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Ovarian Cancer Finding May Be a 'Win-Win' for at-Risk Women Who Wish to Have a Family

Researchers at Oregon Health & Science University's Oregon National Primate Research Center may have good news for women at high-risk for ovarian cancer who also want to have children. The research suggests that a layer of cells, which serve as the "breeding ground" for ovarian cancer, may be removed yet allow the women to have children. This would be a vast improvement over the current prevention strategy for women at high risk for ovarian cancer: Removal of the ovaries entirely.

The research is published in the current online edition of the journal Human Reproduction.

The new treatment approach being tested at OHSU focuses on a layer of cells that surround the ovaries called ovarian surface epithelium. These cells, which have no known function, are where ovarian cancer takes root. To conduct the research, scientists washed away the ovarian surface epithelium in healthy female monkeys through minimally invasive surgery.

Following the procedure, the animals were closely observed to determine if removal of the cells changed function of the ovaries themselves. This observation revealed that the animals' ovaries produced eggs at a normal rate, as well as estrogen and progesterone in normal cyclic patterns. The procedure did not appear to affect the health of the ovaries or the overall health of the animals.

Because women with a family history of the disease are at a much higher risk for ovarian cancer themselves, many of these women choose to have their ovaries removed as a precaution. Of course for young women, this can be a major quality of life issue as the treatment prevents future childbirth and removes the primary source of a woman's estrogen.

"While additional studies are necessary, this procedure suggests that we may have found a much less invasive

strategy for preventing ovarian cancer in high-risk women while at the same time maintaining fertility," said Jay Wright, Ph.D., a scientist in the Division of Reproductive Sciences at the Oregon National Primate Research Center. "This is a key finding in monkeys because their reproductive system is so similar to the human female reproductive system."

The National Institute of Child Health and Human Development and the National Center for Research Resources which are components of the National Institutes of Health, and the OHSU Foundation funded this research. About Ovarian Cancer:

- · Each year, approximately 20,000 women in the United States are diagnosed with ovarian cancer.
- Among women in the United States, ovarian cancer is the eighth most common cancer and the fifth leading cause of cancer death.
- In 2010, there were 21,880 new cases ovarian cancer diagnosed in the United States and 13,850 deaths (source CDC).

Journal Reference: 1. J. W. Wright, T. Pejovic, L. Jurevic, C. V. Bishop, T. Hobbs, R. L. Stouffer. Ovarian surface epitheliectomy in the non-human primate: continued cyclic ovarian function and limited epithelial replacement. Human Reproduction, 2011; DOI: 10.1093/humrep/der061