

#288P# - Impact of hormonal contraception on estradiol and progesterone serum levels. A 6-year study on progression-free survival, disease-free survival, and overall survival at Dr. Moewardi Hospital

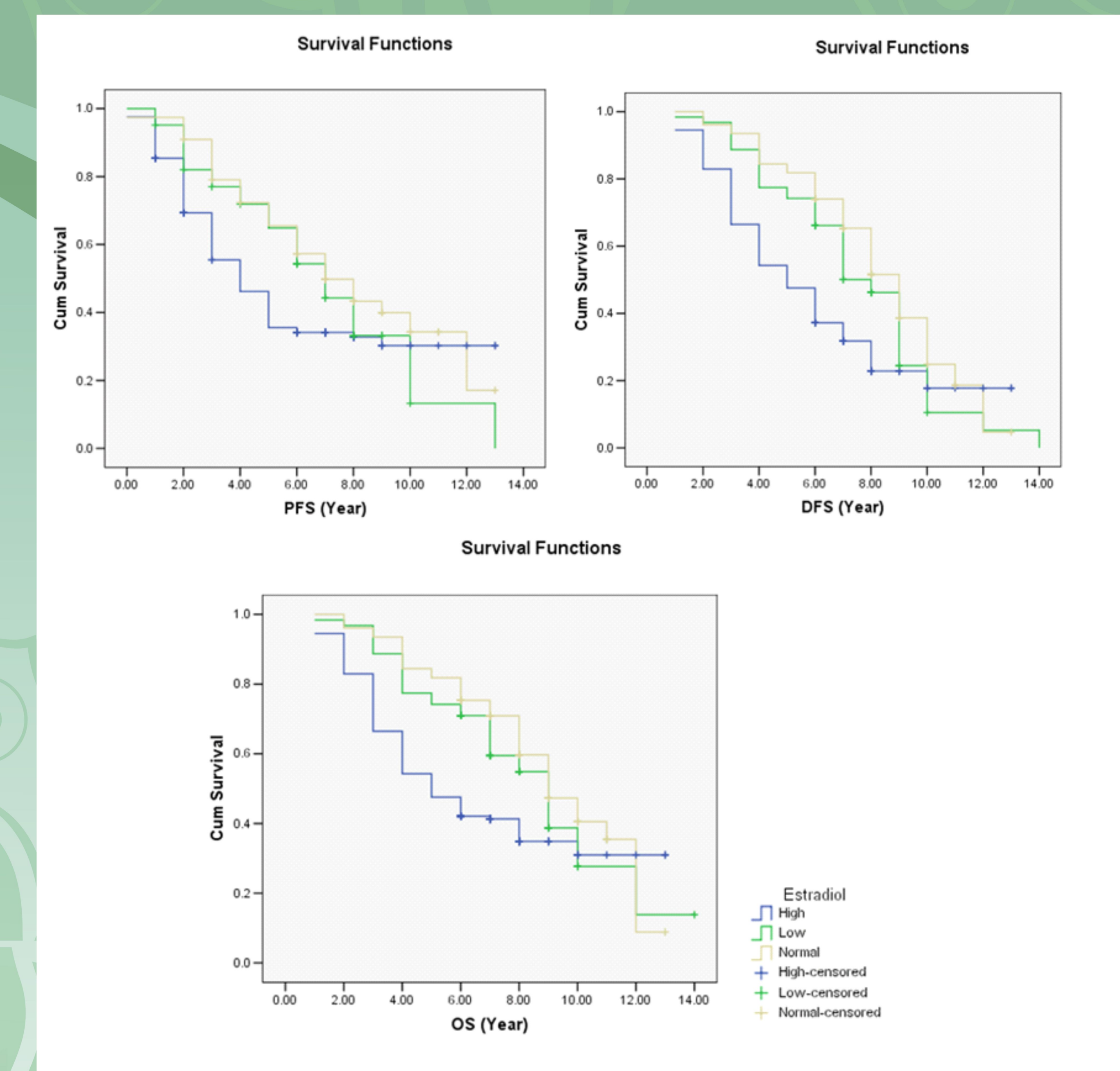
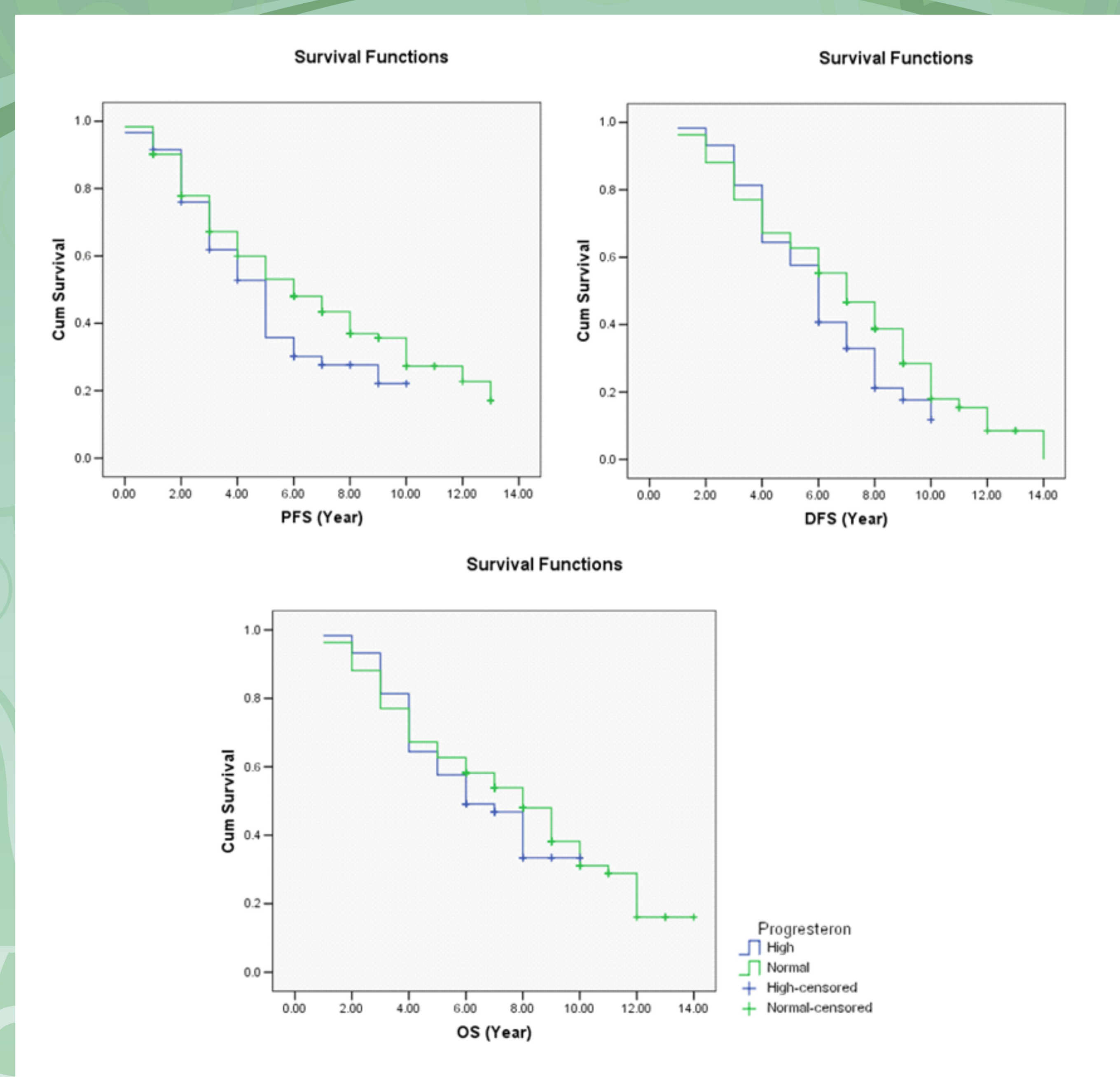
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Background: The family planning program curated by the Indonesian government to limit population growth has been successful. Hormonal contraception contains progesterone and estrogen, risk factors for breast cancer. Breast cancer is a prominent health issue in Indonesia as it has a high incidence rate and accounts for the second-highest mortality in women. the purpose of this research, looking at how the effect of hormonal contraceptives on estradiol and progesterone levels in breast cancer patients

Methods: a six-year prospective cohort study at dr. Moewardi Hospital. There are two groups of subjects with and without hormonal contraceptives. Data on breast cancer stage, tumor characteristics, estradiol levels, and progesterone levels were collected. The data are presented in mean, standard deviation, and distribution frequency (%). Statistical tests using Chi-square, Fisher exact, Mann-Whitney, and an independent t-test.

Results: 303 samples were aged 31 to 78 years. 51% grade III, 28.7% Luminal B, and 45.9% LABC. 54.1% high estradiol levels, and 80.5% normal progesterone levels. The use of contraceptives, the type, duration of use, and duration of discontinuation of contraceptives do not affect estradiol and progesterone levels ($p > 0.05$). Estradiol levels affect PFS, DFS, and OS ($p < 0.05$) while progesterone levels have no effect ($p > 0.05$). The type and duration of contraceptive use do not affect PFS, DFS, and OS ($p > 0.05$). While the duration of discontinuation of contraceptives affects the OS ($p < 0.05$) but not PFS and DFS ($p > 0.05$).



Conclusion: PFS, DFS, and OS in breast cancer are affected by significantly high levels of estradiol, and in contrast, progesterone levels tend to be normal and not significantly affected. Lower levels of estradiol are associated with a better OS. Shorter duration for stopping the use of contraceptives is associated with poorer OS.