POEMS
Prevention Of Early Menopause Study
(IVCSG 34-05/SWOG 0230)

Consider for all premenopausal women with hormone receptor negative (ER- and PgR –) early breast cancer who will receive chemotherapy.
POEMS

Phase III trial of chemotherapy +/- LHRH analogue to reduce ovarian failure following chemotherapy in premenopausal early stage, hormone receptor negative (ER- and PgR-) breast cancer
Schema

Premenopausal Stage I, II or IIIA ER- and PgR-

Strata Age/chemo regimen*

Randomization

ARM 1
Standard (Neo)Adjuvant chemotherapy*

ARM 2
Standard (Neo)Adjuvant chemotherapy* + goserelin

*Most standard cyclophosphamide-containing regimens
Timing of Goserelin

- Goserelin starts **at least 1 week before** 1\textsuperscript{st} dose of chemotherapy.

- Given every 28 days throughout chemotherapy.
Rationale

• Premature menopause is a common side effect of chemotherapy for early-stage BC, but has no therapeutic benefit for patients with receptor-negative disease.

• Premature menopause puts patients at risk of long-term health problems such as osteoporosis, cardiovascular disease, infertility.

• Several small Phase II studies* have examined the role of GnRH agonists as gonadal chemoprotectants with promising results.

Objectives

Primary
• Compare rates of premature ovarian failure at 2 years.

Secondary
• Compare rates of ovarian dysfunction and evaluate ovarian reserve at 1 and 2 years.
• Evaluate pregnancy and other fertility information after treatment and in the 5 years of follow up.
Eligibility Criteria 1

• Premenopausal (consider for all not only those who desire preservation of fertility).
• Operable stage I, II or IIIa invasive breast cancer.
• ER and PgR negative disease as defined by institution, but:
  • Protocol specifies >10% cells staining positive by IHC, or >3 fm/mg cytosol protein by EIA assay will be considered receptor POSITIVE.
  • IBCSG strongly recommends enrolment only of patients whose tumours show no staining of both ER and PgR.

Between 18 and 50 years old.
Eligibility Criteria 2

• Chemotherapy must include 3-8 months of an alkylating agent (cyclophosphamide).

• No post-operative chemotherapy planned for those having neoadjuvant chemotherapy.

• No estrogens, antiestrogens, SERMs, AIs, or hormonal contraception within 1 month (exceptions: women < 35 years old on contraceptive pill, and women of any age may have up to 2 months of hormonal treatments for oocyte collection).
Sample Size

- Sample size calculated for >80% power to detect an absolute reduction of 15% in the rate of ovarian failure at 2 years from initiation of chemotherapy using a one-sided 2.5% significance level.

- Total target accrual is 416.

- IBCSG target accrual is 200.
Significance

• If goserelin is shown to be effective in this study, it will change the standard of care for premenopausal women who receive chemotherapy for hormone receptor-negative breast cancer.

• It will also have implications for premenopausal women with other types of potentially curable cancer.