

AB056. 184. Progesterone receptor status as a prognostic indicator in oestrogen receptor positive breast cancer patients—a systematic review

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Background: The role of progesterone receptor (PR) status in determining prognosis in oestrogen receptor (ER) positive breast cancer patients remains controversial. The aim of this review was to determine whether absence of PR receptor expression was a negative prognostic indicator in patients with ER positive disease.

Methods: A comprehensive search of MEDLINE/PubMed, Embase, and the Cochrane Library was performed in accordance with PRISMA guidelines. Studies pertaining to progesterone receptor status and its effect on survival in breast cancer patients were identified. The primary outcome recorded was hazard ratio (HR) for disease-free survival (DFS) and overall survival (OS) in PR negative

cases. Secondary outcomes included percentage DFS and OS. Studies deemed eligible for inclusion were quality assessed.

Results: Four retrospective cohort studies met inclusion criteria, involving a total of 9,419 patients, of which 1,061 were ER+ PR-. PR status was found to be a significant independent prognostic indicator in all four studies. Mean hazard ratio for DFS in PR negative patients across the four studies was 2.60 (range, 1.66–3.91). Mean hazard ratio for OS in PR negative patients across the four studies was 3.20 (range, 1.62–4.78). Included studies demonstrated significantly increased percentage DFS in ER+PR+ patients compared to ER+PR- patients at 2 years (97.7% *vs.* 90.4%; $P<0.05$) and median follow up (83.7% *vs.* 76.1%; $P=0.001$).

Conclusions: PR expression is an independent negative prognostic indicator in ER+ breast cancer which is traditionally considered to have a good prognosis and should be considered accordingly when planning treatment.

Keywords: Progesterone; receptor; status; prognosis

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