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Breast Cancer Screening in Albania During 2007-2008

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ABSTRACT

Aim: Our aim was to assess the prevalence of breast cancer among women who showed up and participated in the breast cancer screening program during October 2007-October 2008 in Tirana, the Albanian capital city. **Methods:** A breast cancer prevention and treatment campaign was undertaken in Tirana, Albania, in 2007 which included also mammography examination for the early detection of breast cancer. All women residing in Tirana municipality were invited to undergo a mammography examination free of charge. **Results:** A total number of 5224 women underwent mammography examination during October 2007 – October 2008 time period in Tirana. The highest number of mammography tests were performed in October 2008 (1284 tests), followed by June 2008 with 746 mammography examinations realized. In general, the prevalence of breast cancer positive mammography readings where higher among women older than 60 years, followed by the 51-60 and 41-50 years age-groups.
Conclusion: Our findings indicate that, among 5224 examined women during a one-year period, 1.9% had a positive reading in mammography. This is one of the few reports large-scale breast cancer screening in Albania. The increasing of breast cancer rates necessitates implementation of multi-directional programs to prevent, early diagnose and control this condition in Albanian women.
Key words: breast cancer, multi-directional programs, Albania.

1. INTRODUCTION

The evidence suggests that cancer incidence is rising in all parts of the world (1). Lung cancer in men and breast cancer in women account for a considerable share of cancer burden (1). Statistics show that 1.38 million new breast cancer cases were diagnosed in 2008, accounting for 23% of all cancers cases detected in this period (2). Across the world, breast cancer is ranked second with 10.9% of all cancers (3). Current estimates suggest that the annual breast cancer incidence has increased from 0.5% to 3% per year (4). Breast cancer is the leading malignant disease and the first cause of death from cancer among women in Europe as well (5). The 2012 estimations suggested that 464000 new cases of breast cancer and 131000 deaths have occurred in 40 European countries including Albania (5).

In this context, the great challenge of medical and public health institutions worldwide is the prevention or early detection of cancer for better possibilities to win the battle with this serious life threatening health condition (6). Although breast self-examination (7) and early detection techniques in general are important, screening programs have always been accompanied by the debate on benefits of breast cancer screening against over-diagnosis and limited possibilities to detect breast cancer in all screened individuals because due to various factors, including the breast tissue disparity for each

woman in mammography examination (8). A number of factors seem to be associated with the occurrence of breast cancer including age, place of residence, pollution, family history and genetics, lifestyle, socio-economic status, education, and access to health care (9, 10).

Albania is experiencing major political, socioeconomic and life-style changes. These conditions are responsible for the epidemiological transition which has been observed in this south European country. Alongside reduction of infective diseases' morbidity and mortality the data suggests that there is a substantial increase in the incidence of non-communicable and tumoral diseases during the last two decades. In this framework, our aim was to assess the prevalence of breast cancer among women who showed up and participated in the breast cancer screening program during October 2007-October 2008 in Tirana, the Albanian capital.

2. MATERIAL AND METHODS

A breast cancer prevention and treatment campaign was undertaken in Tirana, Albania, in 2007 which included also mammography examination for the early detection of breast cancer. All women residing in Tirana municipality were invited to undergo a mammography examination free of charge.

3. RESULTS AND DISCUSSION

A total number of 5224 women underwent mammography examination during October 2007 – October 2008 time period in Tirana. According to the age-group, 7.4% of examined subjects were younger than 41 years old, 55.1% were between 41-50 years of age, 30.3% belonged to the 51-60 years old range and 7.3% were more than 60 years old (Table 1).

The overall prevalence of breast cancer detected by mammography examination in this group of women was 1.9% (101 cases out of 5224 mammographic examinations).

Except for the <41 years old group (2.6% of which had positive mammography), the prevalence of a positive mammography increased significantly with age. For example, the prevalence of a positive breast cancer reading was 1.5% among women aged 41-50 years old, 1.8% among 51-60 years old and 5.3% among women older than 60 years (Table 1).

Age-group	Total examined		Status of breast cancer				P‡
			Breast cancer		No breast cancer		
	Number	Percentage*	Number	Percentage†	Number	Percentage†	
<41 years	385	7.4	10	2.6	375	97.4	
41-50 years	2876	55.1	42	1.5	2834	98.5	<0.001
51-60 years	1584	30.3	29	1.8	1555	98.2	
>60 years	379	7.3	20	5.3	359	94.7	
Total	5224	100.0	101	1.9	5123	98.1	

Table 1. Detection of breast cancer among women undergoing screening procedures during October 2007-October 2008, Tirana, Albania. * Column percentages. † Row percentages. ‡ P-value from the chi-square test.

the World Bank, Ministry of Health and other local sources report around 400 new cases each year. Radiation, malnutrition, pollution, stress and dramatic changes in lifestyle and diet are thought to be nurturing the breast cancer trends (12). Currently, the Institute of Statistics does not provide information specifically on breast cancer incidence or mortality but instead it relies on aggregated data.

The incidence of breast cancer in Europe in 2012 was 94.2 cases per 100000 population whereas in Albania it was 69.4

Age-group	October-December 2007		January 2008		March 2008		April 2008		May 2008		June 2008		July 2008		October 2008	
	Pos*	Neg*	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg
<41 years	1†	5	2	13	3	10	1	36	0	52	1	71	1	42	1	146
41-50 years	4	250	5	255	1	229	3	363	8	355	5	354	3	235	13	793
51-60 years	4	194	3	210	2	153	3	163	4	183	6	264	3	121	4	267
>60 years	3	48	1	49	3	48	3	51	4	42	3	42	1	21	2	58
Total	12	497	11	527	9	440	10	613	16	632	15	731	8	419	20	1264

Table 2. Results of mammography examination by time period. * Positive mammography; negative mammography. † Number of women.

Table 2 presents the absolute number of positive and negative mammography readings by age-group and period of examination. The highest number of mammography tests were performed in October 2008 (1284 tests), followed by June 2008 with 746 mammography examinations realized.

Figure 1 displays the time trends of positive breast cancer readings by age group. It can be noticed that among women aged less than 41 years the rate of positive readings was quite high during October-December 2007 (16.7%) and March 2008 (23.1%) and then it decreased toward 0%-2.7% levels (Figure 1). In general, the prevalence of breast cancer positive mammography readings where higher among women older than 60 years, followed by the 51-60 and 41-50 years age-groups (Figure 1).

Our study reported that, among 5224 examined women during a one-year period, 1.9% had a positive reading in mammography. To our knowledge, this is one of the few cases when data about large scale breast cancer screening are being published in Albania.

Official information about breast cancer incidence, prevalence and mortality in Albania is still scarce. Despite this, the existing evidence, however contradictory, points to an unequivocal increase of breast cancer figures. A communication published more than two decades ago (11) reported than out of 4000 mammograms breast cancer was detected in 40 of them (prevalence of 1%). Findings from our survey suggest a doubling of breast cancer prevalence among screened individuals in the arch of almost 25 years in this transitional country. Other data are often sporadic and contradictory. For example, local media reported that in 2012 there were 900 new cases of breast cancer detected in Albania, showing a yearly increasing trend whereas
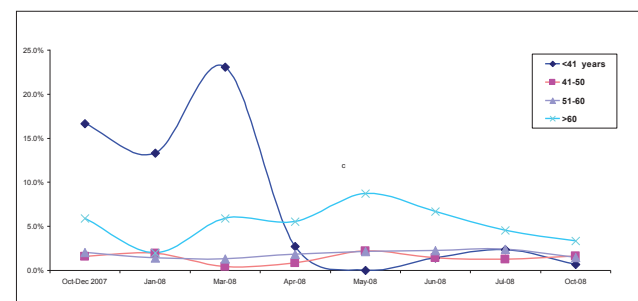

Figure 1. Positive mammography rates (proportions) of women screened during October 2007 – October 2008, by period of examination

ranking it in 31th place out of 40 countries (5) and being much lower compared to Western European countries. The breast cancer mortality rate was 23.1 per 100000 population in Europe and 21.8 per 100000 population in Albania (5).

Although the incidence of breast cancer in developing countries is lower compared to developed ones, it is increasing sharply due to lifestyle factors and higher life expectancy as well (13). On the other hand, often the awareness about breast cancer is relatively low in developing countries and as a result a good proportion of cancer cases are detected only in later stages of the disease, complicating the treatment and deteriorating its outcomes (13). Therefore, these populations might benefit from the establishment and carrying out of organized screening programs (4).

There is contradictory information about the benefits of large-scale population breast cancer screening. While some

research agree that there is a clear benefit (14) others point out the negative consequences of population-based screening, including false positive rates, over-diagnosis, and increasing of breast surgery rates (15)and suggesting such approach to be quite expensive (16). In a country with limited resources like Albania, this fact should be taken into consideration. Therefore, the screening is proposed to be individually tailored in order to contain the costs (17).

In the context when the awareness about breast cancer screening is relatively low in Albania, efforts should be done to improve the situation. Besides media campaigns, there could be a role for physicians to play as well. A recent paper reported that the odds of undergoing a mammography test increased by 24% for every 2 standard deviations increase in physicians' communication skills' score (18). Since the patients of doctors with good communications skills are more likely to perform a mammogram, then this could be a good intervention opportunity in order to increase the awareness of Albanian woman about the importance of breast cancer screening.

4. CONCLUSION

Improving communication skills of physicians could be done through various ways such as introduction of the topic in the curricula of the Faculty of Medicine or through trainings.

In conclusion, the increasing of breast cancer rates in Albania necessitates increasing multi-directional efforts to prevent, early diagnose and control this disease.

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