	BRCA1/2 Mutation Carriers (N=75)	Non-Mutation Carriers (N=48)	P-value
Age, y	37.2 ± 5.5	39.8 ± 3.7	0.02
BMI, kg/m2	23.9 ± 5.2	24.0 ± 5.7	0.80
AMH, ng/mL	1.23 ± 1.70	1.18 ± 1.15	0.57
AMH <1ng/mL	42 (56%)	23 (48%)	0.38

CONCLUSION: BRCA 1/2 mutation carriers have a lower AMH level after accounting for age and BMI compared to non-carriers, suggestive of decreased ovarian reserve. Decreased ovarian reserve may have widespread implications on future fertility and reproductive lifespan.

Supported by: Helping Hand of Los Angeles, Inc.

O-212 Tuesday, October 15, 2013 05:15 PM

WOMEN WITH GYNECOLOGIC CANCERS ARE SUBOPTIMALLY COUNSELED ABOUT POST TREATMENT REPRODUCTIVE HEALTH OUTCOMES. W. H. Salem,[a] J. M. Letourneau,[b] J. Chan,[a] S.-W. Chan,[a] M. Cedars,[a] M. P. Rosen.[a] [a]Department of Obstetrics, Gynecology and Reproductive Sciences, University of California, San Francisco, San Francisco, CA; [b]Department of Obstetrics and Gynecology, University of North Carolina at Chapel Hill, Chapel Hill, NC.

OBJECTIVE: To assess counseling patterns regarding fertility preservation in women with gynecological (GYN) & non-gynecological (non-GYN) cancers.

DESIGN: Cross-sectional survey.

MATERIALS AND METHODS: We attempted to contact 4714 randomly sampled women from the California Cancer Registry diagnosed in 1993-2007 with common GYN & non-GYN cancers. Subjects were 18-40 years of age at diagnosis. Surveys were mailed & available in written/electronic form in English/Spanish. Information about demographics, cancer, treatment modality, fertility desires, fertility counseling & fertility sparing surgery (FSS) was collected. Univariate & multivariate logistic regression were used as appropriate.

RESULTS: Of the 2537 women contacted, 1892 responded. Of these, 1686 reported treatment with potential to impact fertility (i.e., systemic chemotherapy, radiation/surgery to the abdomen/pelvis). Among women with GYN cancers, 52% wanted future children & 51% of these women were counseled by an oncologist regarding the risk of treatment on fertility. This represented a lower odds of counseling (OR 0.5 95%CI 0.4-0.6) compared to women with non-GYN cancers. Among women with GYN cancers, women who underwent FSS had increased odds of wanting future children (OR 2.5 95%CI 1.7-3.6); however, there was no difference in rates of counseling between those that underwent FSS or not (OR 0.9 95% CI 0.6-1.3). Women more likely to desire children after treatment & consider fertility preservation identified their partner (OR 2.2, 95%CI 1.03-4.7), family members (OR 2.2, 95% CI 1.0-5.2) or the internet (OR 4.8, 95%CI 1.4-16.8) as strong influences in their decision making.

CONCLUSION: This study identifies survivors of GYN cancers to be sub-optimally counseled. With the pronounced detrimental outcomes on fertility in gynecologic cancers along with the high desire for future childbearing in this population, these women seek counseling from other sources. We have identified a population which merits improved and targeted counseling.

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O-213 Tuesday, October 15, 2013 05:30 PM

GRANULOCYTE COLONY-STIMULATING FACTOR AND LEUPROLIDE HAVE SIMILAR EFFICACY IN PRESERVING OVARIAN FUNCTION IN MICE TREATED WITH HIGH-DOSE CHEMOTHERAPY. M. E. Skaznik-Wikiel, J. Donohue, M. Sukhwani, K. E. Orwig. Obstetrics, Gynecology and Reproductive Sciences, Magee-Womens Research Institute, University of Pittsburgh School of Medicine, Pittsburgh, PA.

OBJECTIVE: The goal of this study was to compare the efficacy of G-CSF with a GnRH analogue (leuprolide) in preserving ovarian function in mice treated with high-dose chemotherapy.

DESIGN: Prospective laboratory study.

MATERIALS AND METHODS: Adult mice (6-8 mice/group) were treated with 1) cyclophosphamide (100mg/kg) and busulfan (12mg/kg) (CTx); 2) G-CSF (50μg/kg) for 5 days with CTx on day 3; 3) leuprolide depot with CTx on day 10 (CTx+L) or 4) appropriate vehicle control. Ovaries were collected on day 21 after CTx for primordial and early-growing follicle counts. Similar treatments were performed for mating trials (7-8 mice/group), which were initiated 4 weeks after CTx treatment.

RESULTS: Primordial follicle numbers per ovary were significantly reduced in CTx-treated mice (31.5±4.2) compared to vehicle treated controls (1,628 ± 246, $p<0.0001$). Mice treated with CTx+L (107±17.6) and CTx+G-CSF (158±27) had significantly more primordial follicles per ovary than mice treated with CTx alone ($p<0.0001$). Mice treated with CTx+G-CSF also had significantly more primordial follicles than mice treated with CTx+L ($p<0.01$). Early-growing follicles (primary and secondary) per ovary were significantly reduced in CTx-treated mice (64±7.8) compared to vehicle controls (1,021 ± 48, $p<0.0001$) and this reduction was partially ameliorated in mice treated with CTx+L (100±17.4, $p<0.01$) and CTx+G-CSF (114±17.5 follicles/ovary; $p<0.05$). The CTx+L and CTx+G-CSF groups were not different. During a 5-month breeding trial, CTx+G-CSF produced more litters than CTx+L($p=0.03$), but neither group produced more litters than CTx group (p=ns). All groups produced fewer litters that vehicle controls ($p<0.001$).

CONCLUSION: G-CSF protects ovarian follicles from high-dose chemotherapy and may provide an alternative to current leuprolide therapy.

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O-214 Tuesday, October 15, 2013 05:45 PM

SAFETY AND FEASIBILITY OF PERFORMING TWO CONSECUTIVE LETROZOLE-FSH STIMULATION CYCLES FOR FERTILITY PRESERVATION IN WOMEN WITH BREAST CANCER. G. Bedoschi,[a,b] V. Turan,[a,b] K. Oktay.[a,b] [a]Obstetrics and Gynecology, New York Medical College, Valhalla, NY; [b]Innovation Institute for Fertility Preservation and In Vitro Fertilization, New York, NY.

OBJECTIVE: To investigate the safety and feasibility of performing two consecutive ovarian stimulation cycles with the use of letrozole protocol for fertility preservation in breast cancer patients.

DESIGN: Secondary analysis of a prospectively generated database.

MATERIALS AND METHODS: Embryo or oocyte cryopreservation outcomes, time interval from surgery to chemotherapy (CT), and breast cancer recurrence rates of patients undergoing two consecutive (2C) vs single (1C) ovarian stimulation cycle with the Letrozole-FSH protocol prior to the initiation of chemotherapy were compared.

RESULTS: Of the 157 women, 78 had ≤ stage III breast cancer and met the inclusion criteria. Sixty-one patients underwent single ovarian stimulation cycle (1C) while 17 had two consecutive cycles (2C). As expected, the mean total number of oocytes harvested (16.1 ± 13.2 vs. 9.1 ± 5.2; p=0.01) and embryos generated (6.4 ± 2.9 vs. 3.7 ± 3.1; p=0.02) were significantly higher in patients in 2C vs. 1C. The mean number of oocytes or embryos was similar between the two cycles in 2C (oocytes 7.7 ± 5.4 vs 8.4 ± 9.6, p=0.78; embryos 3.5 ± 2.6 vs 3.4 ± 2.6, p=0.81) as well as when 1C was compared to individual cycles of 2C (oocytes 9.1 ± 5.2, p=0.59; embryos 3.7 ± 3.1, p=0.59). The time interval from surgery to CT was similar between the 2C and 1C groups (63.7 ± 7.7 vs. 58.0 ± 12.1 days, p=0.176), probably because 82.3% of patients who underwent 2C were referred prior to breast surgery compared to only 34.4 % of patients who underwent 1C (p=0.001). After a mean follow up of 58.5 ± 13.6 months, recurrence rates were similar between 2C (0/17) and 1C (2/49) patients (p=0.548).

CONCLUSION: It appears to be safe and feasible to perform two consecutive ovarian stimulation cycles to increase the oocyte/embryo yield for fertility preservation in women with ≤ stage III breast cancer. With early referral, no significant delay occurs in initiating chemotherapy.

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