001
- Mahadevappa, A., Krishna, S.M., & Vimala, M.G., 2017. Diagnostic and Prognostic Significance of Ki-67 Immunohistochemical Expression in Surface Epithelial Ovarian Carcinoma 11: 8–12. doi:10.7860/JCDR/2017/24350.9381
- Menon, S.S., Guruvayoorappan, C., Sakthivel, K.M., & Rasmi, R.R., 2019. Ki-67 protein as a tumour proliferation marker. *Clin. Chim. Acta* 491: 39–45. doi:10.1016/j.cca.2019.01.011



- Miller, I., Min, M., Yang, C., Tian, C., Gookin, S., Carter, D., et al., 2018. Ki67 is a Graded Rather than a Binary Marker of Proliferation versus Quiescence Graphical Abstract HHS Public Access. *Cell Rep* 24: 1105–1112. doi:10.1016/j.celrep.2018.06.110.Ki67
- Moazed, V., Jafari, E., Khandani, B.K., Nemati, A., Roozdar, A., & Razavi, S.A. Ben, 2018. Prognostic significance of reduction in Ki67 index after neoadjuvant chemotherapy in patients with breast cancer in Kerman between 2009 and 2014. *Iran. J. Pathol.* 13: 71–77. doi:10.30699/ijp.13.1.71
- Mohapatra, I., Harshini, N., Samantaray, S.R., & Sahitya, K.A., 2021. Immunohistochemical expression of P53 and Ki-67 on epithelial tumors of ovary. *Int. J. Reprod. Contraception, Obstet. Gynecol.* 10: 1005. doi:10.18203/2320-1770.ijrcog20210724
- Momenimovahed, Z., Tiznobaik, A., Taheri, S., & Salehiniya, H., 2019. Ovarian cancer in the world: Epidemiology and risk factors. *Int. J. Womens. Health* 11: 287–299. doi:10.2147/IJWH.S197604
- Morgan, K., Conklin, D., Pawson, A.J., Sellar, R., Ott, T.R., & Millar, R.P., 2003. A transcriptionally active human type II gonadotropin-releasing hormone receptor gene homolog overlaps two genes in the antisense orientation on chromosome 1q.12. *Endocrinology* 144: 423–436. doi:10.1210/en.2002-220622
- Na, T.Y., Schecterson, L., Mendonsa, A.M., & Gumbiner, B.M., 2020. The functional activity of E-cadherin controls tumor cell metastasis at multiple steps. *Proc. Natl. Acad. Sci. U. S. A.* 117: 5931–5937. doi:10.1073/pnas.1918167117
- National Library of Medicine, 2022. GNRH2 gonadotropin releasing hormone 2 [Homo sapiens (human)] [WWW Document]. *Natl. Cent. Biotechnol. Inf.* URL <https://www.ncbi.nlm.nih.gov/gene/2797> (accessed 3.7.23).
- Neill, J.D., Musgrove, L.C., & Duck, L.W., 2004. Newly recognized GnRH receptors: Function and relative role. *Trends Endocrinol. Metab.* 15: 383–392. doi:10.1016/j.tem.2004.08.005
- Noela, F., & Nuryanto, H.K., 2016. Epidemiology Data of Ovarian Cancer in Dr . Cipto Mangunkusumo Hospital , Jakarta. *Indones J Obs. Gynecol* 4: 0–5.
- Novus Biological, 2022. Tissue Microarray Construction [WWW Document]. URL <https://www.novusbio.com/tissue-microarrays>
- Page, C., Köbel, M., Ladurantaye, M., Rahimi, K., Madore, J., Babinszky, S., et al., 2013. Specimen Quality Evaluation in Canadian Biobanks Participating in the COEUR Repository. *Biopreserv. Biobank.* 11: 83–93. doi:10.1089/bio.2012.0044
- Park, S., Han, J.M., Cheon, J., Hwang, J.I., & Seong, J.Y., 2014. Apoptotic death of prostate cancer cells by a gonadotropin-releasing hormone-II antagonist.



*PLoS One* 9. doi:10.1371/journal.pone.0099723

- Pawson, A.J., Morgan, K., Maudsley, S.R., & Millar, R.P., 2003. Type II gonadotrophin-releasing hormone (GnRH-II) in reproductive biology. *Reproduction* 126: 271–278. doi:10.1530/rep.0.1260271
- Pei, D.S., Qian, G.W., Tian, H., Mou, J., Li, W., & Zheng, J.N., 2012. Analysis of human Ki-67 gene promoter and identification of the Sp1 binding sites for Ki-67 transcription. *Tumor Biol.* 33: 257–266. doi:10.1007/s13277-011-0277-z
- Pfleger, K.D.G., Bogerd, J., & Millar, R.P., 2002. Conformational constraint of mammalian, chicken, and salmon GnRHs, but not GnRH II, enhances binding at mammalian and nonmammalian receptors: Evidence for preconfiguration of GnRH II. *Mol. Endocrinol.* 16: 2155–2162. doi:10.1210/me.2002-0159
- Pignata, S., Cecere, S.C., Du Bois, A., Harter, P., & Heitz, F., 2017. Treatment of recurrent ovarian cancer. *Ann. Oncol.* 28: viii51–viii56. doi:10.1093/annonc/mdx441
- Pölcher, M., Friedrichs, N., Rudlowski, C., Fimmers, R., Keyver-Paik, M.-D., Kübler, K., et al., 2010. Changes in Ki-67 Labeling Indices During Neoadjuvant Chemotherapy for Advanced Ovarian Cancer Are Associated With Survival. *Int. J. Gynecol. Cancer* 20: 555–560. doi:10.1111/IGC.0b013e3181c104c0
- Poon, S.L., Lau, M.T., Hammond, G.L., & Leung, P.C.K., 2011. Gonadotropin-releasing hormone-II increases membrane type I metalloproteinase production via β-catenin signaling in ovarian cancer cells. *Endocrinology* 152: 764–772. doi:10.1210/en.2010-0942
- Purbadi, S., Anggraeni, T.D., & Vitria, A., 2021. Early stage epithelial ovarian cancer metastasis through peritoneal fluid circulation 1–5.
- Qiu, D., Cai, W., Zhang, Z., Li, H., & Zhou, D., 2019. High Ki-67 expression is significantly associated with poor prognosis. *Arch. Gynecol. Obstet.*
- Ravindran, F., & Choudhary, B., 2021. Ovarian Cancer: Molecular Classification and Targeted Therapy, in: Webber, B.C.E.-G.-Y.H.E.-K. (Ed.), . IntechOpen, Rijeka, p. Ch. 1. doi:10.5772/intechopen.95967
- Rebelo, S., Santos, M., Martins, F., da Cruz e Silva, E.F., & da Cruz e Silva, O.A.B., 2015. Protein phosphatase 1 is a key player in nuclear events, Cellular Signalling. Elsevier B.V. doi:10.1016/j.cellsig.2015.08.007
- Rödel, F., Zhou, S., Győrffy, B., Raab, M., Sanhaji, M., Mandal, R., et al., 2020. The Prognostic Relevance of the Proliferation Markers Ki-67 and Plk1 in Early-Stage Ovarian Cancer Patients With Serous, Low-Grade Carcinoma Based on mRNA and Protein Expression. *Front. Oncol.* 10: 1–10. doi:10.3389/fonc.2020.558932
- Ruengwanichayakun, P., 2021. Histochemical scoring assessment (H-score). *Asian*



*Arch. Pathol.* 13: 13–14.

- Safitri, W.R., 2016. Analisis Korelasi Pearson Dalam Menentukan Hubungan Antara Kejadian Demam Berdarah Dengue Dengan Kepadatan Penduduk Di Kota Surabaya Pada Tahun 2012-2014. *J. Ilm. Keperawatan (Scientific J. Nursing)* 2: 21–29.
- Saglam, O., 2022. Endometrioid Carcinoma [WWW Document]. URL <https://www.pathologyoutlines.com/topic/ovarytumorendometrioidcarcinoma.html>. (accessed 7.24.22).
- Schildkraut, J.M., Halabi, S., Bastos, E., Marchbanks, P.A., McDonald, J.A., & Berchuck, A., 2000. Prognostic factors in early-onset epithelial ovarian cancer: A population-based study. *Obstet. Gynecol.* 95: 119–127. doi:10.1016/S0029-7844(99)00535-9
- Sehouli, J., Braicu, E.I., Richter, R., Denkert, C., Jank, P., Jurmeister, P.S., et al., 2019. Prognostic significance of Ki-67 levels and hormone receptor expression in low-grade serous ovarian carcinoma: an investigation of the Tumor Bank Ovarian Cancer Network. *Hum. Pathol.* 85: 299–308. doi:10.1016/j.humpath.2018.10.020
- Shi, Y., He, D., Hou, Y., Hu, Q., Xu, C., Liu, Y., et al., 2013. An alternative high output tissue microarray technique. *Diagn. Pathol.* 8: 9. doi:10.1186/1746-1596-8-9
- Sindiani, A., Obeidat, B., Hamadeh, L., Alghazo, S., Al-Mohtaseb, A., & Alshdaifat, E., 2020. A descriptive study of the clinico-pathological and surgical characteristics of patients with primary epithelial ovarian cancer. A cross sectional study. *Ann. Med. Surg.* 59: 254–257. doi:<https://doi.org/10.1016/j.amsu.2020.09.043>
- Singh, N., & Kamath, S.M., 2022. Ki-67 Immunostaining in Epithelial Ovarian Tumors with Clinicopathological Correlation 19–26.
- Singla, A., 2019. Epidemiology and Risk Factors for Ovarian Cancer, in: Preventive Oncology for the Gyne. Springer Singapore, Singapore, pp. 223–231.
- Sobecki, M., Mrouj, K., Colinge, J., Gerbe, F., Jay, P., Krasinska, L., et al., 2017. Cell-cycle regulation accounts for variability in Ki-67 expression levels. *Cancer Res.* 77: 2722–2734. doi:10.1158/0008-5472.CAN-16-0707
- Soliman, N.A., & Yussif, S.M., 2016. Ki-67 as a prognostic marker according to breast cancer molecular subtype. *Cancer Biol. Med.* 13: 496–504. doi:10.20892/j.issn.2095-3941.2016.0066
- Stewart, A.J., Katz, A.A., Millar, R.P., & Morgan, K., 2009. Retention and silencing of prepro-GnRH-II and type II GnRH receptor genes in mammals. *Neuroendocrinology* 90: 416–432. doi:10.1159/000233303
- Sun, X., & Kaufman, P.D., 2018. Ki-67: more than a proliferation marker.



*Chromosoma* 127: 175–186. doi:10.1007/s00412-018-0659-8

- Sung, H., Ferlay, J., Siegel, R.L., Laversanne, M., Soerjomataram, I., Jemal, A., et al., 2021. Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. *CA. Cancer J. Clin.* 71: 209–249. doi:10.3322/caac.21660
- Sung Keun Kang, Tai, C.J., Nathwani, P.S., Choi, K.C., & Leung, P.C.K., 2001. Stimulation of mitogen-activated protein kinase by gonadotropin-releasing hormone in human granulosa-luteal cells. *Endocrinology* 142: 671–679. doi:10.1210/en.142.2.671
- Suo, L., Chang, X., Xu, N., & Ji, H., 2019. The anti-proliferative activity of GnRH through downregulation of the Akt/ERK pathways in pancreatic cancer. *Front. Endocrinol. (Lausanne)*. 10: 1–12. doi:10.3389/fendo.2019.00370
- Terada, K.Y., Ahn, H.J., & Kessel, B., 2016. Differences in risk for type 1 and type 2 ovarian cancer in a large cancer screening trial. *J. Gynecol. Oncol.* 27: 1–8. doi:10.3802/jgo.2016.27.e25
- Tian, H., Qian, G.W., Li, W., Chen, F.F., Di, J.H., Zhang, B.F., et al., 2011. A critical role of Sp1 transcription factor in regulating the human Ki-67 gene expression. *Tumor Biol.* 32: 273–283. doi:10.1007/s13277-010-0119-4
- Torre, L.A., Trabert, B., DeSantis, C.E., Miller, K.D., Samimi, G., Runowicz, C.D., et al., 2018. Ovarian cancer statistics, 2018. *CA. Cancer J. Clin.* 68: 284–296. doi:10.3322/caac.21456
- Uxa, S., Castillo-Binder, P., Kohler, R., Stangner, K., Müller, G.A., & Engeland, K., 2021. Ki-67 gene expression. *Cell Death Differ.* 28: 3357–3370. doi:10.1038/s41418-021-00823-x
- Vagnarelli, P., Ribeiro, S., Sennels, L., Sanchez-Pulido, L., de Lima Alves, F., Verheyen, T., et al., 2011. Repo-Man Coordinates Chromosomal Reorganization with Nuclear Envelope Reassembly during Mitotic Exit. *Dev. Cell* 21: 328–342. doi:10.1016/j.devcel.2011.06.020
- Varghese, F., Bukhari, A.B., Malhotra, R., & De, A., 2014. IHC profiler: An open source plugin for the quantitative evaluation and automated scoring of immunohistochemistry images of human tissue samples. *PLoS One* 9. doi:10.1371/journal.pone.0096801
- Wang, J., Liu, Q., Zhou, X., He, Y., Guo, Q., Shi, Q., et al., 2017. Thymidine kinase 1 expression in ovarian serous adenocarcinoma is superior to Ki-67: A new prognostic biomarker. *Tumor Biol.* 39. doi:10.1177/1010428317706479
- Wang, M.J., Pei, D.S., Qian, G.W., Yin, X.X., Cheng, Q., Li, L.T., et al., 2011. P53 regulates Ki-67 promoter activity through p53- and Sp1-dependent manner in HeLa cells. *Tumor Biol.* 32: 905–912. doi:10.1007/s13277-011-0191-4
- Webb, P.M., & Jordan, S.J., 2017. Epidemiology of epithelial ovarian cancer. *Best*



*Pract.*      *Res.*      *Clin.*      *Obstet.*      *Gynaecol.*      41:      3–14.  
doi:10.1016/j.bpobgyn.2016.08.006

Wentzensen, N., Poole, E.M., Trabert, B., White, E., Arslan, A.A., Patel, A. V, et al., 2016. Ovarian Cancer Risk Factors by Histologic Subtype: An Analysis From the Ovarian Cancer Cohort Consortium. *J. Clin. Oncol.* 34: 2888–2898. doi:10.1200/JCO.2016.66.8178

White, R.B., Eisen, J.A., Kasten, T.L., & Fernald, R.D., 1998. Second gene for gonadotropin-releasing hormone in humans. *Proc. Natl. Acad. Sci. U. S. A.* 95: 305–309. doi:10.1073/pnas.95.1.305

Yousefi, M., Dehghani, S., Nosrati, R., Ghanei, M., Salmaninejad, A., Rajaie, S., et al., 2020. Current insights into the metastasis of epithelial ovarian cancer - hopes and hurdles. *Cell. Oncol. (Dordr.)*. 43: 515–538. doi:10.1007/s13402-020-00513-9

Yu, H., Wang, J., Wu, B., li, J., & Chen, R., 2023. Prognostic significance and risk factors for pelvic and para-aortic lymph node metastasis in type I and type II ovarian cancer: a large population-based database analysis. *J. Ovarian Res.* 16: 1–10. doi:10.1186/s13048-023-01102-8

Zhou, J., Sun, J.Y., Wu, S.G., Wang, X., He, Z.Y., Chen, Q.H., et al., 2016. Risk factors for lymph node metastasis in ovarian cancer: Implications for systematic lymphadenectomy. *Int. J. Surg.* 29: 123–127. doi:10.1016/j.ijsu.2016.03.039

Zou, J., Lei, T., Guo, P., Yu, J., Xu, Q., Luo, Y., et al., 2019. Mechanisms shaping the role of ERK1/2 in cellular senescence (Review). *Mol. Med. Rep.* 19: 759–770. doi:10.3892/mmr.2018.9712

Zucha, M., Silawani, S., Dewanto, A., Widad, S., Taufiqurrachman, I., Kusumanto, A., et al., 2022. Expression of GnRH Receptor Type-II Correlates with Proliferation Activity in Endometriosis. *Int. J. Infertil. Fetal Med.* 13: 37–41. doi:10.5005/jp-journals-10016-1253