

번호 08-5

제 목	국 문	유방 X-선상 유방조직밀도와 유방암 위험인자와의 관련성		
	영 문	Mammographic Breast Composition in Relation to the Risk Factors of Breast Cancer in Korea		
저 자 및 소 속	국 문	신명희 <sup>1</sup> ,한부경 <sup>2</sup> ,최연현 <sup>2</sup> ,남석진 <sup>3</sup> ,양정현 <sup>3</sup> 성균관대학교 의과대학 <sup>1</sup> 예방의학교실, <sup>2</sup> 진단방사선과학교실 <sup>3</sup> 일반외과학교실		
	영 문	M.H.Shin, B.K.Han, Y.H.Cho, S.J.Nam, J.H.Yang Sungkyunkwan University <sup>1</sup> Dept. of Preventive Medicine, <sup>2</sup> Dept. of Diagnostic Radiology, <sup>3</sup> Dept. of General Surgery		
분 야	역 학	발 표 자	신 명 희	
발표 형식	구 연	발표 시간	15 분	
진행 상황	연구완료 ( 0 ), 연구중 ( ) → 완료 예정 시기 : 년 월			

1. 연구 목적

A possibility of positive relationship between parenchymal pattern of the breast in mammography and breast cancer has been described. Women with diffuse or nodular parenchymal densities (DY pattern in Wolfe's classification) found to have higher risk of breast cancer compared to women with entirely fatty breast (N1 pattern). Asian women have been reported to have different pattern of mammographic density and breast cancer risk compared to white women. This cross-sectional study investigated the relationship between mammographic breast composition and several known risk factors of the breast cancer in Korean women.

2. 연구 방법

751 women who were enrolled in breast screening program, whose mammographic densities were determined, and who were found to have no breast cancer, were interviewed on menstrual history, reproductive history, and other risk factors of breast cancer. Their mammography was read by 2 radiologists. Breast composition was classified into A (scattered fibroglandular tissue), B (heterogeneous dense), C (extremely dense, homogeneous dense), and F (almost entirely fat) based on The American College of Radiology Breast Imaging Reporting and Data System (Bi-RADS). Among 751 mammographies, 100 mammographies were read twice, among which 98 yielded the same composition result and 2 were different. Serological lab tests were also conducted measuring serum estradiol (E2), serum deoxypyridinoline (an osteoporosis index), serum total cholesterol, and serum low density lipoprotein (LDL)-cholesterol. Menstrual cycle at the time of blood sampling was not recorded, but sample time was fixed between 7:30 and 9:30. Analysis were conducted comparing composition C vs. other composition and composition B/C vs. other composition

### 3. 연구결과

The proportions of women with composition A, B, C, and F were 27.6%, 34.3%, and 26.1%, and 12.0%, respectively.

In comparison with the rest type of compositions, the proportion of composition C or composition B/C decreased significantly with Age. ( $p < 0.01$ ). Higher Education (odds ratio [OR] 1.9, 95% confidence interval [CI] 1.2-2.8), Tall Height (OR 2.9, 95% CI 1.5-5.8), and History of Myoma (OR 1.6, 95%CI 1.01-2.3) *increased* the risk for having composition C.

Heavy Weight or BMI (OR 0.3, 95%CI 0.2-0.6), Postmenopause (OR 0.21, 95% CI 0.1-0.5), and Breast Feeding more than 12 months (OR 0.5, 95%CI 0.3-0.98) *decreased* the risk for having composition C.

High serum E2 Level (OR 6.2, 95%CI 1.6-40.7), History of Bilateral Oophorectomy (OR 6.4, 95%CI 1.2-27.5), Current Estrogen Replacement Therapy (OR 4.3, 95%CI 1.6-10.7), Multiparous or Late Last Delivery (OR 0.7, 95%CI 0.5-0.96), and Higher LDL-cholesterol (OR 0.2, 95%CI 0.03-0.75) were significant only among *postmenopausal women*.

Positive lesions in mammography, either benign or suspicious nodules, showed no association with any of the risk factors of breast cancer, and the relation to composition C was not significant either (OR 2.3, 95%CI 0.7-6.5).

### 4. 고찰

Korean women had higher proportion of dense breast than Caucasian women and Japanese women. Most of known risk factors for breast cancer also increased the risk for dense breast (Parenchyma B/C), except obesity. In postmenopausal women, high serum E2, current estrogen replacement therapy, and artificial menopause (such as hysterectomy or bilateral oophorectomy) increased the risk for dense breast.

The results fairly consistent with the results from studies for Caucasians, except that our subjects had more higher rate of dense breasts. However, this study was a cross-sectional study with subjects undergone breast screening exam in a hospital. Limited generalizability is expected.