

Table: 142P

	All cases, % n = 1,001	Screening, % n = 741	Clinical symptoms, % n = 260	χ^2 p-value
BC type				
Invasive	86.2	82.9	95.8	p <0.001
In situ	13.8	17.1	4.2	
pT				
pTis	14.2	17.3	4.3	p<0.001
pT1a-b	25.2	29.2	12.8	
pT1c	40.1	40.6	38.6	
pT2	18.8	12.4	39.1	
pT3-4	1.7	0.5	5.2	
LVI ^a				
Yes	12.9	10.0	20.3	p<0.001
No	87.1	90.0	79.7	
ANI ^a				
pN0	76.9	80.9	64.1	p<0.001
pN+	23.1	19.1	35.9	
Metastases ^a				
M0	98.1	99.0	95.2	p<0.001
M1	1.9	1.0	4.8	
Molecular subtype ^a				
Luminal A	41.9	44.6	35.2	p=0.009
Luminal B HER2-	39.9	40.3	39.0	
Luminal B HER2+	6.2	5.3	8.5	
HER2+	3.6	3.2	4.7	
TN	8.3	6.6	12.7	
Treatments ^a				
BCS	90.8	95.7	79.1	p<0.001
MT	9.2	4.3	20.9	
CT	42.1	34.4	61.3	p<0.001
No CT	57.9	65.6	38.7	
BC recurrence rate ^b	2.6	2.3	3.5	p<0.001
BC related death rate ^b	2.5	1.0	6.6	p<0.001

^a Among invasive cases (n=862)

^b Median follow-up 45.9 months

Funding: Has not received any funding.

Disclosure: All authors have declared no conflicts of interest.

<https://doi.org/10.1016/j.annonc.2022.03.159>

143P Demographics of breast cancer and non-malignant breast lesions in Western India: A study of 8000 breast pathologies

N.K. Agarwal¹, S. Singh¹, P. Patel¹, K.K. Lakhera¹, A. Hussain¹, R.G. Sharma²

¹Surgical Oncology, Sawai Man Singh (SMS) Medical College & Attached Hospital, Jaipur, India; ²Surgical Oncology, Mahatma Gandhi Medical College, Jaipur, India

Background: Breast cancer accounted for the highest percentage amongst all new cases of cancer in 2020 (11.7%). Different pathologic subtypes have varied survival rates. Benign breast diseases have a reported incidence of 76% in a series in southern India. But in western India, dearth of proper data makes it difficult to predict the distribution. This study intended at creating data on epidemiological distribution of breast cancer subtypes and benign breast lesions in eastern Rajasthan, India.

Methods: A retrospective observational study was conducted on 8590 breast pathologies obtained from four major diagnostic centres in Eastern Rajasthan capital-Jaipur. These included histologically proven benign and malignant breast lesions. Distribution of types, age and sex was noted.

Results: There were 5985 lesions (69.67%) in the benign group and 2605 (30.33 %) in the malignant group. Females formed most of the study group 92.71% (7964) and males 7.29 % (626). Males formed 8.92% of benign lesions group while just 3.53% of malignant lesion group (p< 0.001) Amongst benign lesions, the most common were fibroadenomas 45.73 % (2737) followed by fibroadenosis 12.68 % (759), and gynaecomastia 5.73% (343). The most common age group was ≤ 20 years for fibroadenomas and gynaecomastia, whereas 31-40 years for fibroadenosis. Amongst malignant lesions, the most common was infiltrating duct carcinoma NS with 32.72 % (857) followed by infiltrating duct carcinoma :moderately differentiated 26.84 % (703). The age group most common with either infiltrating duct carcinoma (IDC) or infiltrating lobular carcinomas (ILC) was 41-50 years. Second most common age group was 51-60 years for IDC, whereas 31-40 years for ILC. Amongst breast lesions in males, male breast carcinoma formed 2.25% (59) of overall breast lesions and gynaecomastia formed 5.04% (302).

Conclusions: Breast lesions are a cause of concern since some carry the potential risk of turning malignant. Timely excision of lesion, evaluation and confirmation of histological findings helps us to differentiate between benign and malignant lesions.

Carcinoma breast and benign breast lesions are common in men as well. Vigilance regarding male breast lesions is needed.

Legal entity responsible for the study: SMS Medical College Jaipur, Rajasthan, India.

Funding: Has not received any funding.

Disclosure: All authors have declared no conflicts of interest.

<https://doi.org/10.1016/j.annonc.2022.03.160>

144P The differences in fatty acid profiles and stearoyl-CoA desaturase (SCD1) mRNA level in adipose tissue surrounding breast tumor of Iranian women with breast cancer and benign breast disease

R. Sefidabi¹, A. Moini¹, A. Alizadeh², S. Alipour¹, R. Omranipoor¹, M. Hafezi³, M. Shahhoseini⁴, A. Izadi², S. Vesali⁵

¹Breast Disease Research Center (BDRC), Cancer Institute, Tehran University of Medical Sciences, Tehran, Iran; ²Department of Embryology, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran; ³Department of Endocrinology and Female Infertility, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran; ⁴Department of Genetics, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran; ⁵Reproductive Epidemiology Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran

Background: Cancer-associated adipocytes (CAAs), as a major component of the breast tissue microenvironment, communicate with adjacent breast cancer (BC) cells. An alteration in the expression of Stearoyl-CoA Desaturase 1 (SCD1), the enzyme that converts saturated fatty acids (SFA) into monounsaturated fatty acids (MUFA) is a hallmark in cancer cells. Indeed, the desaturation index (DI) calculated using the MUFA: SFA ratio attracted attention as a potential and sensitive predictor for malignancies. Actually, the SCD1 mRNA level, different fatty acid (FA) profiles of breast adipose tissue (AT), and its effect on supporting tumorigenic signaling in different types of breast tumors remain unexplored. Our objective was to determine the differences in SCD1 mRNA abundance, DI, and the FA profiles of the mammary gland-subcutaneous AT around benign and malignant breast tumors.

Methods: Forty women (20 patients with estrogen-receptor-positive BC: 18 invasive ductal carcinoma (IDC) and 2 invasive lobular carcinoma (ILC) and 20 women with benign breast disease (BBD)) undergoing breast surgery were enrolled in the current study after obtaining ethical permission (IR.TUMS.IKHC.REC.1399.502). AT samples were collected from 30-50mm from the tumor in a tumor-free region and they were immediately snap-frozen in liquid nitrogen. FA profiles and SCD1 mRNA level (2^{ΔΔct}) in AT samples were determined by gas chromatography and qPCR, respectively.

Results: No significant differences were detected with respect to age (Mean ± sd) (44.4 ± 8.85 and 37.8 ± 13.23 years) and BMI (27.3 ± 4.83 and 26.5 ± 5.16 kg/m²) among BC and BBD patients. Twenty-one major FAs were detected and FA profiles and DI (C18:1/C18:0 ratio: 9.2 ± 2.71 and 8.8 ± 2.74) were similar among BC and BBD patients, respectively. Interestingly, BC women showed significantly higher mRNA level of SCD1 compared to those with BBD (0.00229 ± 0.0012337 vs. 0.000448 ± 0.000289, respectively; p=0.001).

Conclusions: While the 5-fold higher mRNA level of SCD1 was found in CCAs of BC, the FA profiles as well as DI in AT of BC and BBD patients were similar. Additionally, more attention should be given to AT of women with BBD that was previously ignored.

Legal entity responsible for the study: The authors.

Funding: Breast Disease Research Center (BDRC), Cancer Institute, Tehran University of Medical Sciences, Tehran, Iran.

Disclosure: All authors have declared no conflicts of interest.

<https://doi.org/10.1016/j.annonc.2022.03.161>

145P Trajectory of physical activity and breast cancer risk: Findings from a population-based cohort study in South Korea

T.T.P. Tran¹, N.M. Luu¹, T.T. Bui¹, M. Han², M.K. Lim³, J-K. Oh²

¹Cancer Control and Population Health, National Cancer Center Graduate School of Cancer Science and Policy, Goyang-si, Republic of Korea; ²Division of Cancer Prevention, National Cancer Center, Goyang-si, Republic of Korea; ³Department of Social and Preventive Medicine, College of Medicine, Inha University, Incheon, Republic of Korea

Background: Physical activity has a protective factor against breast cancer. However, the frequency of physical activity continuously changes throughout the life course, which could modify its effects on cancer risk. We aimed to examine the association between different trajectories of physical activity and breast cancer.

Methods: 791,019 women from the National Health Insurance Service cohort (2002-2018) were included. The physical activity was measured based on the question "How