## **Clinical studies**

Excluded studies - RQ8.2 Is there a subgroup of people with early invasive breast cancer who do not need breast radiotherapy after breast- conserving surgery?	
Study	Reason for exclusion
Early Breast Cancer Trialists' Collaborative, Group, Effect of radiotherapy after breast-conserving surgery on 10-year recurrence and 15-year breast cancer death: meta-analysis of individual patient data for 10,801 women in 17 randomised trials, Lancet (London, England), 378, 1707-16, 2011	More recent results available for some included studies
Fyles, A, Breast-conservative surgery with and without radiotherapy in patients aged 55-75 years with early-stage breast cancer: A prospective, randomized, multicenter trial analysis after 108 months of median follow-up, Breast Diseases, 25, 347-8, 2015	Review of article
Gatzemeier, W, Andreoli, C, Costa, A, Gentilini, Ma, Tinterri, C, Zanini, V, Regolo, L, Pedrazzoli, C, Rondini, E, Amanti, C, Gentile, G, Taffurelli, M, Fenaroli, P, Tondini, C, Sacchetto, G, Sismondi, P, Murgo, R, Orlandi, M, Cianchetti, E, Multi-centre prospective randomised trial on breast conservative surgery (BCS) with and without whole breast irradiation (WBI) in postmenopausal women aged 55-75 and low in-breast-recurrence (IBR) risk: Analysis after 9 years medium follow-up - RT 55-75 Study Group, European Journal of Cancer, 49, S449, 2013	Conference abstract
Henson, Katherine E., Jagsi, Reshma, Cutter, David, McGale, Paul, Taylor, Carolyn, Darby, Sarah C., Inferring the Effects of Cancer Treatment: Divergent Results From Early Breast Cancer Trialists' Collaborative Group Meta-Analyses of Randomized Trials and Observational Data From SEER Registries, Journal of clinical oncology : official journal of the American Society of Clinical Oncology, 34, 803-9, 2016	Article retracted
Housri, N., Haffty, B. G., Effect of radiotherapy after breast-conserving surgery on 10-year recurrence and 15-year breast cancer death: Meta-analysis of individual patient data for 10 801 women in 17 randomised trials, Breast Diseases, 23, 266-267, 2012	Overview - full text already identified
Hughes, K. S., Schnaper, L. A., Cirrincione, C., Berry, D. A., McCormick, B., Muss, H. B., Shank, B., Hudis, C., Winer, E. P., Smith, B. L., Lumpectomy plus tamoxifen with or without irradiation in women age 70 or older with early breast cancer, Journal of Clinical Oncology, 28, no pagination, 2010	Conference abstract

Excluded studies - RQ8.2 Is there a subgroup of people with early invasive breast cancer who do not need breast radiotherapy after breastconserving surgery? Study **Reason for exclusion** Killander, F. Karlsson, P. Anderson, H. Mattsson, J. Holmberg, E. Lundstedt, D. Holmberg, L. Insufficient presentation of results Malmstrom, P. No breast cancer subgroup can be spared postoperative radiotherapy after breastconserving surgery. Fifteen-year results from the Swedish Breast Cancer Group randomised trial, SweBCG 91 RT, European Journal of Cancer, 67, 57-65, 2016 Kunkler, I, Williams, L, King, C, Prescott, R, Dixon, M, Pol, M, The PRIME (Post-Operative Conference abstract Radiotherapy in Minimum-Risk Elderly) Breast Cancer Trial of Adjuvant Radiotherapy after Breast Conserving Surgery: Impact on Quality of Life and Cost-Effectiveness at Three Years, 69, 2010 Kunkler, I., The role of postoperative radiotherapy in the older patient: Impact on local control and Conference abstract guality of life, Radiotherapy and Oncology, 115, S104-S105, 2015 Kunkler, I. H., Williams, L. J., Prescott, R. J., King, C. C., Jack, W., Dixon, J. M., Van Der Pol, M., Abstract only Goh. T. T., Lindley, R., Cairns, J., The post-operative radiotherapy in minimum-risk elderly (Prime) randomised trial of adjuvant radiotherapy after breast conserving surgery. Impact on quality of life and cost-effectiveness at 5 years, European Journal of Cancer, Supplement, 8, 18, 2010 Kunkler, Ih, Williams, Lw, Jack, W, Canney, P, Prescott, Rj, Dixon, Mj, The PRIME II trial: Wide local Conference abstract excision and adjuvant hormonal therapy +/- postoperative whole breast irradiation in women > 65 years with early breast cancer managed by breast conservation, Cancer Research, 73, 2013 Lundstedt, D, Gustafsson, M, Malmstrom, P, Johansson, K-A, Alsadius, D, Sundberg, A, Wilderang, Outcomes within scope not presented in sufficient detail U. Holmberg, E. Anderson, H. Steineck, G. Karlsson, P. Symptoms 10-17 years after breast cancer radiotherapy data from the randomised SWEBCG91-RT trial, Radiotherapy and Oncology, 97, 281-7,2010 Marta, G. N., Hanna, S. A., Martella, E., da Silva, J. L. F., Carvalho, H. A., Early stage breast cancer Narrative review and radiotherapy: Update, Revista da Associacao Medica Brasileira, 57, 459-464, 2011 Matuschek, C., Boelke, E., Kammers, K., Budach, W., The Benefit of Adjuvant Radiation Therapy Abstract only After Breast-Conserving Surgery in Older Patients With Low-Risk Breast Cancer: A Meta-Analysis of Randomized Trials, International journal of radiation oncology, biology, physics, 96, E6, 2016 Matuschek, C., Boelke, E., Kammers, K., Budach, W., Do patients with low-risk (T1-2 [<3 cm] N0, Conference abstract HR+) breast cancer and antihormone treatment need adjuvant radiation therapy? A meta-analysis of randomized trials, Journal of Clinical Oncology, 34, no pagination, 2016

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Study	Reason for exclusion
Matuschek, C., Boelke, E., Kammers, K., Budach, W., Patients with low-risk breast cancer and tamoxifen - Do they need adjuvant radiation therapy-A meta-analysis, Radiotherapy and Oncology, 120, S45, 2016	Conference abstract
Matuschek, C., Bolke, E., Orth, K., Zwiefel, K., Nestle-Kramling, C., Budach, W., Irradiation of the breast after breast conserving surgery: Current medical practice, Onkologe, 19, 471-480, 2013	Non-English language
Recht, A, Sector resection with or without postoperative radiotherapy for stage i breast cancer: 20- year results of a randomized trial: Wickberg A, Holmberg L, Adami HO, et al (Orebro Univ Hosp, Sweden; Karolinska Institutet, Stockholm, Sweden; King's College, London, UK) J Clin Oncol 32:791-797, 2014, Breast Diseases, 26, 79-82, 2015	Overview
Sautter-Bihl, M. L., Sedlmayer, F., Budach, W., Dunst, J., Feyer, P., Fietkau, R., Haase, W., Harms, W., Rodel, C., Souchon, R., Wenz, F., Sauer, R., When are breast cancer patients old enough for the quitclaim of local control?, Strahlentherapie und Onkologie : Organ der Deutschen Röntgengesellschaft [et al], 188, 1069-73, 2012	Narrative review
Simmons, R, Long-term results of phase II ablation after breast lumpectomy added to extend intraoperative margins (ABLATE I) trial, Breast Diseases, 25, 331-2, 2015	Intervention outside scope
Skandarajah, Anita R., Mann, G. Bruce, Do all patients require radiotherapy after breast-conserving surgery?, Cancers, 2, 740-51, 2010	Narrative review
Tinterri, C, Costa, A, Andreoli, C, Valagussa, P, Gatzemeier, W, Breast conservative surgery with and without radiotherapy in patients aged 55-75 with early-stage breast cancer: A prospective randomized multicenter trial analysis after 90 months of medium follow-up, Annals of Surgical Oncology, 20, 3-4, 2013	Same as Tinterri 2014 but shorter follow-up period
Tinterri, C, Gatzemeier, W, Costa, A, Gentilini, Ma, Zanini, V, Regolo, L, Pedrazzoli, C, Rondini, E, Amanti, C, Gentile, G, Taffurelli, M, Fenaroli, P, Tondini, C, Sacchetto, G, Sismondi, P, Murgo, R, Orlandi, M, Cianchetti, E, Andreoli, C, Breast-conservative surgery with and without radiotherapy in patients aged 55-75 years with early-stage breast cancer: a prospective, randomized, multicenter trial analysis after 108 months of median follow-up, Annals of Surgical Oncology, 21, 408-15, 2014	Insufficient presentation of results
Tinterri, C, Gatzemeier, W, Zanini, V, Regolo, L, Pedrazzoli, C, Rondini, E, Amanti, C, Gentile, G, Taffurelli, M, Fenaroli, P, Tondini, C, Sacchetto, G, Sismondi, P, Murgo, R, Orlandi, M, Cianchetti, E, Andreoli, C, Conservative surgery with and without radiotherapy in elderly patients with early-stage	Same outcomes as Tinterri 2014 but with shorter follow- up periods

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Study	Reason for exclusion
breast cancer: a prospective randomised multicentre trial, Breast (Edinburgh, Scotland), 18, 373-7, 2009	
van de Water, Willemien, Bastiaannet, Esther, Scholten, Astrid N., Kiderlen, Mandy, de Craen, Anton J. M., Westendorp, Rudi G. J., van de Velde, Cornelis J. H., Liefers, Gerrit-Jan, Breast-conserving surgery with or without radiotherapy in older breast patients with early stage breast cancer: a systematic review and meta-analysis, Annals of Surgical Oncology, 21, 786-94, 2014	Insufficient presentation of results
Winzer, Kj, Sauerbrei, W, Braun, M, Liersch, T, Dunst, J, Guski, H, Schumacher, M, Radiation therapy and tamoxifen after breast-conserving surgery: updated results of a 2 x 2 randomised clinical trial in patients with low risk of recurrence, European journal of cancer (Oxford, England : 1990), 46, 95-101, 2010	Insufficient presentation of results
Zeng, S., Zhang, X., Yang, D., Wang, X., Ren, G., Effects of adjuvant radiotherapy on borderline and malignant phyllodes tumors: A systematic review and meta-analysis, Molecular and Clinical Oncology, 3, 663-671, 2015	Observational studies only