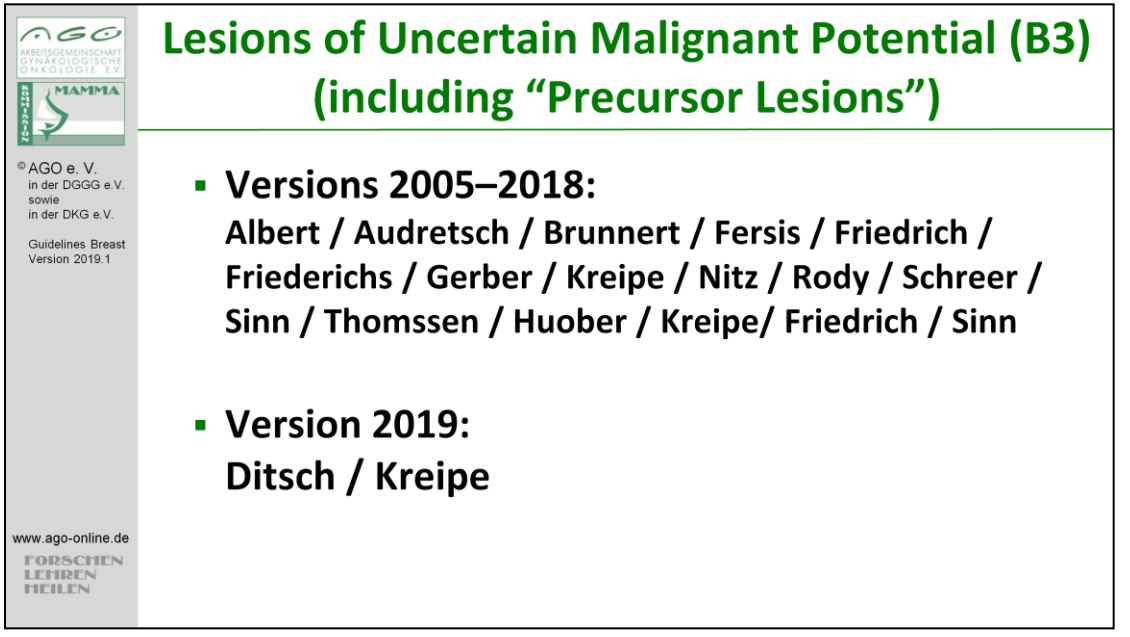
Diagnosis and Treatment of Patients with early and advanced Breast Cancer

Guidelines Breast
Version 2019.1

FORSCHEN
LEHREN
HEILEN

Lesions of Uncertain Malignant Potential (B3)

(ADH, LIN, FEA, Papilloma, Radial Scar)



Pubmed 2010-2018 queries

Lobular neoplasia (119 Results)

(Breast Diseases/CL[mh] OR Breast Diseases/DI[mh] OR Breast Diseases/EP[mh] OR Breast Diseases/GE[mh] OR Breast Diseases/MO[mh] OR Breast Diseases/PA[mh] OR Breast Diseases/RT[mh] OR Breast Diseases/SU[mh] OR Breast Diseases/TH[mh]) AND ("2010/01/01"[dp] : "2018/01/01"[dp]) AND ("lobular neoplasia"[ti] OR "lobular intraepithelial neoplasia"[ti] OR "atypical lobular hyperplasia"[ti] OR "lobular carcinoma in situ"[ti] OR "LIN"[ti] OR "ALH"[ti] OR "LCIS"[ti]) AND ("english"[la] OR "german"[la])

Atypical ductal hyperplasia (57 Results)

(Breast Diseases/CL[mh] OR Breast Diseases/DI[mh] OR Breast Diseases/EP[mh] OR Breast Diseases/GE[mh] OR Breast Diseases/MO[mh] OR Breast Diseases/PA[mh] OR Breast Diseases/RT[mh] OR Breast Diseases/SU[mh] OR Breast Diseases/TH[mh]) AND ("2010/01/01"[dp] : "2018/01/01"[dp]) AND ("atypical ductal hyperplasia"[ti] OR "atypical hyperplasia"[ti] OR "ADH"[ti]) AND ("english"[la] OR "german"[la])

Flat epithelial atypia (55 Results)

(Breast Diseases/CL[mh] OR Breast Diseases/DI[mh] OR Breast Diseases/EP[mh] OR Breast Diseases/GE[mh] OR Breast Diseases/MO[mh] OR Breast Diseases/PA[mh] OR Breast Diseases/RT[mh] OR Breast Diseases/SU[mh] OR Breast Diseases/TH[mh]) AND ("2010/01/01"[dp] : "2018/01/01"[dp]) AND ("flat epithelial atypia"[ti] OR "columnar cell"[ti] OR "FEA"[ti]) AND ("english"[la] OR "german"[la])

Papilloma (181 Results)

(Breast Diseases/CL[mh] OR Breast Diseases/DI[mh] OR Breast Diseases/EP[mh] OR Breast Diseases/GE[mh] OR Breast Diseases/MO[mh] OR Breast Diseases/PA[mh] OR Breast Diseases/RT[mh] OR Breast Diseases/SU[mh] OR Breast Diseases/TH[mh]) AND ("2010/01/01"[dp] : "2018/01/01"[dp]) AND ("papilloma"[ti] OR "papillary"[ti]) AND ("english"[la] OR "german"[la]) NOT virus[Title]

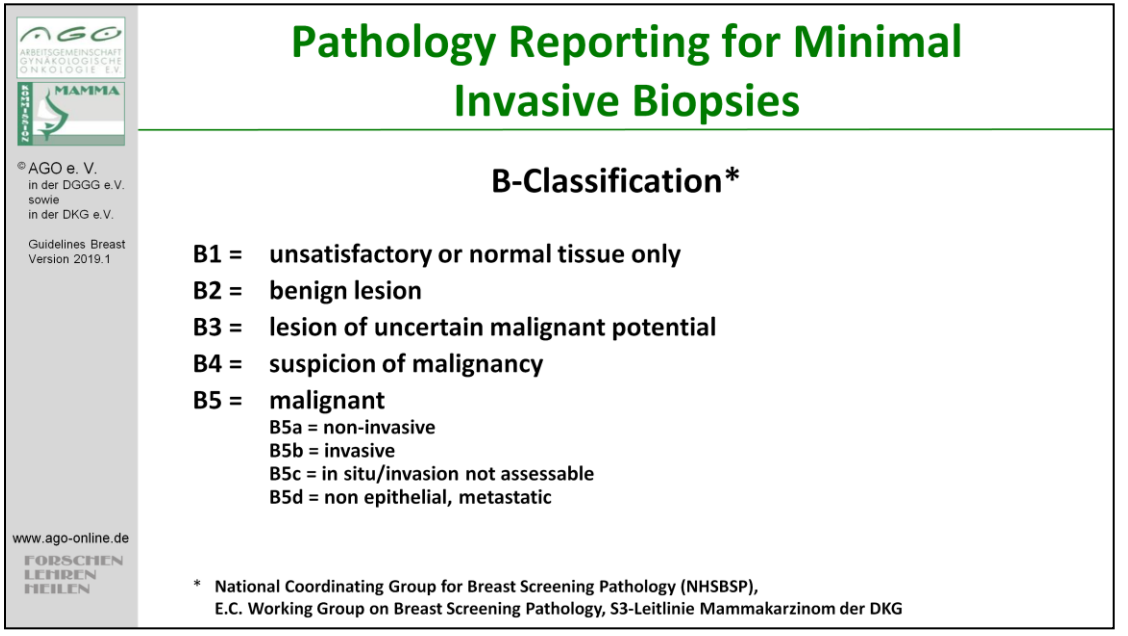
Radial scar (15 Results)

(Breast Diseases/CL[mh] OR Breast Diseases/DI[mh] OR Breast Diseases/EP[mh] OR Breast Diseases/GE[mh] OR Breast Diseases/MO[mh] OR Breast Diseases/PA[mh] OR Breast Diseases/RT[mh] OR Breast Diseases/SU[mh] OR Breast Diseases/TH[mh]) AND ("2010/01/01"[dp] : "2018/01/01"[dp]) AND ("radial scar"[ti] OR "complex sclerosing lesion"[ti] OR "radial sclerosing lesion"[ti]) AND ("english"[la] OR "german"[la])

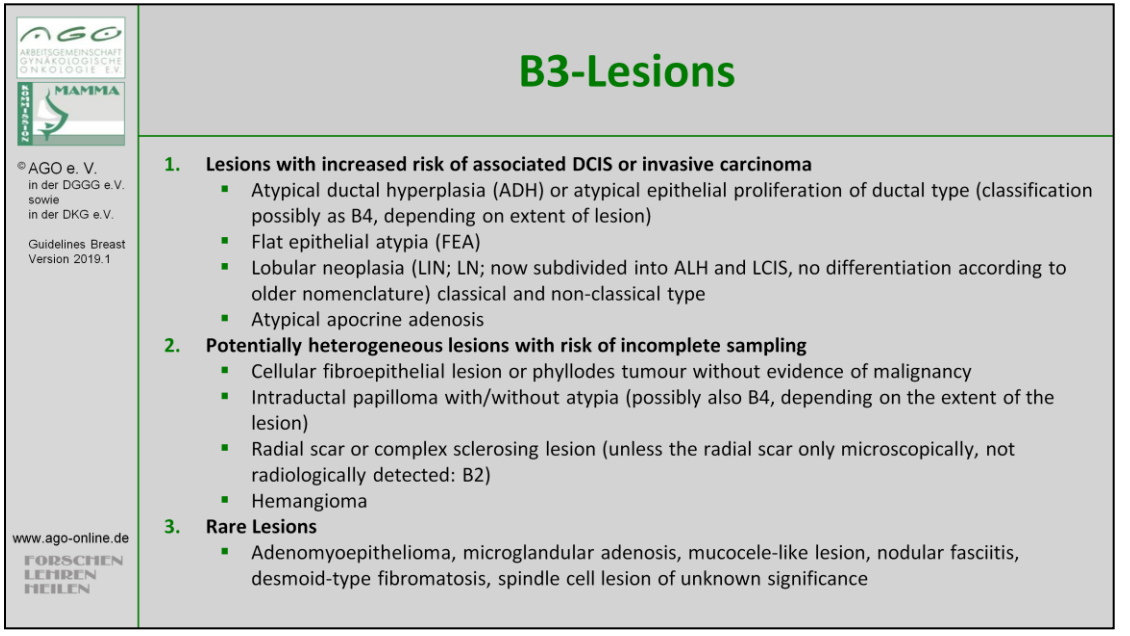
National and international guidelines

1. AWMF, Deutschen Krebsgesellschaft e.V. und Deutschen Krebshilfe e.V. (Hrsg.). Interdisziplinäre S3-Leitlinie für die Diagnostik, Therapie und Nachsorge des Mammakarzinoms. Langversion 4.0, Aktualisierung 2017 http://www.leitlinienprogramm-onkologie.de/leitlinien/mammakarzinom/
2. Curigliano, G., Burstein, H. J., P Winer, E., Gnant, M., Dubsky, P., Loibl, S., et al. (2017). De-escalating and escalating treatments for early-stage breast cancer: the St. Gallen International Expert Consensus Conference on the Primary Therapy of Early Breast Cancer 2017. Annals of Oncology, 28(8), 1700–1712. http://doi.org/10.1093/annonc/mdx308
3. NCCN, National Comprehensive Cancer Network. Breast cancer Version 2.2016.

4. NCCN National Comprehensive Cancer Network. (2016). Breast Cancer Risk Reduction. Version 1.2016.
5. National Comprehensive Cancer Network. (2016). Breast cancer screening and diagnosis. Versinn I.2016.
6. Rageth CJ, O'Flynn EAM, Pinker K, Kubik-Huch RA, Mundinger A, Decker T, Tausch C, Dammann F, Baltzer PA, Fallenberg EM, Foschini MP, Dellas S, Knauer M, Malhaire C, Sonnenschein M, Boos A, Morris E, Varga Z (2018) Second International Consensus Conference on lesions of uncertain malignant potential in the breast (B3 lesions). Breast Cancer Res Treat. [E pub ahead of print] doi: 10.1007/s10549-018-05071-1
7. Scottish Intercollegiate Guidelines Network (SIGN) (2013) SIGN 134 • Treatment of primary breast cancer. http://www.sign.ac.uk/pdf/SIGN134.pdf
8. Stacey, D., Légaré, F., Lewis, K. et al. (2017). Decision aids for people facing health treatment or screening decisions. The Cochrane Database of Systematic Reviews, 4, CD001431. http://doi.org/10.1002/14651858.CD001431.pub5
9. Visvanathan, K., Hurley, P., Bantug, E. et al. (2013). Use of pharmacologic interventions for breast cancer risk reduction: American Society of Clinical Oncology clinical practice guideline. Journal of Clinical Oncology, 31(23), 2942–2962. http://doi.org/10.1200/JCO.2013.49.3122
10. Weir R, Day P, Ali W. Risk factors for breast cancer in women:a systematic review of he literature. Christchurch: New Zealand Health Technology Assessment (NZHTA), 2007.

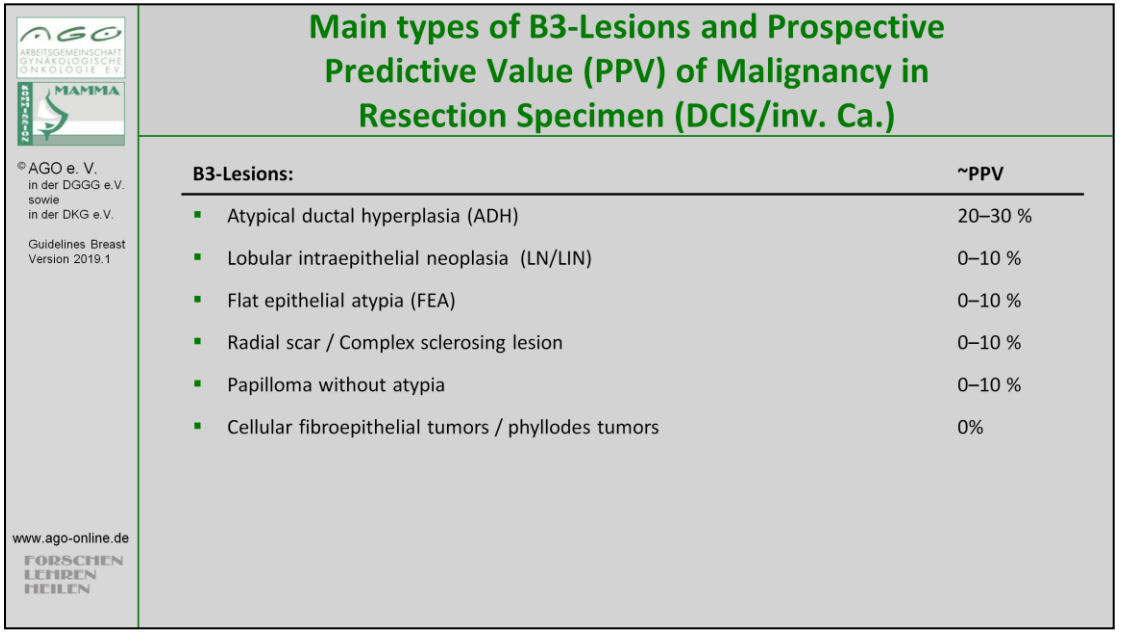


1. Andreu FJ, Sáez A, Sentís M et al. Breast core biopsy reporting categories--An internal validation in a series of 3054 consecutive lesions. Breast. 2007 Jan 31;16(1):94–101.
2. Lee, A.H. et al., Guidelines for non-operative diagnostic procedures and reporting in breast 29 cancer screening. G 150. 2016: The Royal College of Pathologists. 1-74. https://www.rcpath.org/profession/publications/cancer-datasets.html
3. Kluttig A, Trocchi P, Heinig A et al. Reliability and validity of needle biopsy evaluation of breast-abnormalities using the B-categorization--design and objectives of the Diagnosis Optimisation Study (DIOS). BMC Cancer. 2007 Jun 14;7:100.
4. Wells C (ed.) (2006) Quality assurance guidelines for pathology: Cytological and histological non-operative procedures. In: European guidelines for quality assurance in breast cancer screening and diagnosis. Perry N, Broeders M, de Wolf C, Törnberg S, Holland R, Koch von F, editors. Luxembourg: Office for Official Publications of the European Communities, ISBN 92-79-01258-4 pp. 221-256 Retrieved from http://www.euref.org/european-guidelines
5. Wells, C. A. (2014). Pathology Update Breast Screening, pp. 1 - 48. Retrieved from http://www.euref.org/european-guidelines
6. World Health Organization: WHO Classification of Tumours of the Breast. Lakhani SR, Ellis IO, Schnitt SJ, Tan PH, editors. World Health Organization; 2012.

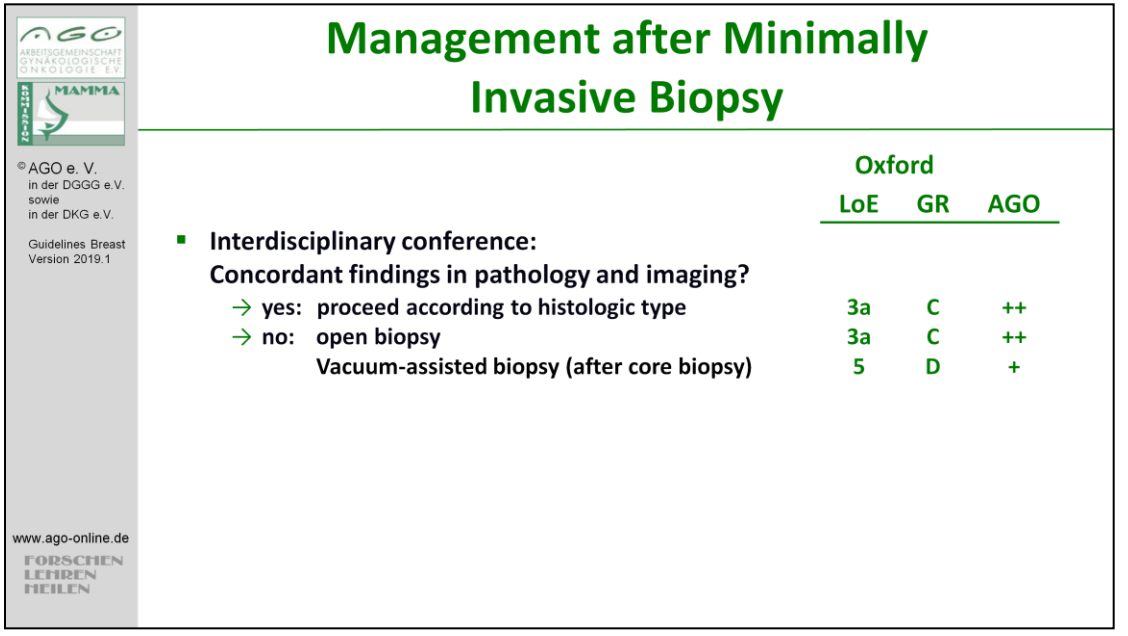


1. AWMF, Deutschen Krebsgesellschaft e.V. und Deutschen Krebshilfe e.V. (Hrsg.). Interdisziplinäre S3-Leitlinie für die Diagnostik, Therapie und Nachsorge des Mammakarzinoms. Langversion 4.0, Aktualisierung 2017 http://www.leitlinienprogramm-onkologie.de/leitlinien/mammakarzinom/
2. Hayes BD, Quinn CM. Pathology of B3 lesions of the breast. Diagnostic Histopathology. Elsevier Ltd; 2009 Oct 1;15(10):459–69.
3. Kreipe H-H, Höfler H, Lebeau A. Ergebnisse der Referenzpathologie im Mammographie-Screening. Pathologe. 2008 Oct 9;29(S2):178–80.
4. Menes TS, Rosenberg R, Balch S. Upgrade of high-risk breast lesions detected on mammography in the Breast Cancer Surveillance Consortium. Am J Surg. Elsevier; 2014 Jan;207(1):24–31.
5. Rageth CJ, O'Flynn EA, Comstock C et al. First International Consensus Conference on lesions of uncertain malignant potential in the breast (B3 lesions). Breast Cancer Res Treat. Springer US; 2016 Sep;159(2):203–13.
6. Rakha, E. A., Lee, A. H. S. et al (2011). Characterization and outcome of breast needle core biopsy diagnoses of lesions of uncertain malignant potential (B3) in abnormalities detected by mammographic screening. International Journal of Cancer, 129(6), 1417–1424. http://doi.org/10.1002/ijc.25801
7. Saladin C, Haueisen H, Kampmann G et al. Lesions with unclear malignant potential (B3) after minimally invasive breast biopsy: evaluation of vacuum biopsies performed in Switzerland and recommended further management. Acta Radiol. 2016 Jul;57(7):815–21.

8. Rageth CJ, O`Flynn EAM, Pinker K et al.: Second International Consensus Conference on lesions of uncertain malignant potential in the breast (B3 lesions). Review, Breast Cancer Res Treat, 2018, doi: 10.1007/s10549-018-05071-1.

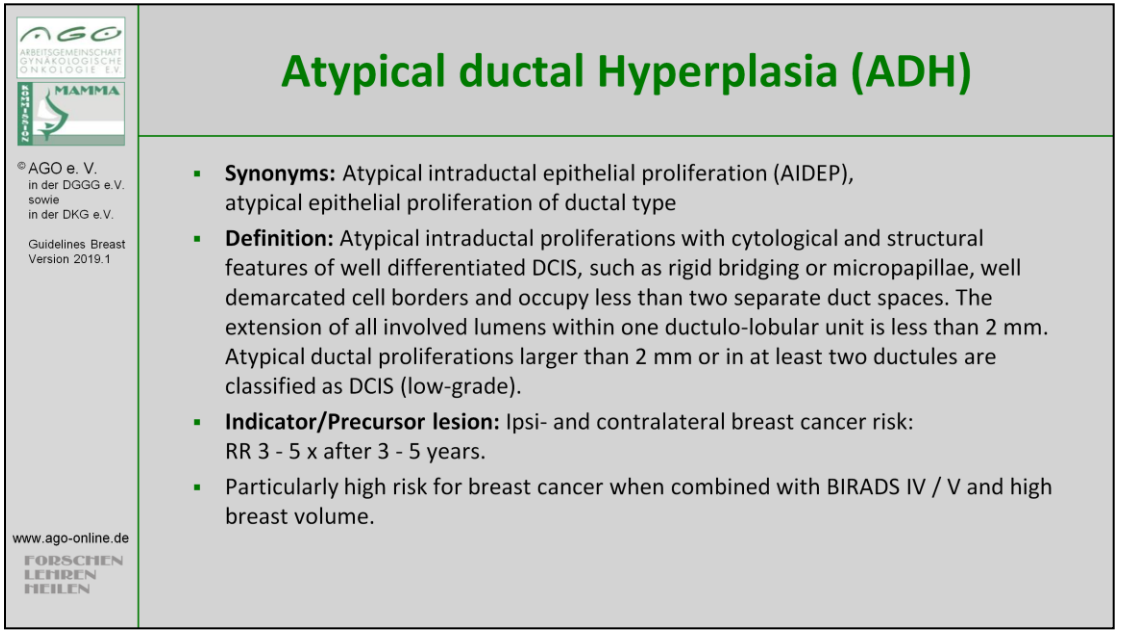


1. Calhoun, B. C., & Collins, L. C. (2016). Recommendations for excision following core needle biopsy of the breast: a contemporary evaluation of the literature. Histopathology, 68(1), 138–151. http://doi.org/10.1111/his.12852



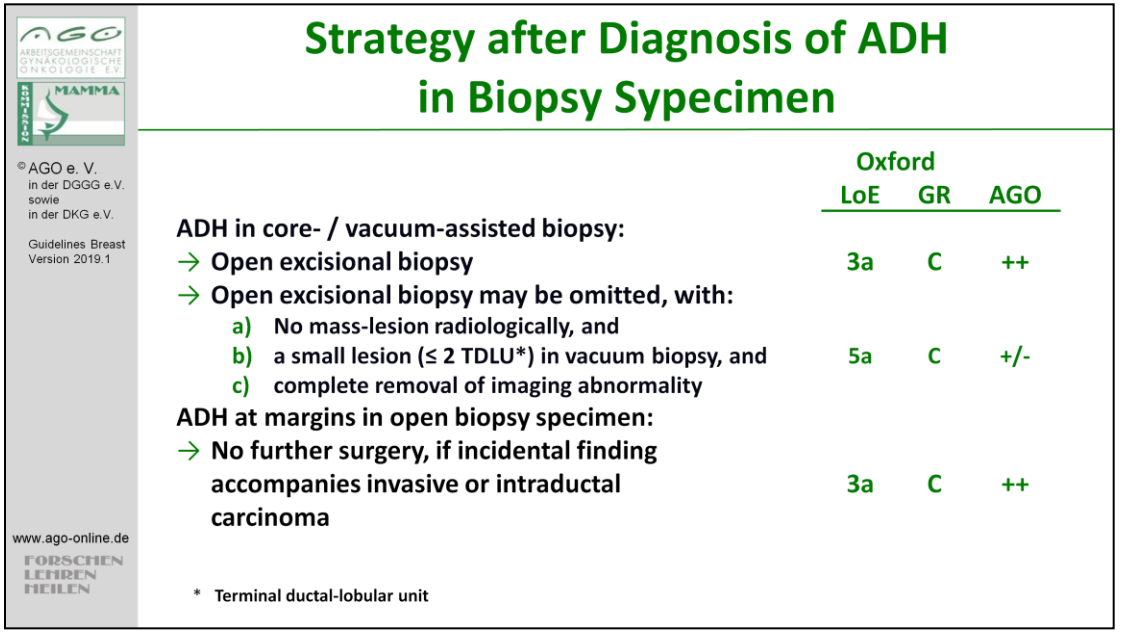
1. Atkins KA, Cohen MA, Nicholson B et al.: Atypical lobular hyperplasia and lobular carcinoma in situ at core breast biopsy: use of careful radiologic-pathologic correlation to recommend excision or observation. Radiology. 2013 Nov;269(2):340-7.
2. AWMF, Deutschen Krebsgesellschaft e.V. und Deutschen Krebshilfe e.V. (Hrsg.). Interdisziplinäre S3-Leitlinie für die Diagnostik, Therapie und Nachsorge des Mammakarzinoms. Langversion 4.0, Aktualisierung 2017 http://www.leitlinienprogramm-onkologie.de/leitlinien/mammakarzinom/
3. Calhoun, B. C., & Collins, L. C. (2016). Recommendations for excision following core needle biopsy of the breast: a contemporary evaluation of the literature. Histopathology, 68(1), 138–151. http://doi.org/10.1111/his.12852
4. Hartmann LC, Degnim AC, Santen RJ et al.: Atypical hyperplasia of the breast--risk assessment and management options. N Engl J Med. 2015 Jan 1;372(1):78-89.
5. Hayes BD, O'Doherty A, Quinn CM. Correlation of needle core biopsy with excision histology in screen-detected B3 lesions: the Merrion Breast Screening Unit experience. J Clin Pathol. 2009 Dec 1;62(12):1136–40.
6. Houssami N et al: Borderline breast core needle histology: predictive values for malignancy in lesions of uncertain malignant potential (B3). Br J Cancer 2007; 96:1253-1257
7. Middleton LP, Sneige N, Coyne R et al.: Most lobular carcinoma in situ and atypical lobular hyperplasia diagnosed on core needle biopsy can be managed clinically with radiologic follow-up in a multidisciplinary setting. Cancer Med. 2014 Jun;3(3):492-9
8. Morrow, M., Schnitt, S. J., & Norton, L. (2015). Current management of lesions associated with an increased risk of breast cancer.

Nature Reviews. Clinical Oncology, 12(4), 227–238. http://doi.org/10.1038/nrclinonc.2015.8
9. Neal L, Sandhu NP, Hieken TJ et al.: Diagnosis and management of benign, atypical, and indeterminate breast lesions detected on core needle biopsy. Mayo Clin Proc. 2014 Apr;89(4):536-47
10. Rageth CJ, O'Flynn EA, Comstock C et al. First International Consensus Conference on lesions of uncertain malignant potential in the breast (B3 lesions). Breast Cancer Res Treat. Springer US; 2016 Sep;159(2):203–13.
11. Saladin C, Haueisen H, Kampmann G et al. Lesions with unclear malignant potential (B3) after minimally invasive breast biopsy: evaluation of vacuum biopsies performed in Switzerland and recommended further management. Acta Radiol. 2016 Jul;57(7):815–21.
12. Sinn HP, Flechtenmacher C, Aulmann S. Diagnostik benigner duktaler Epithelproliferationen der Mamma in der Stanzbiopsie. Der Pathologe. Springer Berlin Heidelberg; 2014 Feb;35(1):18–25.



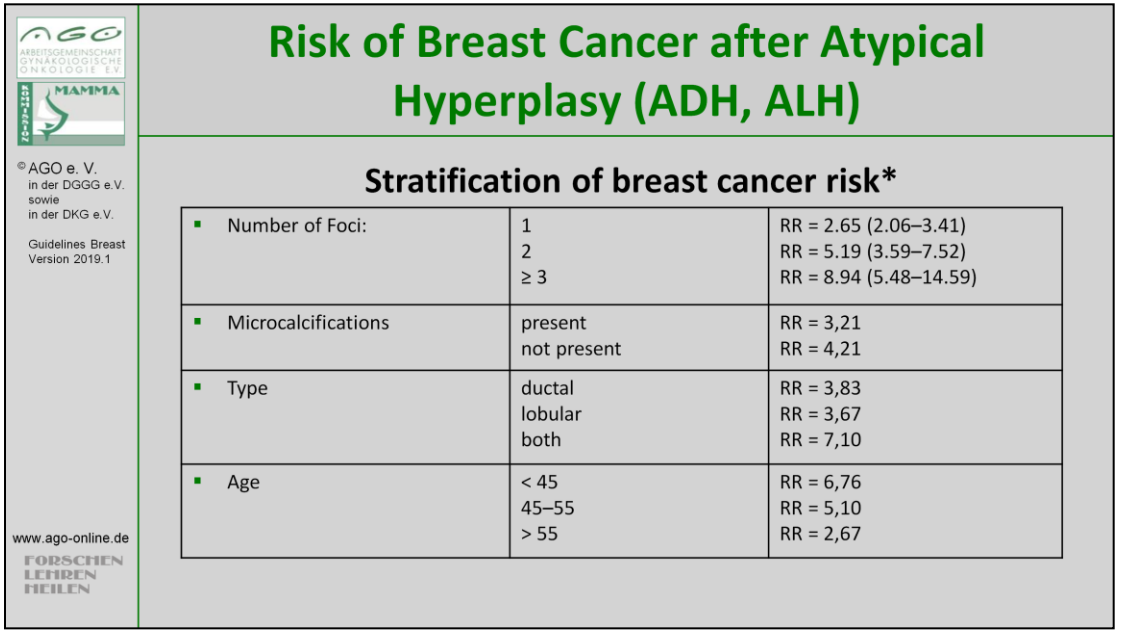
1. Menes T: Rates of atypical ductal hyperplasia have declined with less use of postmenopausal hormone treatment: Findings from the Breast Cancer Surveillance Consortium. Cancer Epidemiol Biomarkers Prev 2009;18:2822-2828
2. Degnim AC, Dupont WD, Radisky DC et al. Extent of atypical hyperplasia stratifies breast cancer risk in 2 independent cohorts of women. Cancer. 2016 Oct;122(19):2971–8.
3. Calhoun BC, Collins LC. Recommendations for excision following core needle biopsy of the breast: a contemporary evaluation of the literature. Histopathology. 2016 Jan;68(1):138–51.
4. Clauser P, Marino MA, Baltzer PAT et al.: Management of atypical lobular hyperplasia, atypical ductal hyperplasia, and lobular carcinoma in situ. Expert Rev Anticancer Ther. 2016;16(3):335–46.
5. Ellis IO. Intraductal proliferative lesions of the breast: morphology, associated risk and molecular biology. Mod Pathol. 2010 May 1;23 Suppl 2:S1–7.
6. Goldacre MJ, Abisgold JD, Yeates DGR et al.: Benign breast disease and subsequent breast cancer: English record linkage studies. J Public Health (Oxf). Oxford University Press; 2010 Dec;32(4):565–71.
7. Hartmann LC, Degnim AC, Santen RJ et al.: Atypical hyperplasia of the breast--risk assessment and management options. N Engl J Med. 2015 Jan 1;372(1):78–89.
8. Javitt MC. Diagnosis and management of high-risk breast lesions: Aristotle's dilemma. American Journal of Roentgenology. 2012 Feb;198(2):246–8.

9. Sinn P, Elsawaf Z, Helmchen B et al.: Early Breast Cancer Precursor Lesions: Lessons Learned from Molecular and Clinical Studies. Breast care (Basel, Switzerland). 2010;5(4):218–26.
10. Co M, Kwong A, Shek T: Factors affecting the under-diagnosis of atypical ductal hyperplasia diagnosed by core needle biopsies – a 10year retrospective study and review of the literature. Int J Surg, 2018, 49:27-31
11. Beca F Kensler K, Glass B et al.: EZH2 protein expression in normal breast epithelium and risk of breast cancer: results from the Nurses`Health Studies. Breast Cancer Res 2017, 19(1):21
12. Hodorowicz-Zaniewska D, Brzuszkiewicz K, Szpor J et al.: Clinical predictors of malignancy in patients diagnosed with atypical ductal huperplasia on vacuum-assisted core needle biopsy. Videosurgery Miniinv 2018, 13(2):184-191

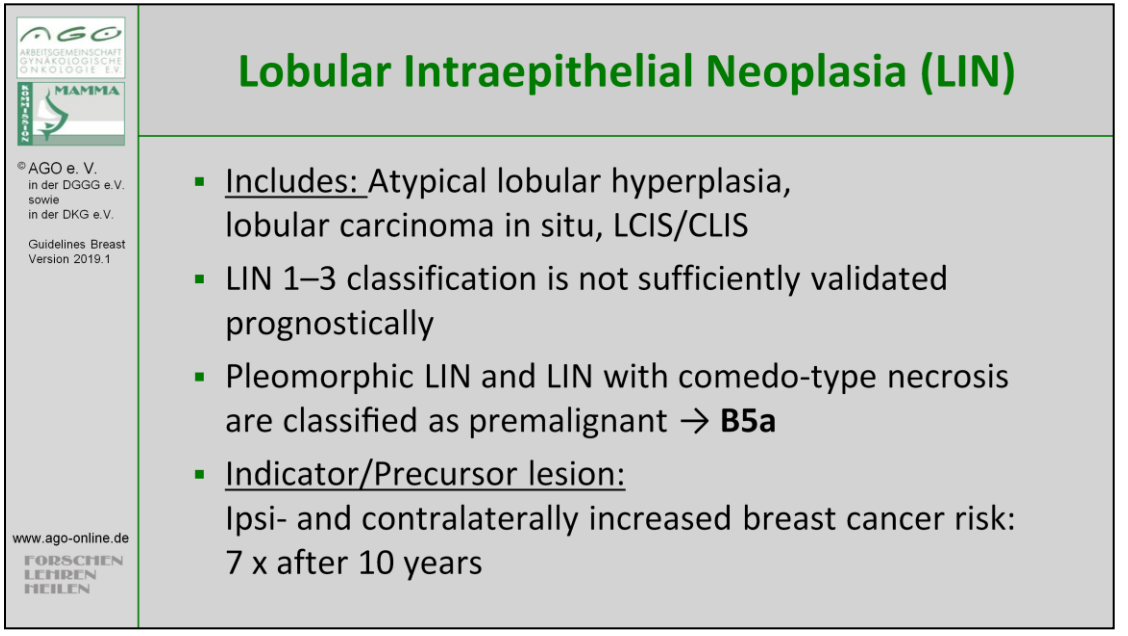


1. Allison, K. H., Rendi, M. H. et al. (2016). Histological features associated with diagnostic agreement in atypical ductal hyperplasia of the breast: illustrative cases from the B-Path study. Histopathology, 69(6), 1028–1046. http://doi.org/10.1111/his.13035
2. Hartmann, L. C., Degnim, A. C., Santen et al. (2015). Atypical hyperplasia of the breast--risk assessment and management options. The New England Journal of Medicine, 372(1), 78–89. http://doi.org/10.1056/NEJMsr1407164
3. Hayes B et al: Correlation of needle core biopsy with excision histology in screen-detected B3 lesions: the Merrion Breast Screening Unit experience. J Clin Pathol 2009; 62:1136-1140.
4. Khoury, T., Chen, X., Wang, D. et al. (2015). Nomogram to predict the likelihood of upgrade of atypical ductal hyperplasia diagnosed on a core needle biopsy in mammographically detected lesions. Histopathology, 67(1), 106–120. http://doi.org/10.1111/his.12635
5. Li, S., Liu, J., Yang, Y et al. (2014). Impact of atypical hyperplasia at margins of breast-conserving surgery on the recurrence of breast cancer. Journal of Cancer Research and Clinical Oncology, 140(4), 599–605. http://doi.org/10.1007/s00432-014-1597-3
6. McGhan, L. J., Pockaj, B. A., Wasif, N.et al. (2012). Atypical ductal hyperplasia on core biopsy: an automatic trigger for excisional biopsy? Annals of Surgical Oncology, 19(10), 3264–3269. http://doi.org/10.1245/s10434-012-2575-0
7. Menes TS, Rosenberg R, Balch S et al.: Upgrade of high-risk breast lesions detected on mammography in the Breast Cancer Surveillance Consortium. Am J Surg. 2014 Jan;207(1):24-31.
8. Mesurolle, B., Perez, J. C. H., Azzumea, F. et al. (2014). Atypical ductal hyperplasia diagnosed at sonographically guided core needle biopsy: frequency, final surgical outcome, and factors associated with underestimation. American Journal of Roentgenology,

202(6), 1389–1394. http://doi.org/10.2214/AJR.13.10864
9. Racz JM, Degnim AC (2018) When Does Atypical Ductal Hyperplasia Require Surgical Excision? Surg Oncol Clin N Am. 27:23-32. doi: 10.1016/j.soc.2017.07.011.
10. Sutton T, Farinola M, Johnson N, Garreau JR (2018) Atypical ductal hyperplasia: Clinicopathologic factors are not predictive of upgrade after excisional biopsy. Am J Surg. pii: S0002-9610(18)31431-4. doi: 10.1016/j.amjsurg.2018.12.020. [Epub ahead of print]
11. Youn, I., Kim, M. J., Moon, H. J. et al. (2014). Absence of Residual Microcalcifications in Atypical Ductal Hyperplasia Diagnosed via Stereotactic Vacuum-Assisted Breast Biopsy: Is Surgical Excision Obviated? Journal of Breast Cancer, 17(3), 265–269. http://doi.org/10.4048/jbc.2014.17.3.265
12. Yu, C.-C., Ueng, S.-H., Cheung, Y.-C. et al. (2015). Predictors of Underestimation of Malignancy after Image-Guided Core Needle Biopsy Diagnosis of Flat Epithelial Atypia or Atypical Ductal Hyperplasia. The Breast Journal, 21(3), 224–232. http://doi.org/10.1111/tbj.12389



1. Degnim A, Visscher W, Berman H et al. Stratification of breast cancer risk in women with atypia: A Mayo Cohort Study. JCO 2007; 25(19):2671-2677
2. Degnim AC, Dupont WD, Radisky DC et al. Extent of atypical hyperplasia stratifies breast cancer risk in 2 independent cohorts of women. Cancer. 2016 Oct;122(19):2971–8.
3. Collins LC, Aroner SA, Connolly JL et al. Breast cancer risk by extent and type of atypical hyperplasia: An update from the Nurses' Health Studies. Cancer. 2016 Feb 15;122(4):515–20.
4. Khoury T, Chen X, Wang D et al. Nomogram to predict the likelihood of upgrade of atypical ductal hyperplasia diagnosed on a core needle biopsy in mammographically detected lesions. Histopathology. 2015 Jul;67(1):106–20.
5. Yu C-C, Ueng S-H, Cheung Y-C et al. Predictors of Underestimation of Malignancy after Image-Guided Core Needle Biopsy Diagnosis of Flat Epithelial Atypia or Atypical Ductal Hyperplasia. Breast J. 2015 Mar 13;21(3):224–32.

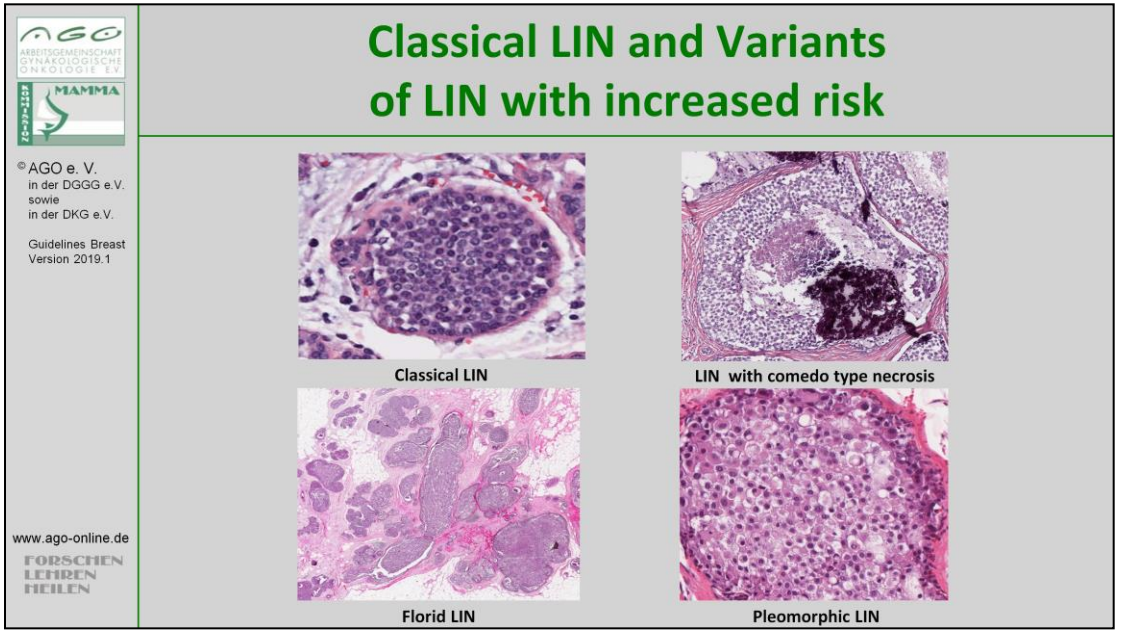


1. Bratthauer GL, Tavassoli FA. Lobular intraepithelial neoplasia: previously unexplored aspects assessed in 775 cases and their clinical implications. Virchows Arch. 2002;440(2):134-138.
2. Contreras A: Lobular Neoplasia of the breast: An update. Arch Pathol Lab Med 2009; 133(7):1116-1120
3. Ginter, P. S., & D'Alfonso, T. M. (2017). Current Concepts in Diagnosis, Molecular Features, and Management of Lobular Carcinoma In Situ of the Breast With a Discussion of Morphologic Variants. Archives of Pathology & Laboratory Medicine, 141(12), 1668–1678. http://doi.org/10.5858/arpa.2016-0421-RA
4. Hussain, M., & Cunnick, G. H. (2011). Management of lobular carcinoma in-situ and atypical lobular hyperplasia of the breast--a review. European Journal of Surgical Oncology : the Journal of the European Society of Surgical Oncology and the British Association of Surgical Oncology, 37(4), 279–289. http://doi.org/10.1016/j.ejso.2011.01.009
5. Hwang, H., Sullivan, M. E., & Susnik, B. (2010). Lobular neoplasia. Diagnostic Histopathology, 16(7), 337–344. http://doi.org/10.1016/j.mpdhp.2010.03.016
6. Jorns, J., Sabel, M. S., & Pang, J. C. (2014). Lobular neoplasia: morphology and management. Archives of Pathology & Laboratory Medicine, 138(10), 1344–1349. http://doi.org/10.5858/arpa.2014-0278-CC
7. Pinder S, Provenzano E, Reis-Filho J. Lobular in situ neoplasia and columnar cell lesions: diagnosis in breast core biopsies and implications for management. Pathology. 2007 Mar 31;39(2):208–16.
8. Sinn, H. P., Helmchen, B., Heil, J. et al. (2014). Lobuläre Neoplasie und invasives lobuläres Mammakarzinom. Der Pathologe, 35(1),

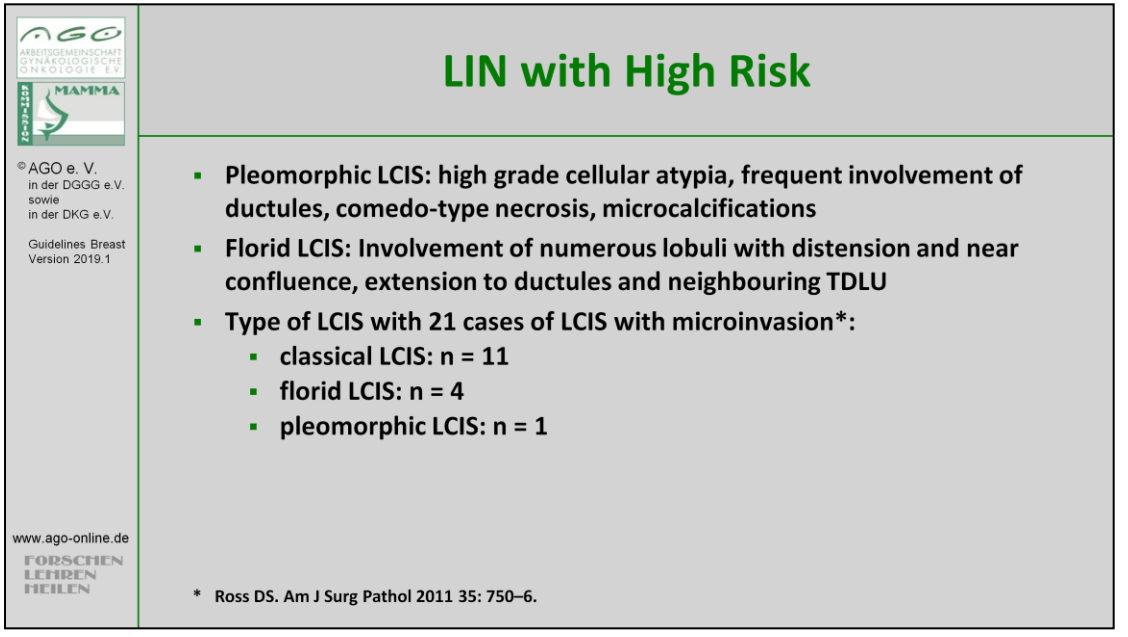
45–53. http://doi.org/10.1007/s00292-013-1840-8

Statement: Indicator-/ precusor lesion

1. Ansquer Y, Delaney S, Santulli P et al. Risk of invasive breast cancer after lobular intra-epithelial neoplasia: review of the literature. Eur J Surg Oncol. 2010 Jul;36(7):604–9.
2. Chuba PJ, Hamre MR, Yap J, et al. Bilateral risk for subsequent breast cancer after lobular carcinoma-in-situ: analysis of surveillance, epidemiology, and end results data. J Clin Oncol. 2005 Aug 20;23(24):5534–41.
3. Nakhlis F, Gilmore L, Gelman R et al. Incidence of Adjacent Synchronous Invasive Carcinoma and/or Ductal Carcinoma In-situ in Patients with Lobular Neoplasia on Core Biopsy: Results from a Prospective Multi-Institutional Registry (TBCRC 020). Ann Surg Oncol. Springer International Publishing; 2016 Mar;23(3):722–8.



1. Brogi, E., Murray, M. P., & Corben, A. D. (2010). Lobular carcinoma, not only a classic. Breast Journal, 16 Suppl 1, S10–4. http://doi.org/10.1111/j.1524-4741.2010.00994.x
2. Ginter, P. S., & D'Alfonso, T. M. (2017). Current Concepts in Diagnosis, Molecular Features, and Management of Lobular Carcinoma In Situ of the Breast With a Discussion of Morphologic Variants. Archives of Pathology & Laboratory Medicine, 141(12), 1668–1678. http://doi.org/10.5858/arpa.2016-0421-RA
3. Jorns, J., Sabel, M. S., & Pang, J. C. (2014). Lobular neoplasia: morphology and management. Archives of Pathology & Laboratory Medicine, 138(10), 1344–1349. http://doi.org/10.5858/arpa.2014-0278-CC
4. Shin SJ, Lal A, De Vries S et al.: Florid lobular carcinoma in situ: molecular profiling and comparison to classic lobular carcinoma in situ and pleomorphic lobular carcinoma in situ. Hum Pathol. 2013;44(10):1998-2009.
5. Sinn, H. P., Helmchen, B., Heil, J.et al. (2014). Lobuläre Neoplasie und invasives lobuläres Mammakarzinom. *Der Pathologe*, *35*(1), 45–53. http://doi.org/10.1007/s00292-013-1840-8



Statement: Pleomorphic lobular carcinoma in situ (PLCIS)

1. Carder, P. J., Shaaban, A., Alizadeh, Y. et al. (2010). Screen-detected pleomorphic lobular carcinoma in situ (PLCIS): risk of concurrent invasive malignancy following a core biopsy diagnosis. Histopathology, 57(3), 472–478. http://doi.org/10.1111/j.1365-2559.2010.03634.x
2. Chivukula M, Haynik DM, Brufsky A et al. Pleomorphic lobular carcinoma in situ (PLCIS) on breast core needle biopsies: clinical significance and immunoprofile. Am J Surg Pathol. 2008;32(11):1721-1726.
3. Downs-Kelly, E., Bell, D., Perkins, G. H. et al. (2011). Clinical implications of margin involvement by pleomorphic lobular carcinoma in situ. Archives of Pathology & Laboratory Medicine, 135(6), 737–743. http://doi.org/10.1043/2010-0204-OA.1
4. Khoury, T., Karabakhtsian, R. G., Mattson, D. et al. (2014). Pleomorphic lobular carcinoma in situof the breast: clinicopathological review of 47 cases. Histopathology, 64(7), 981–993. http://doi.org/10.1111/his.12353
5. Masannat, Y. A., Bains, S. K., Pinder, S. E et al. (2013). Challenges in the management of pleomorphic lobular carcinoma in situ of the breast. Breast (Edinburgh, Scotland), 22(2), 194–196. http://doi.org/10.1016/j.breast.2013.01.003
6. Monhollen, L., Morrison, C., Ademuyiwa, F. O. et al (2012). Pleomorphic lobular carcinoma: a distinctive clinical and molecular breast cancer type. Histopathology, 61(3), 365–377. http://doi.org/10.1111/j.1365-2559.2012.04230.x
7. Reis-Filho, J. S., Simpson, P. T., Jones, C. et al. (2005). Pleomorphic lobular carcinoma of the breast: role of comprehensive molecular pathology in characterization of an entity. The Journal of Pathology, 207(1), 1–13. http://doi.org/10.1002/path.1806

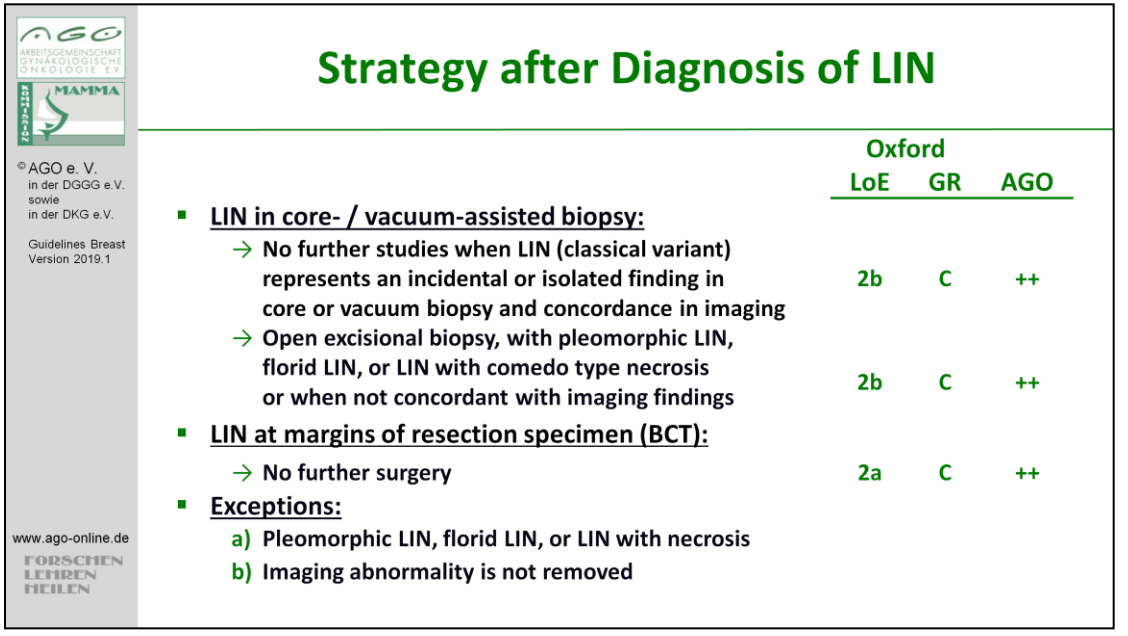
8. Murray, L., Reintgen, M., Akman, K. et al. (2012). Pleomorphic lobular carcinoma in situ: treatment options for a new pathologic entity. Clinical Breast Cancer, 12(1), 76–79. http://doi.org/10.1016/j.clbc.2011.08.007

Statement: Florid lobular carcinoma in situ (FLCIS)

1. Alvarado-Cabrero, I., Picón Coronel, G., Valencia Cedillo, R et al. (2010). Florid lobular intraepithelial neoplasia with signet ring cells, central necrosis and calcifications: a clinicopathological and immunohistochemical analysis of ten cases associated with invasive lobular carcinoma. Archives of Medical Research, 41(6), 436–441. http://doi.org/10.1016/j.arcmed.2010.08.010
2. Bagaria, S. P., Shamonki, J., Kinnaird, M. et al.(2011). The florid subtype of lobular carcinoma in situ: marker or precursor for invasive lobular carcinoma? Annals of Surgical Oncology, 18(7), 1845–1851. http://doi.org/10.1245/s10434-011-1563-0
3. Bratthauer, G., & Tavassoli, F. (2002). Lobular intraepithelial neoplasia: previously unexplored aspects assessed in 775 cases and their clinical implications. Virchows Archiv : an International Journal of Pathology, 440(2), 134–138.
4. Fadare, O., Dadmanesh, F., Alvarado-Cabrero, I. et al. (2006). Lobular intraepithelial neoplasia [lobular carcinoma in situ] with comedo-type necrosis: A clinicopathologic study of 18 cases. The American Journal of Surgical Pathology, 30(11), 1445–1453. http://doi.org/10.1097/01.pas.0000213290.58283.82
5. Shin, S. J., Lal, A., De Vries, S et al. (2013). Florid lobular carcinoma in situ: molecular profiling and comparison to classic lobular carcinoma in situ and pleomorphic lobular carcinoma in situ. Human Pathology, 44(10), 1998–2009. http://doi.org/10.1016/j.humpath.2013.04.004

Statement: Lobular carcinoma in situ with microinvasion

1. Nemoto, T., Castillo, N., Tsukada, Y et al. (1998). Lobular carcinoma in situ with microinvasion. Journal of Surgical Oncology, 67(1), 41–46.
2. Ross, D. S., & Hoda, S. A. (2011). Microinvasive (T1mic) lobular carcinoma of the breast: clinicopathologic profile of 16 cases. The American Journal of Surgical Pathology, 35(5), 750–756. http://doi.org/10.1097/PAS.0b013e318212acd3



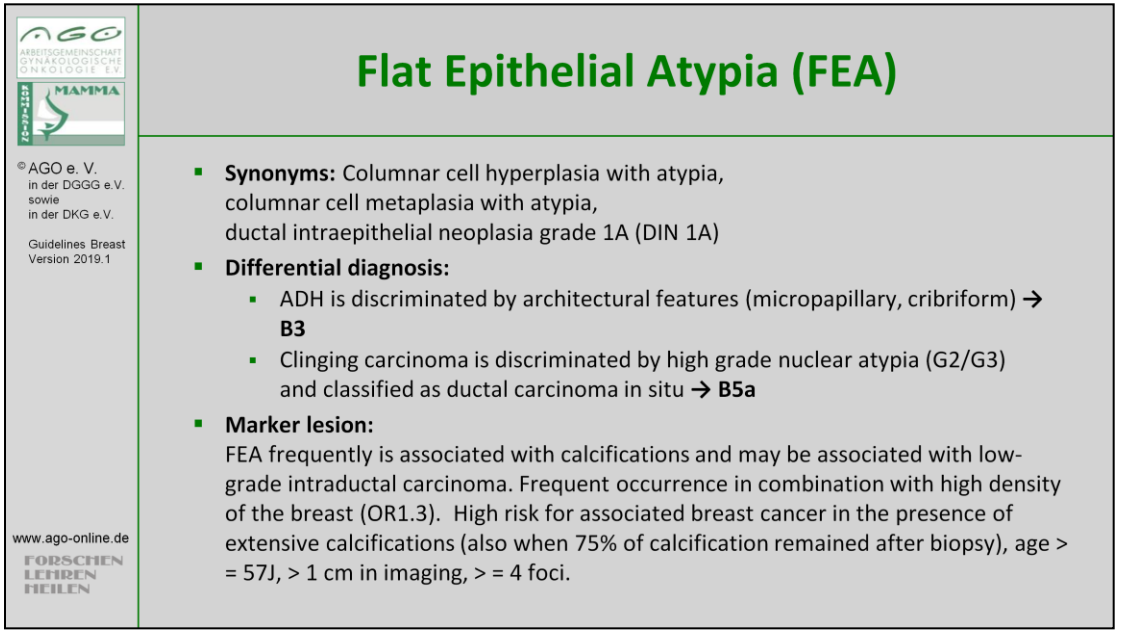
LIN in core- / vacuum-assisted biopsy (LoE 2b)

1. Atkins KA, Cohen MA, Nicholson B et al. Atypical lobular hyperplasia and lobular carcinoma in situ at core breast biopsy: use of careful radiologic-pathologic correlation to recommend excision or observation. Radiology. 2013 Nov;269(2):340-7.
2. Bianchi S, Bendinelli B, Castellano I et al.: VANCB Study Group. Morphological parameters of lobular in situ neoplasia in stereotactic 11-gauge vacuum-assisted needle core biopsy do not predict the presence of malignancy on subsequent surgical excision. Histopathology. 2013 Jul;63(1):83-95.
3. Buckley, E. S., Webster, F., Hiller, J. E. et al.(2014). ScienceDirect. European Journal of Surgical Oncology, 40(2), 168–175. http://doi.org/10.1016/j.ejso.2013.10.024
4. D'Alfonso TM, Wang K, Chiu YL et al. Pathologic upgrade rates on subsequent excision when lobular carcinoma in situ is the primary diagnosis in the needle core biopsy with special attention to the radiographic target. Arch Pathol Lab Med. 2013 Jul;137(7):927-35.
5. Hussain, M., & Cunnick, G. H. (2011). Management of lobular carcinoma in-situ and atypical lobular hyperplasia of the breast--a review. European Journal of Surgical Oncology : the Journal of the European Society of Surgical Oncology and the British Association of Surgical Oncology, 37(4), 279–289. http://doi.org/10.1016/j.ejso.2011.01.009
6. Jorns, J., Sabel, M. S., & Pang, J. C. (2014). Lobular neoplasia: morphology and management. Archives of Pathology & Laboratory Medicine, 138(10), 1344–1349. http://doi.org/10.5858/arpa.2014-0278-CC

7. King, T. A., & Reis-Filho, J. S. (2014). Lobular neoplasia. Surgical Oncology Clinics of North America, 23(3), 487–503. http://doi.org/10.1016/j.soc.2014.03.002
8. Lakhani, S. R., Audretsch, W., Cleton-Jensen, A.-M. et al. (2006). The management of lobular carcinoma in situ (LCIS). Is LCIS the same as ductal carcinoma in situ (DCIS)? European Journal of Cancer (Oxford, England : 1990), 42(14), 2205–2211. http://doi.org/10.1016/j.ejca.2006.03.019
9. Menes TS, Rosenberg R, Balch S et al.: Upgrade of high-risk breast lesions detected on mammography in the Breast Cancer Surveillance Consortium. Am J Surg. 2014 Jan;207(1):24-31.
10. Middleton LP, Sneige N, Coyne R et al.: Most lobular carcinoma in situ and atypical lobular hyperplasia diagnosed on core needle biopsy can be managed clinically with radiologic follow-up in a multidisciplinary setting. Cancer Med. 2014 Jun;3(3):492-9
11. Neal L, Sandhu NP, Hieken TJ et al.: Diagnosis and management of benign, atypical, and indeterminate breast lesions detected on core needle biopsy. Mayo Clin Proc. 2014 Apr;89(4):536-47
12. Parkin CK, Garewal S, Waugh P et al.: Outcomes of patients with lobular in situ neoplasia of the breast: the role of vacuum-assisted biopsy. Breast. 2014 Oct;23(5):651-5. doi: 10.1016/j.breast.2014.06.016.
13. Purdie CA et al: Management of in situ lobular neoplasia detected on needle core biopsy of breast. J Clin Pathol. 2010 Nov;63(11):987-93.
14. Rakha EA et al: Characterisation and outcome of breast needle core biopsy diagnoses of lesions of uncertain malignant potential (B3) in abnormalities detected by mammographic screening. Int J Cancer. 2010 Dec 2. [Epub ahead of print]
15. Whiffen A: Predictors of Breast Cancer Development in Women with Atypical Ductal Hyperplasia and Atypical Lobular Hyperplasia. Ann Surg Oncol. 2010 Sep 28.
16. NCCN Guidelines 03/2018. Breast cancer screening and diagnosis.

<u>LIN accompanying intraductal or invasive carcinoma in patients with BCT (LoE 2a)</u>

1. Ciocca R: Presence of lobular carcinoma in situ does not increase recurrence in patients treated with breast-conserving therapy. Ann Surg Oncol 2008; 15:2263-2271



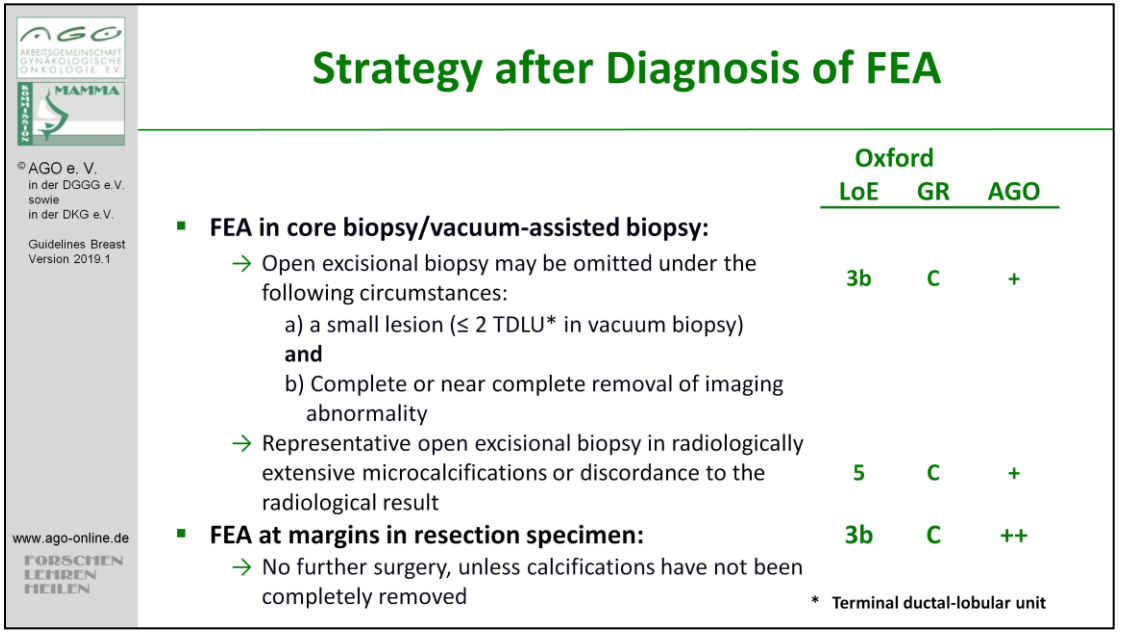
General

1. Böcker, W., Hungermann, D., Tio, J. et al. (2009). Flache epitheliale Atypie. *Der Pathologe*, *30*(1), 36–41. http://doi.org/10.1007/s00292-008-1123-y
2. Elif, A., Burcu, S., Nazan, C. et al. (2015). Columnar cell lesions of the breast: radiological features and histological correlation. Medical Ultrasonography, 17(2), 147–154. http://doi.org/10.11152/mu.2013.2066.172.ccl
3. Moinfar, F. (2009). Flat ductal intraepithelial neoplasia of the breast: a review of diagnostic criteria, differential diagnoses, molecular-genetic findings, and clinical relevance--it is time to appreciate the Azzopardi concept! Archives of Pathology & Laboratory Medicine, 133(6), 879–892.
4. Schnitt, S., & Vincent-Salomon, A. (2003). Columnar cell lesions of the breast. Advances in Anatomic Pathology, 10(3), 113–124.
5. Turashvili, G., Hayes, M., Gilks, B et al. (2008). Are columnar cell lesions the earliest histologically detectable non-obligate precursor of breast cancer? Virchows Archiv : an International Journal of Pathology, 452(6), 589–598.

Statement: Marker Lesion

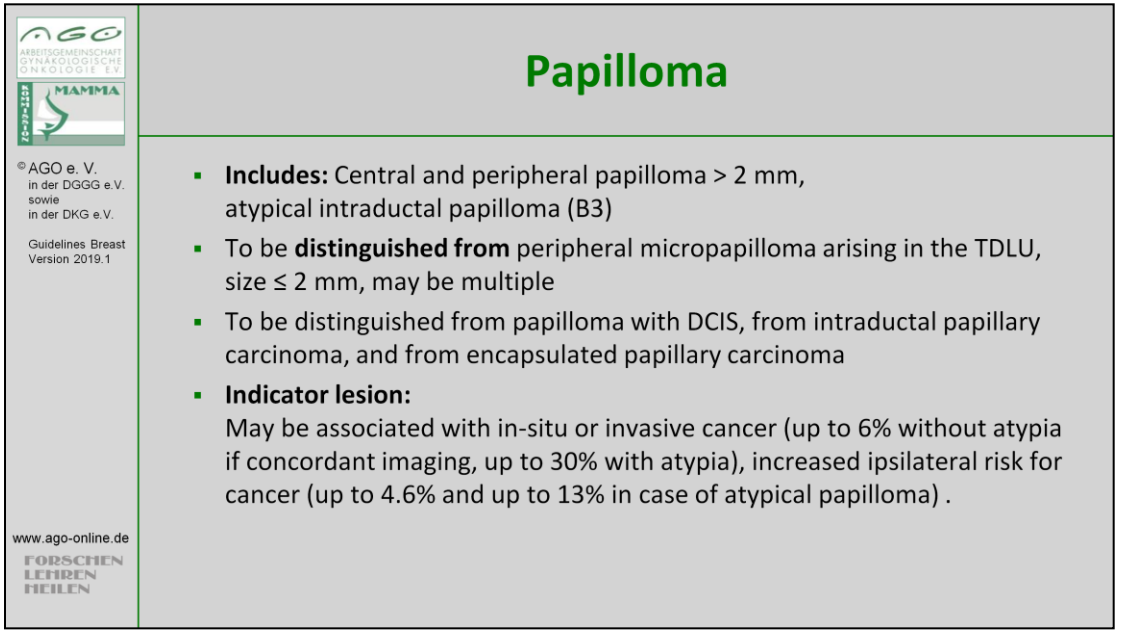
1. Boulos, F. I., Dupont, W. D., Simpson, J. F. et al.(2008). Histologic associations and long-term cancer risk in columnar cell lesions of the breast: a retrospective cohort and a nested case-control study. *Cancer*, *113*(9), 2415–2421. http://doi.org/10.1002/cncr.23873
2. Collins, L. C., Achacoso, N. A., Nekhlyudov, L. et al. (2007). Clinical and pathologic features of ductal carcinoma in situ associated

with the presence of flat epithelial atypia: an analysis of 543 patients. Modern Pathology, 20(11), 1149–1155. http://doi.org/10.1038/modpathol.3800949
3. Lamb, L. R., Bahl, M., Gadd, M. A et al. (2017). Flat Epithelial Atypia: Upgrade Rates and Risk-Stratification Approach to Support Informed Decision Making. Journal of the American College of Surgeons, 225(6), 696–701. http://doi.org/10.1016/j.jamcollsurg.2017.08.022
4. Noske, A., Pahl, S., Fallenberg, E. et al. (2010). Flat epithelial atypia is a common subtype of B3 breast lesions and is associated with noninvasive cancer but not with invasive cancer in final excision histology. Human Pathology, 41(4), 522–527. http://doi.org/10.1016/j.humpath.2009.09.005
5. Pandey, S., Kornstein, M. J., Shank et al. (2007). Columnar cell lesions of the breast: mammographic findings with histopathologic correlation. Radiographics : a Review Publication of the Radiological Society of North America, Inc, 27 Suppl 1, S79–89. http://doi.org/10.1148/rg.27si075515
6. Said, S. M., Visscher, D. W., Nassar, A et al. (2015). Flat epithelial atypia and risk of breast cancer: A Mayo cohort study. Cancer, 121(10), 1548–1555. http://doi.org/10.1002/cncr.29243
7. Verschuur-Maes, A. H. J., Witkamp, A. J., de Bruin, P. C. et al. (2011). Progression risk of columnar cell lesions of the breast diagnosed in core needle biopsies. International Journal of Cancer Journal International Du Cancer, 129(11), 2674–2680. http://doi.org/10.1002/ijc.25926
8. Ouldamer L, Poisson E, Arbion F et al.: All pure flat atypical atypia lesions of the breast diagnosed using percutaneous vacuum-assisted breast biopsy do not need surgical exzision. The Breast 2018; 40:4-9
9. Ghosh K, Vierkant RA, Frank RD et al: Association between mammographic breast density and histologic features of benign breast disease. Breast Cancer Res , 2017, 19:134
10. Alencherry E, Goel R, Gore S et al.: Clinical, imaging, and intervention factors associated with the upgrade of isolated flat epithelial atypia. Clinical Imaging 2019, 54:21-24

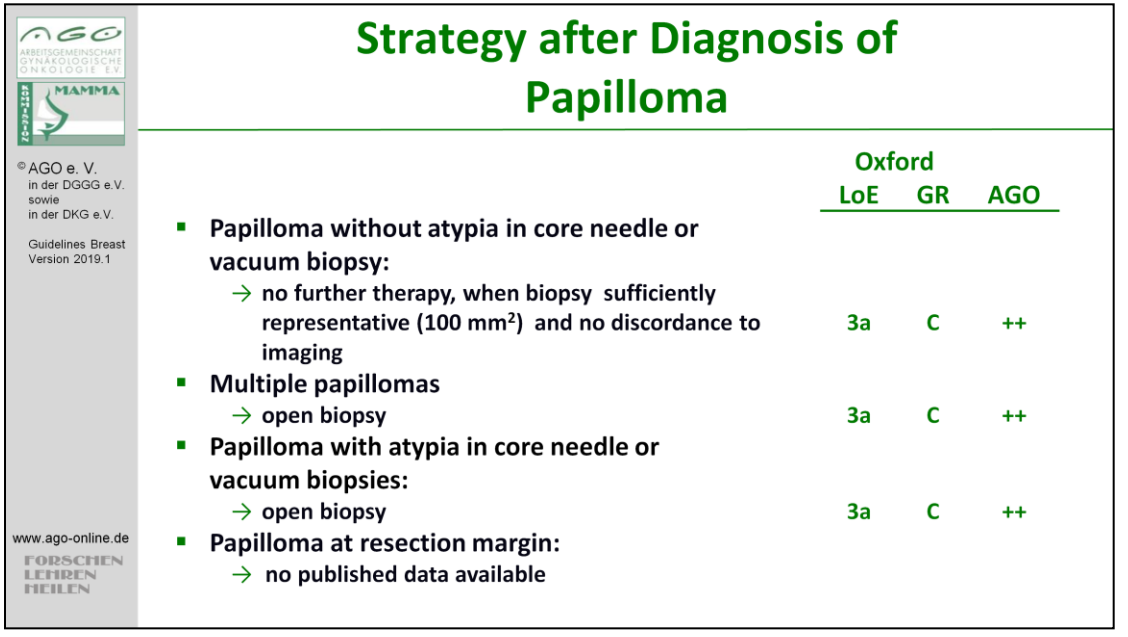


1. Becker, A. K., Gordon, P. B., Harrison, D. A. et al. (2013). Flat Ductal Intraepithelial Neoplasia 1A Diagnosed at Stereotactic Core Needle Biopsy: Is Excisional Biopsy Indicated? American Journal of Roentgenology, 200(3), 682–688. http://doi.org/10.2214/AJR.11.8090
2. Calhoun, B. C., Sobel, A., White, R. L et al. (2015). Management of flat epithelial atypia on breast core biopsy may be individualized based on correlation with imaging studies. Modern Pathology, 28(5), 670–676. http://doi.org/10.1038/modpathol.2014.159
3. Ceugnart, L., Doualliez, V., Chauvet, M. P. et al. (2013). Pure flat epithelial atypia: is there a place for routine surgery? Diagnostic and Interventional Imaging, 94(9), 861–869. http://doi.org/10.1016/j.diii.2013.01.011
4. Dialani, V., Venkataraman, S., Frieling, G. et al. (2014). Does Isolated Flat Epithelial Atypia on Vacuum-assisted Breast Core Biopsy Require Surgical Excision? The Breast Journal, 20(6), 606–614. http://doi.org/10.1111/tbj.12332
5. Kunju, L. P., & Kleer, C. G. (2007). Significance of flat epithelial atypia on mammotome core needle biopsy: Should it be excised? Human Pathology, 38(1), 35–41. http://doi.org/10.1016/j.humpath.2006.08.008
6. Maeda, I., Kanemaki, Y., Tozaki, M. et al. (2015). Positive predictive value for malignancy of pure flat epithelial atypia diagnosis by percutaneous needle biopsy of the breast: management of FEA in ultrasonography. Breast Cancer, 22(6), 634–640. http://doi.org/10.1007/s12282-014-0530-6
7. Neal L, Sandhu NP, Hieken TJ et al. Diagnosis and management of benign, atypical, and indeterminate breast lesions detected on core needle biopsy. Mayo Clin Proc. 2014 Apr;89(4):536-47

8. Prowler, V. L., Joh, J. E., Acs, G. et al. (2014). Surgical excision of pure flat epithelial atypia identified on core needle breast biopsy. Breast (Edinburgh, Scotland), 23(4), 352–356. http://doi.org/10.1016/j.breast.2014.01.013
9. Uzoaru, I., Morgan, B. R., Liu, Z. G. et al. (2012). Flat epithelial atypia with and without atypical ductal hyperplasia: to re-excise or not. Results of a 5-year prospective study. Virchows Archiv : an International Journal of Pathology, 461(4), 419–423. http://doi.org/10.1007/s00428-012-1312-1
10. VANCB Study Group, Bianchi, S., Bendinelli, B. et al. (2012). Morphological parameters of flat epithelial atypia (FEA) in stereotactic vacuum-assisted needle core biopsies do not predict the presence of malignancy on subsequent surgical excision. Virchows Archiv : an International Journal of Pathology, 461(4), 405–417. http://doi.org/10.1007/s00428-012-1279-y
11. Villa, A., Chiesa, F., Massa, T. et al. (2013). Flat epithelial atypia: comparison between 9-gauge and 11-gauge devices. Clinical Breast Cancer, 13(6), 450–454. http://doi.org/10.1016/j.clbc.2013.08.008

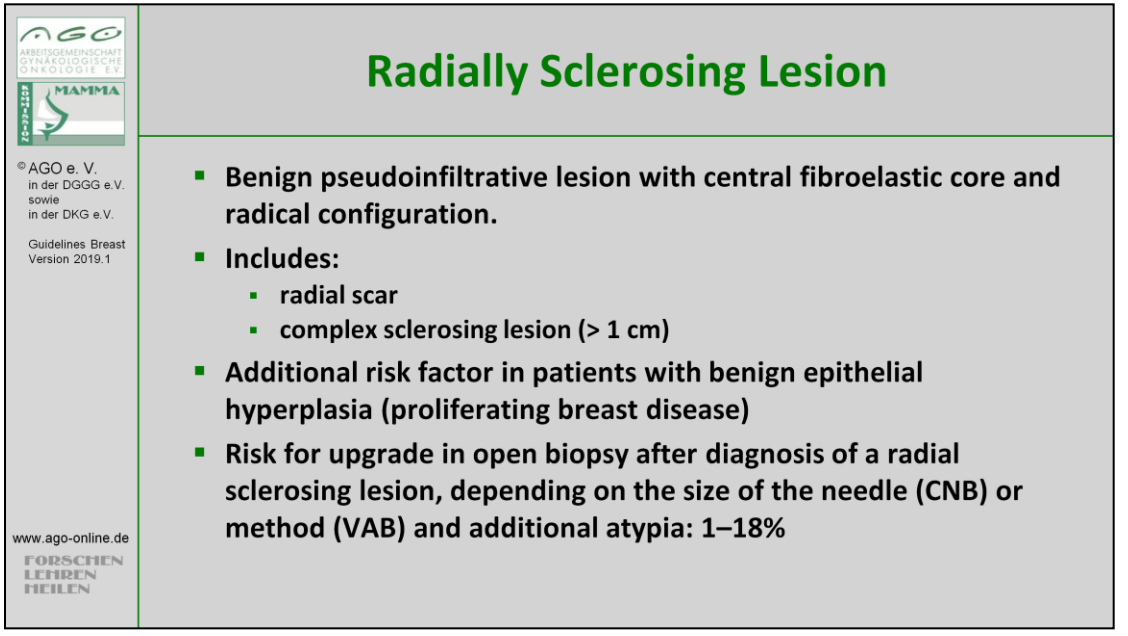


1. World Health Organization. Who Classification of Tumours of the Breast. Lakhani SR, Ellis IO, Schnitt SJ, Tan PH, editors. World Health Organization; 2012.
2. Bilous M. Breast core needle biopsy: issues and controversies. Mod Pathol. 2010 May 1;23 Suppl 2:S36–45.
3. Page DL, Salhany KE, Jensen RA et al. Subsequent breast carcinoma risk after biopsy with atypia in a breast papilloma. Cancer. 1996 Jul 14;78(2):258–66.
4. Khan S, Diaz A, Archer KJ et al. Papillary lesions of the breast: To excise or observe? Breast J. 2018 May;24(3):350-355.
5. Leithner D, Kaltenbach B, Hödl P et al. Intraductal Papilloma Without Atypia on Image- Guided Breast Biopsy: Upgrade Rates to Carcinoma at Surgical Excision. Breast Care (Basel). 2018 Oct;13(5):364-368.



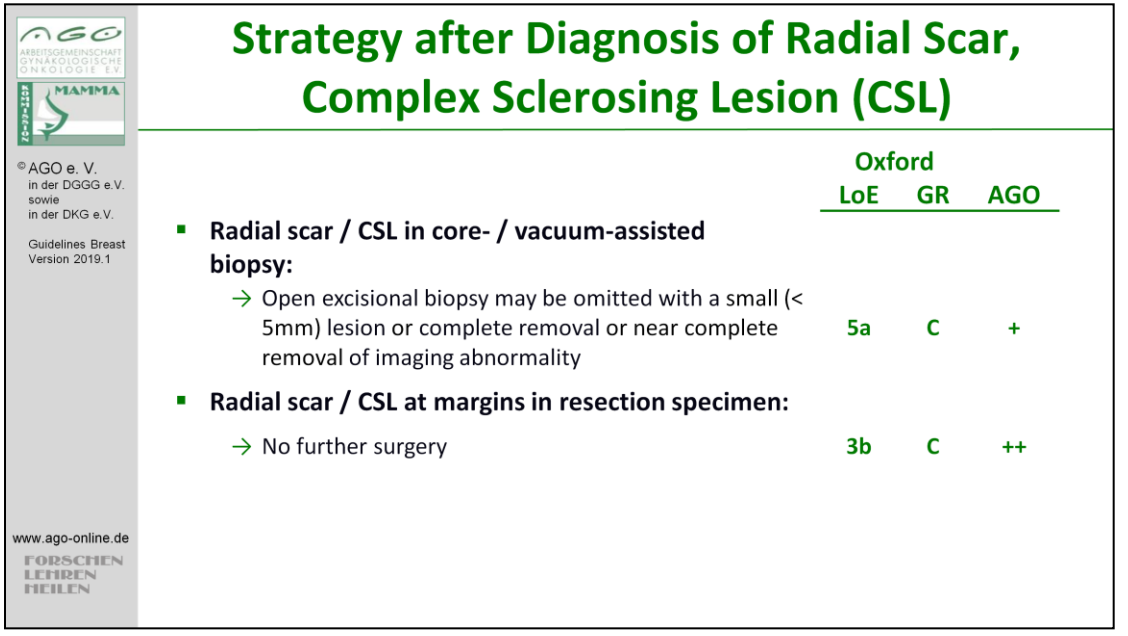
1. Collins L, Schnitt S. Papillary lesions of the breast: selected diagnostic and management issues. Histopathology. 2008;52(1):20–9.
2. European guidelines for quality assurance in breast cancer screening and diagnosis. Perry N, Broeders M, de Wolf C, Törnberg S, Holland R, Karsa von L, editors. 2008
3. Lewis, J., Hartmann, L., Vierkant, R. et al. (2006). An analysis of breast cancer risk in women with single, multiple, and atypical papilloma. Am J Surg Pathol, 30(6), 665–672.
4. Neal L, Sandhu NP, Hieken TJ et al. Diagnosis and management of benign, atypical, and indeterminate breast lesions detected on core needle biopsy. Mayo Clin Proc. 2014 Apr;89(4):536-47
5. Rakha EA et al: Characterisation and outcome of breast needle core biopsy diagnoses of lesions of uncertain malignant potential (B3) in abnormalities detected by mammographic screening. Int J Cancer. 2010 Dec 2. [Epub ahead of print]
6. Shamonki J, Chung A, Huynh KT et al. Management of papillary lesions of the breast: can larger core needle biopsy samples identify patients who may avoid surgical excision? Ann Surg Oncol. 2013 Dec;20(13):4137-44
7. Swapp RE, Glazebrook KN, Jones KN et al. Management of benign intraductal solitary papilloma diagnosed on core needle biopsy. Ann Surg Oncol. 2013 Jun;20(6):1900–5.
8. Wen X, Cheng W. Nonmalignant Breast Papillary Lesions at Core-Needle Biopsy: A Meta-analysis of Underestimation and Influencing Factors. Ann Surg Oncol. 2012 Aug 10;20(1):94–101.
9. Wyss P, Varga Z, Rössle M et al.: Papillary lesions of the breast: outcomes of 156 patients managed without excisional biopsy.

Breast J. 2014 Jul-Aug;20(4):394-401.



1. Bunting, D. M., Steel, J. R., Holgate, C. S. et al. (2011). Long term follow-up and risk of breast cancer after a radial scar or complex sclerosing lesion has been identified in a benign open breast biopsy. European Journal of Surgical Oncology, 37(8), 709–713. http://doi.org/10.1016/j.ejso.2011.04.011
2. Doyle, E., Banville, N., Quinn, C. et al. (2007). Radial scars/complex sclerosing lesions and malignancy in a screening programme: incidence and histological features revisited. Histopathology, 50(5), 607–614.
3. Eusebi, V., & Millis, R. R. (2010). Epitheliosis, infiltrating epitheliosis, and radial scar. Semin Diagn Pathol, 27(1), 5–12. http://doi.org/10.1053/j.semdp.2009.12.008
4. Li, Z., Ranade, A., & Zhao, C. (2016). Pathologic findings of follow-up surgical excision for radial scar on breast core needle biopsy. Human Pathology, 48, 76–80. http://doi.org/10.1016/j.humpath.2015.06.028
5. Matrai, C., D'Alfonso, T. M., Pharmer, L. et al. (2015). Advocating Nonsurgical Management of Patients With Small, Incidental Radial Scars at the Time of Needle Core Biopsy: A Study of 77 Cases. Archives of Pathology & Laboratory Medicine, 139(9), 1137–1142. http://doi.org/10.5858/arpa.2014-0550-OA
6. Manfrin, E., Remo, A., Falsirollo, F. et al. (2007). Risk of neoplastic transformation in asymptomatic radial scar. Analysis of 117 cases. Breast Cancer Research and Treatment, 107(3), 371–377. http://doi.org/10.1007/s10549-007-9569-9
7. Patterson, J., Scott, M., Anderson, N. et al. (2004). Radial scar, complex sclerosing lesion and risk of breast cancer. Analysis of 175 cases in Northern Ireland. European Journal of Surgical Oncology : the Journal of the European Society of Surgical Oncology and

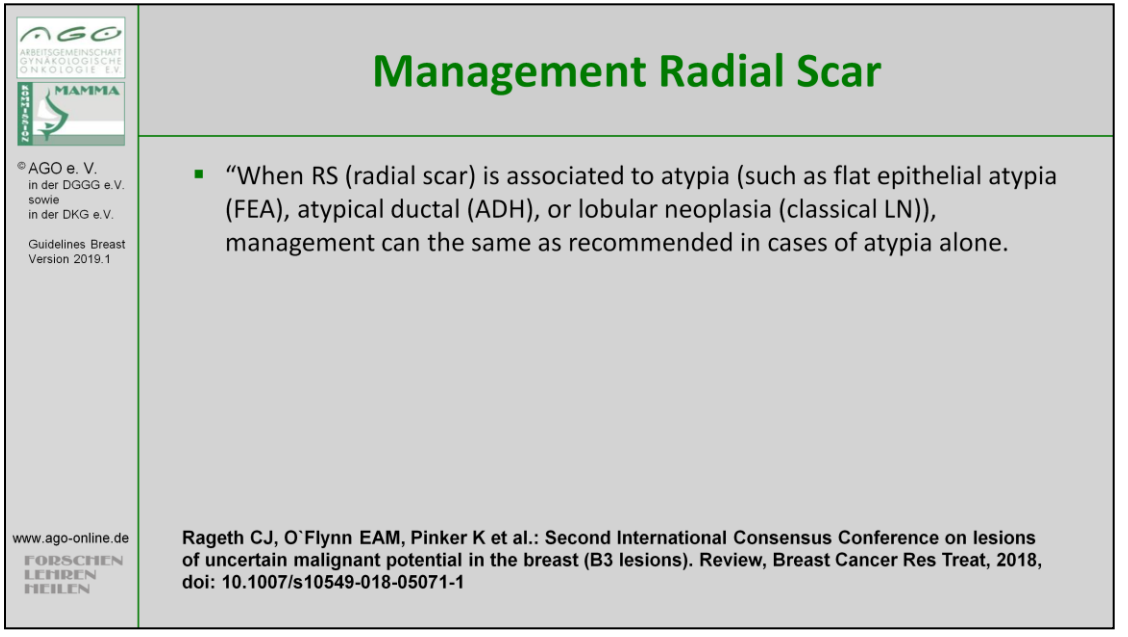
the British Association of Surgical Oncology, 30(10), 1065–1068.
8. Farshid G, Buckley E.: Meta-analysis of upgrade rates in 3163 radial scars excised after needle core biopsy diagnosis. Breast Cancer Res Treat. 2018 Nov 20. doi: 10.1007/s10549-018-5040-3



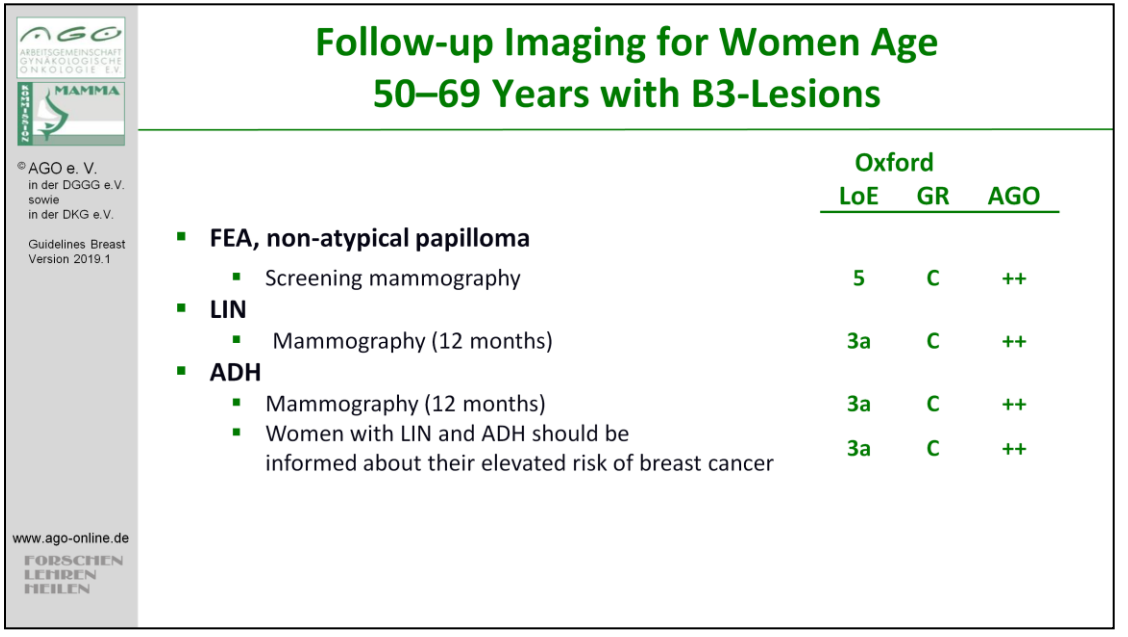
1. Andacoglu, O., Kanbour-Shakir, A., Teh, Y.-C. et al. (2013). Rationale of excisional biopsy after the diagnosis of benign radial scar on core biopsy: a single institutional outcome analysis. American Journal of Clinical Oncology, 36(1), 7–11. http://doi.org/10.1097/COC.0b013e3182354a3f
2. Aroner, S. A., Collins, L. C., Connolly, J. L. et al. (2013). Radial scars and subsequent breast cancer risk: results from the Nurses' Health Studies. Breast Cancer Research and Treatment, 139(1), 277–285. http://doi.org/10.1007/s10549-013-2535-9
3. Bianchi, S., Giannotti, E., Vanzi, E. et al. (2012). Radial scar without associated atypical epithelial proliferation on image-guided 14-gauge needle core biopsy: analysis of 49 cases from a single-centre and review of the literature. Breast (Edinburgh, Scotland), 21(2), 159–164. http://doi.org/10.1016/j.breast.2011.09.005
4. Bunting, D. M., Steel, J. R., Holgate, C. S. et al. (2011). Long term follow-up and risk of breast cancer after a radial scar or complex sclerosing lesion has been identified in a benign open breast biopsy. European Journal of Surgical Oncology, 37(8), 709–713. http://doi.org/10.1016/j.ejso.2011.04.011
5. Conlon, N., D'Arcy, C., Kaplan, J. B. et al. (2015). Radial Scar at Image-guided Needle Biopsy: Is Excision Necessary? The American Journal of Surgical Pathology, 39(6), 779–785. http://doi.org/10.1097/PAS.0000000000000393
6. Dominguez, A., Durando, M., Mariscotti, G. et al. (2015). Breast cancer risk associated with the diagnosis of a microhistological radial scar (RS): retrospective analysis in 10 years of experience. La Radiologia Medica, 120(4), 377–385. http://doi.org/10.1007/s11547-014-0456-2

7. Donaldson, A. R., Sieck, L., Booth, C. N. et al. (2016). Radial scars diagnosed on breast core biopsy: Frequency of atypia and carcinoma on excision and implications for management. Breast (Edinburgh, Scotland), 30, 201–207. http://doi.org/10.1016/j.breast.2016.06.007
8. Doyle, E., Banville, N., Quinn, C. et al. (2007). Radial scars/complex sclerosing lesions and malignancy in a screening programme: incidence and histological features revisited. Histopathology, 50(5), 607–614.
9. Eusebi, V., & Millis, R. R. (2010). Epitheliosis, infiltrating epitheliosis, and radial scar. Semin Diagn Pathol, 27(1), 5–12. http://doi.org/10.1053/j.semdp.2009.12.008
10. Ferreira, A. I., Borges, S., Sousa, A. et al. (2017). Radial scar of the breast: Is it possible to avoid surgery? European Journal of Surgical Oncology : the Journal of the European Society of Surgical Oncology and the British Association of Surgical Oncology, 43(7), 1265–1272. http://doi.org/10.1016/j.ejso.2017.01.238
11. Hou, Y., Hooda, S., & Li, Z. (2016). Surgical excision outcome after radial scar without atypical proliferative lesion on breast core needle biopsy: a single institutional analysis. Annals of Diagnostic Pathology, 21, 35–38. http://doi.org/10.1016/j.anndiagpath.2015.11.004
12. Kalife, E. T., Lourenco, A. P., Baird, G. L. et al. (2016). Clinical and Radiologic Follow-up Study for Biopsy Diagnosis of Radial Scar/Radial Sclerosing Lesion without Other Atypia. Breast Journal, 22(6), 637–644. http://doi.org/10.1111/tbj.12645
13. Leong, R. Y., Kohli, M. K., Zeizafoun, N., Liang, A., & Tartter, P. I. (2016). Radial Scar at Percutaneous Breast Biopsy That Does Not Require Surgery. Journal of the American College of Surgeons, 223(5), 712–716. http://doi.org/10.1016/j.jamcollsurg.2016.08.003
14. Li, Z., Ranade, A., & Zhao, C. (2016). Pathologic findings of follow-up surgical excision for radial scar on breast core needle biopsy. Human Pathology, 48, 76–80. http://doi.org/10.1016/j.humpath.2015.06.028
15. Matrai, C., D'Alfonso, T. M., Pharmer, L. et al. (2015). Advocating Nonsurgical Management of Patients With Small, Incidental Radial Scars at the Time of Needle Core Biopsy: A Study of 77 Cases. Archives of Pathology & Laboratory Medicine, 139(9), 1137–1142. http://doi.org/10.5858/arpa.2014-0550-OA
16. Manfrin, E., Remo, A., Falsirollo, F. et al. (2007). Risk of neoplastic transformation in asymptomatic radial scar. Analysis of 117 cases. Breast Cancer Research and Treatment, 107(3), 371–377. http://doi.org/10.1007/s10549-007-9569-9
17. Nassar, A., Conners, A. L., Celik, B., et al (2015). Radial scar/complex sclerosing lesions: a clinicopathologic correlation study from a single institution. Annals of Diagnostic Pathology, 19(1), 24–28. http://doi.org/10.1016/j.anndiagpath.2014.12.003
18. Patterson, J., Scott, M., Anderson, N. et al. (2004). Radial scar, complex sclerosing lesion and risk of breast cancer. Analysis of 175 cases in Northern Ireland. European Journal of Surgical Oncology : the Journal of the European Society of Surgical Oncology and the British Association of Surgical Oncology, 30(10), 1065–1068.

19. Tóth, D., Sebő, É., Sarkadi, L. et al. (2012). Role of core needle biopsy in the treatment of radial scar. Breast (Edinburgh, Scotland), 21(6), 761–763. http://doi.org/10.1016/j.breast.2012.02.009
20. Rageth CJ, O`Flynn EAM, Pinker K et al.: Second International Consensus Conference on lesions of uncertain malignant potential in the breast (B3 lesions). Review, Breast Cancer Res Treat, 2018, doi: 10.1007/s10549-018-05071-1



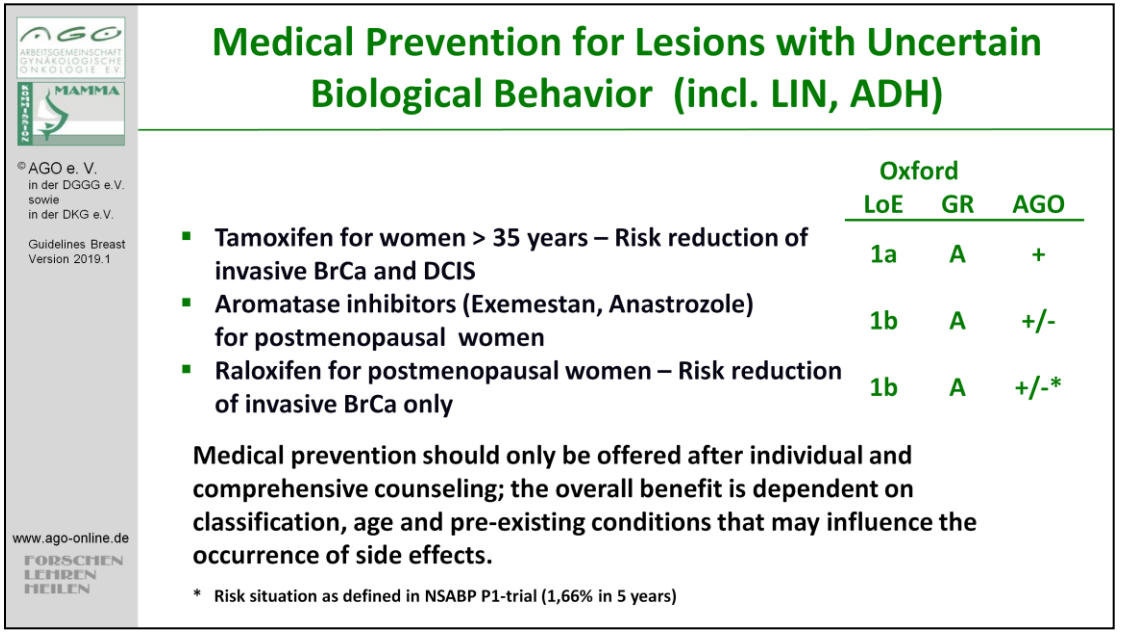
1. Rageth CJ, O`Flynn EAM, Pinker K et al.: Second International Consensus Conference on lesions of uncertain malignant potential in the breast (B3 lesions). Review, Breast Cancer Res Treat, 2018, doi: 10.1007/s10549-018-05071-1



Follow-up Imaging for Women Age 50–69 Years with B3-Lesions

	Oxford LoE	Oxford GR	AGO
FEA, non-atypical papilloma			
Screening mammography	5	C	++
LIN			
Mammography (12 months)	3a	C	++
ADH			
Mammography (12 months)	3a	C	++
Women with LIN and ADH should be informed about their elevated risk of breast cancer	3a	C	++

1. Whiffen A: Predictors of Breast Cancer Development in Women with Atypical Ductal Hyperplasia and Atypical Lobular Hyperplasia. Ann Surg Oncol. 2010 Sep 28. [Epub ahead of print]
2. Weir R: Risk factors for breast cancer in women:a systematic review of the literature. Christchurch: New Zealand Health Technology Assessment (NZHTA); 2007.
3. Chuba PJ: Bilateral Risk for Subsequent Breast Cancer After Lobular Carcinoma-In-Situ: Analysis of Surveillance, Epidemiology, and End Results Data. Journal of Clinical Oncology 2005; 23(24):5534-5541
4. Degnim A: Stratification of breast cancer risk in women with atypia: A Mayo Cohort Study. JCO 2007; 25(19):2671-2677.
5. Youk J: Sonographically guided 14-gauge core needle biopsy of breast mass: A review of 2.420 cases with long-term follow-up. AJR 2007; 190:202-207
6. NCCN, National Comprehensive Cancer Network: Breast cancer screening and diagnosis V.1.2010, ed 2010. USA, NCCN, 2010
7. O'Connor A: Decision aids for people facing health treatment or screening decisions (Review). The Cochrane Library 2009;(4):1-35



1. Visvanathan, K., Hurley, P., Bantug, E. et al. (2013). Use of pharmacologic interventions for breast cancer risk reduction: American Society of Clinical Oncology clinical practice guideline. Journal of Clinical Oncology : Official Journal of the American Society of Clinical Oncology, 31(23), 2942–2962. http://doi.org/10.1200/JCO.2013.49.3122
2. Cuzick J: Long-term results of tamoxifen prophylaxis for breast cancer - 96 months follow-up of the randomized IBIS-I trial. J Natl Cancer Inst 2007; 99:272-282
3. O'Connor A: Decision aids for people facing health treatment or screening decisions (Review). The Cochrane Library 2009;(4):1-354
4. Bozovic-Spasojevic I, Azambuja E, McCaskill-Stevens W et al.: Chemoprevention for breast cancer. Cancer Treat Rev. 2012 Aug;38(5):329-39.

5. Lobular Carcinoma in Situ: A 29-Year Longitudinal Experience Evaluating Clinicopathologic Features and Breast Cancer Risk.

<u>Tamoxifen für Frauen > 35 Jahre –Reduktion von DCIS und invasivem Karzinom</u>

NSABP.P1

1. Fischer B: Tamoxifen for the prevention of breast cancer: current status of the national surgical adjuvant breast and bowel project P-1 study. J Natl Cancer Inst 2005, 97:1652-1662

IBIS.1

1. Cuzick J: Long-term results of tamoxifen prophylaxis for breast cancer - 96 months follow-up of the randomized IBIS-I trial. J Natl Cancer Inst 2007; 99:272-282.

Royal Marsden
Italian Trial

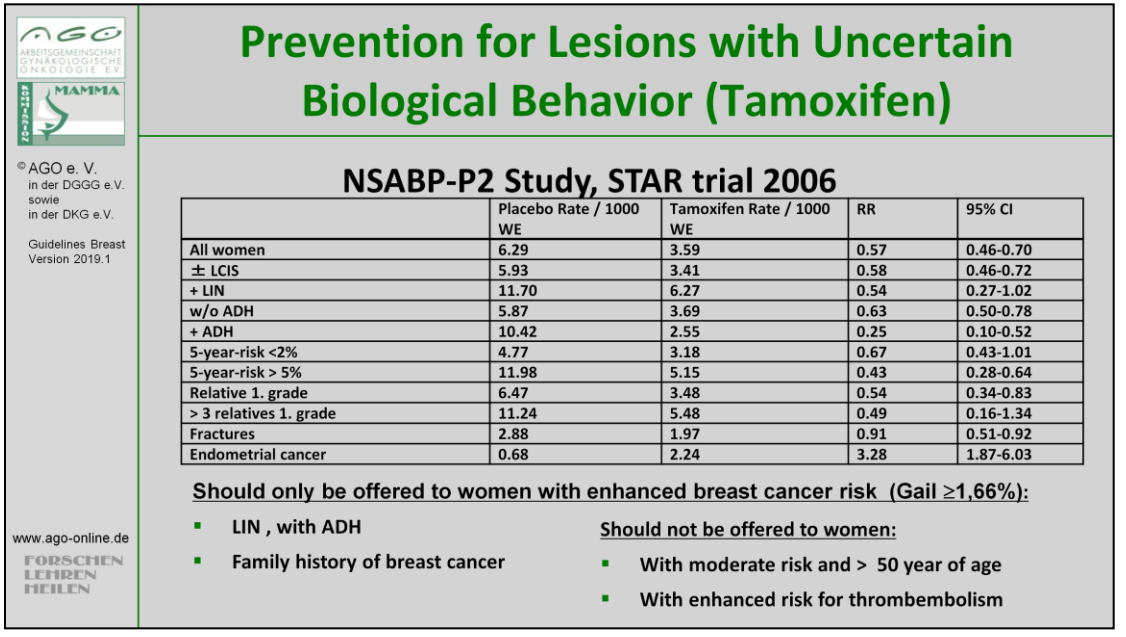
<u>Aromataseinhibitor (Exemestan, Anastrozol) für postmenopausale Frauen</u>

MAP.3

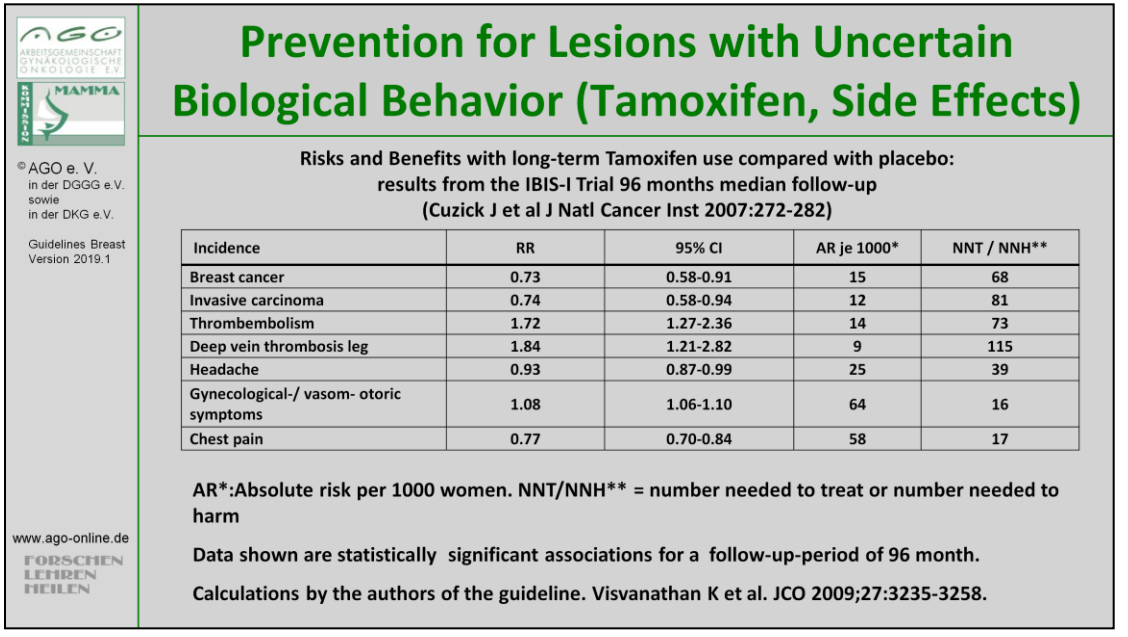
1. Goss PE, Ingle JN, Alés-Martínez JE et al.: Exemestane for breast-cancer prevention in postmenopausal women. N Engl J Med. 2011 Jun 23;364(25):2381-91.
2. Maunsell E, Goss PE, Chlebowski RT et al.: Quality of life in MAP.3 (Mammary Prevention 3): a randomized, placebo-controlled trial evaluating exemestane for prevention of breast cancer. J Clin Oncol. 2014 May 10;32(14):1427-36.

IBIS.2

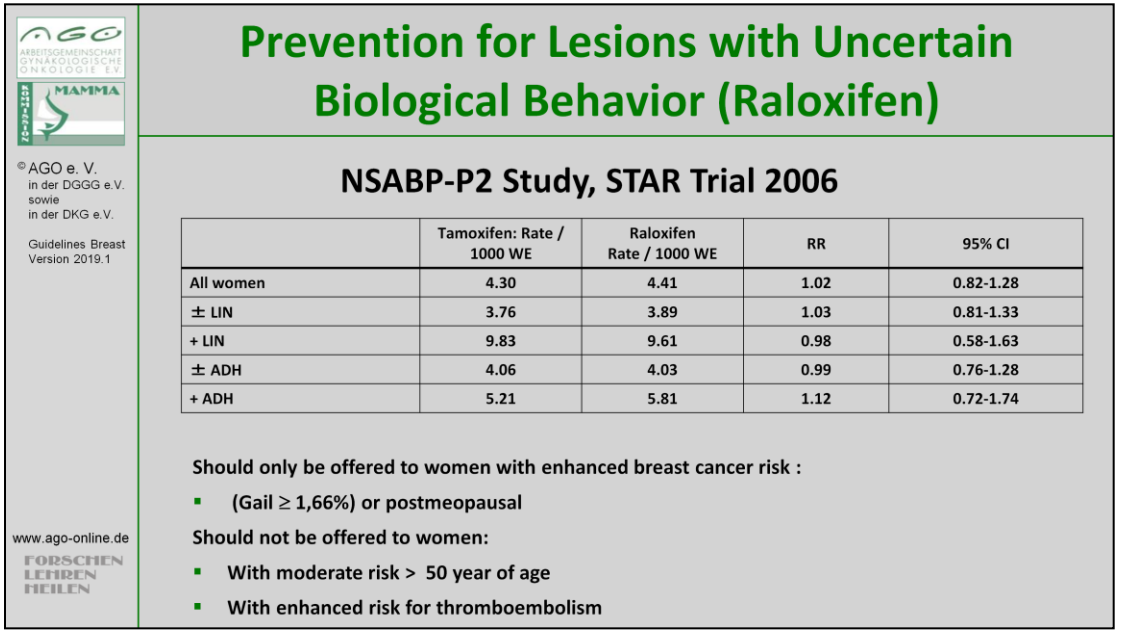
1. Cuzick J, Sestak I, Forbes JF et al.: Anastrozole for prevention of breast cancer in high-risk postmenopausal women (IBIS-II): an international, double-blind, randomised placebo-controlled trial *Lancet* 2014; 383: 1041–48



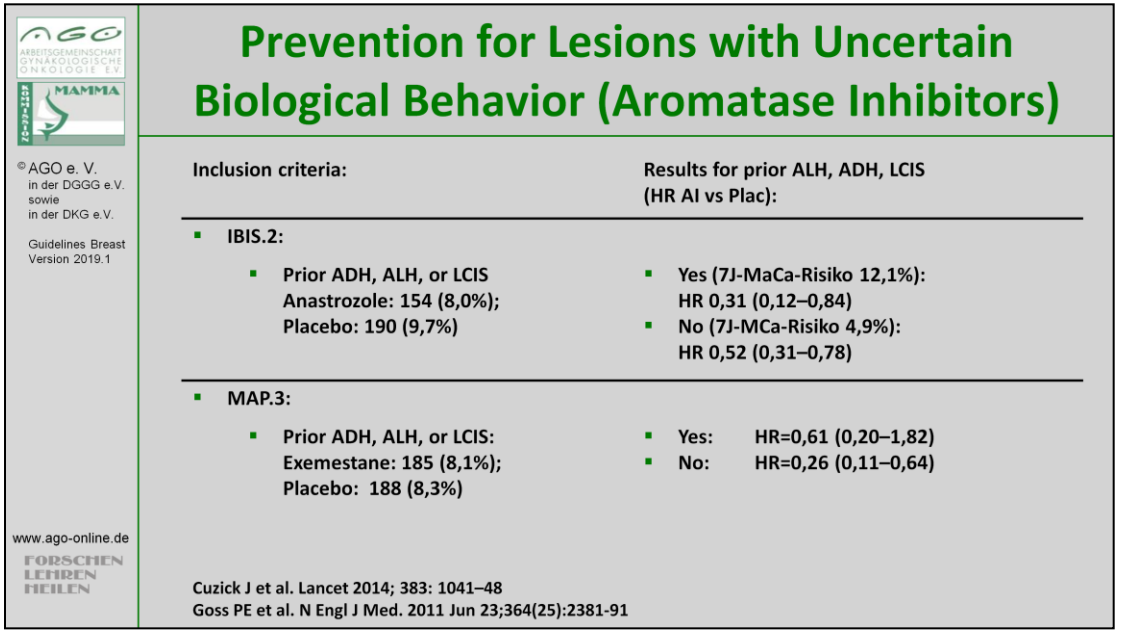
1. Visvanathan, K., Hurley, P., Bantug, E. et al. (2013). Use of pharmacologic interventions for breast cancer risk reduction: American Society of Clinical Oncology clinical practice guideline. Journal of Clinical Oncology : Official Journal of the American Society of Clinical Oncology, 31(23), 2942–2962. http://doi.org/10.1200/JCO.2013.49.3122
2. Cuzick J: Long-term results of tamoxifen prophylaxis for breast cancer - 96 months follow-up of the randomized INIS-I trial. J Natl Cancer Inst 2007; 99:272-282
3. Vogel V: Effects of tamoxifen versus raloxifene on the risk of developing invasive breast cancer and other disease outcomes: the NSABP Study of Tamoxifen and Raloxifene (STAR) P2 trial. JAMA 2006; 295(23):2727-2741.
4. Fischer B: Tamoxifen for the prevention of breast cancer: current status of the national surgical adjuvant breast and bowel project P-1 study. J Natl Cancer Inst 2005, 97:1652-1662



1. Visvanathan, K., Hurley, P., Bantug, E. et al. (2013). Use of pharmacologic interventions for breast cancer risk reduction: American Society of Clinical Oncology clinical practice guideline. Journal of Clinical Oncology : Official Journal of the American Society of Clinical Oncology, 31(23), 2942–2962. http://doi.org/10.1200/JCO.2013.49.3122
2. Cuzick J: Long-term results of tamoxifen prophylaxis for breast cancer - 96 months follow-up of the randomized INIS-I trial. J Natl Cancer Inst 2007; 99:272-282
3. Stacey, D., Légaré, F., Lewis, K. et al. (2017). Decision aids for people facing health treatment or screening decisions. The Cochrane Database of Systematic Reviews, 4, CD001431. http://doi.org/10.1002/14651858.CD001431.pub5



1. Visvanathan, K., Hurley, P., Bantug, E. et al. (2013). Use of pharmacologic interventions for breast cancer risk reduction: American Society of Clinical Oncology clinical practice guideline. Journal of Clinical Oncology : Official Journal of the American Society of Clinical Oncology, 31(23), 2942–2962. http://doi.org/10.1200/JCO.2013.49.3122
2. Cuzick J: Long-term results of tamoxifen prophylaxis for breast cancer - 96 months follow-up of the randomized INIS-I trial. J Natl Cancer Inst 2007; 99:272-282
3. Vogel V: Effects of tamoxifen versus raloxifene on the risk of developing invasive breast cancer and other disease outcomes: the NSABP Study of Tamoxifen and Raloxifene (STAR) P2 trial. JAMA 2006; 295(23):2727-2741.
4. Fischer B: Tamoxifen for the prevention of breast cancer: current status of the national surgical adjuvant breast and bowel project P-1 study. J Natl Cancer Inst 2005, 97:1652-1662



Exemestane for breast-cancer prevention in postmenopausal women

1. Goss, P. E., Ingle, J. N., Alés-Martínez, J. E. et al. (2011). Exemestane for breast-cancer prevention in postmenopausal women. The New England Journal of Medicine, 364(25), 2381–2391. http://doi.org/10.1056/NEJMoa1103507

Chemoprevention for breast cancer

1. Bozovic-Spasojevic, I., Azambuja, E., McCaskill-Stevens, W. et al. (2012). Chemoprevention for breast cancer. Cancer Treatment Reviews, 38(5), 329–339. http://doi.org/10.1016/j.ctrv.2011.07.005