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제 목	국 문	유암 조직내 에스트로젠 및 프로제스테론 수용체 양성 여부에 따른 유암 위험인자의 상이성
	영 문	Breast-Cancer Risk Factors According to Combined Estrogen- and Progesterone-Receptor Status : A Case-Control Analysis
저 자 및 소 속	국 문	
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1. Background

It is not yet clear whether breast cancers of differing hormone receptor status represent etiologically distinct forms of the disease with different risk factor profiles. Reports examining risk factors by estrogen receptor status or by progesterone receptor status have not produced clear and consistent findings. While a more refined and possibly biologically more meaningful approach would stratify by estrogen receptor and progesterone receptor status jointly, only a few studies have done so thus far.

This hospital-based case-control study examined risk factors for breast cancer according to estrogen- and progesterone-receptor status. The authors hypothesized a gradient of risk for reproductive risk factors, tumors positive for both receptors exhibiting the highest risk and tumors negative for both receptors being unrelated to reproductive factors.

2. Subjects and methods

Information on risk factors was obtained from 1,170 breast cancer cases and 21,714 cancer-free controls at the Aichi Cancer Center Hospital, Nagoya, Japan between 1988 and 1992. Cases were diagnosed with histologically confirmed invasive breast cancer. Controls were confirmed to be cancer-free by diagnostic procedures at the hospital.

The presence of receptors in the breast cancer tissue was determined by the dextran-coated charcoal method during 1988-1989, and by a radioimmunoassay commercial kit during 1990-1992. Receptor assays were performed on only 39 percent of the cases.

3. Data analysis

All cases (receptor status known and unknown combined) were compared to controls using unconditional multiple logistic regression. Odds ratios and 95% confidence intervals were calculated for known and suspected breast cancer risk factors, which were included in the model simultaneously.

The multiple polychotomous logistic regression model, with disease status including receptor status as the response, was used to determine whether risk factors for breast cancer differed according to receptor status. The BMDP polychotomous logistic regression procedure was used to calculate odds ratios and 95% confidence intervals based on the regression parameters and their standard errors obtained from the regression models. The Wald statistic was calculated to determine the statistical significance of differences in effect across groups of differing receptor status.

4. Results

Risk factors did not differ according to estrogen receptor status. In a multiple polychotomous logistic regression, however, statistically significant differences in odds ratios were found for age at menarche ($p = 0.017$) and menstrual regularity at ages 20 to 29 ($p = 0.018$). Estrogen receptor status did not appear to modify the difference in effect according to progesterone receptor status for these variables or for age, occupation, or cigarette smoking. Also noteworthy was a protective effect of number of full-term

pregnancies in estrogen receptor-negative, progesterone receptor-positive cases only (OR = 0.39, 95 percent CI 0.18-0.85).

5. Discussion

This study did not support the hypothesis of a gradient of risk for reproductive factors according to hormone receptor status. Nevertheless, our finding that some risk factors may differ for progesterone receptor-positive versus progesterone receptor-negative breast cancer, through a yet to be understood mechanism, is intriguing and should be pursued in future studies.