

**Table 1.** Distribution of breast cancer diagnosis according to the month of birth

Month	Breast cancer cases observed (N)
January	113
February	103
March	132
April	105
May	129
June	106
July	108
August	101
September	81
October	89
November	91
December	91
Total	1249

p= 0.009

seemed to decrease significantly (p=0.009). These results are similar to the ones found by Vassilaros et al. [2], who identified a peak in March and April. Since Turkey and Greece are similar in many ways with respect to climate and infection patterns, it can be expected that there are common environmental determinants which may increase the risk of breast cancer among women born in those months. Several causes such as diet, infectious agents and hormonal status have all been put forth for possible causes. One study has postulated that the amount of daylight may be responsible as light reduces melatonin secretion from the pineal gland, which has been shown to suppress the development of breast cancer by inhibiting the upregulation of

estrogen-induced cyclin D1 via its G-protein-coupled receptor MT1 [3]. However the effect of artificial illumination is not well established. A study conducted in Sweden has identified a peak in June, during which there is increased exposure to sunlight. Birth weight, which has been pointed out to show variations according to seasons has also been suggested as a possible cause for the difference in future breast cancer risk [4]. Although an empirical relationship has been identified in this analysis, there are several confounding factors. The birth rates of each month during the birth dates, rates of perinatal infections, seasonal variations of hormonal levels in this region, must all be studied before establishing a principal relationship.

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## Angiosarcoma of the breast

Dear Editor,

Angiosarcoma (ANSA) of the breast is a rare malignancy (< 1% of all cancers of the breast), and primary ANSA is even rarer (about 0.04% of breast cancers and 8% of mammary sarcomas).

Secondary ANSA occurs most frequently after radiotherapy (RT) following breast-conserving surgery for breast adenocarcinoma. The exact etiology is still unclear, but the presence of lymphedema, RT-induced mutations and genetic predisposition are suggested as causative factors for the development of secondary ANSA.

Herein we describe 3 cases of ANSAs of the breast:

(A): In July 2007, a 34-year-old woman underwent modified radical mastectomy of the left breast with axillary lymph node dissection for a pT2 N0, grade III primary breast ANSA. Due to the coexistence of liver metastases she was treated with chemotherapy (paclitaxel plus doxorubicin q3w) from September 2007 to January 2008 without response. She died in February 2008.

(B): In July 1997 a 61-year-old woman underwent a bilateral breast quadrantectomy and bilateral axillary nodal dissection for right colloid and left ductal adenocarcinomas. She then received 5 cycles of adjuvant chemotherapy (CMF), adjuvant bilateral RT (50 Gy) and adjuvant hormone therapy (tamoxifen for 3 years and then arimidex for another 2 years; 1998-2003). In April 2006 she underwent mastectomy of the remaining left breast for suspected

recurrence, but the tumor was histologically diagnosed as ANSA infiltrating the dermis and muscle layer. Three months later she underwent surgical excision of a left chest wall recurrence. In March 2007 ANSA recurred in the chest wall, after which she received 6 cycles of epirubicin + ifosfamide, days 1-3 q3w (7-11/2007) and in December a CT of the brain, chest and upper abdomen showed a 12 mm nodular lesion in the retrosternal space and a 2 cm lesion in the liver. In January 2008 chemotherapy was switched to weekly paclitaxel for 3 courses.

Due to further disease progression in the lung and liver chemotherapy was changed to methotrexate and cyclophosphamide q3w. In July 2008, a CT showed multiple bilateral, subcentimeter pulmonary nodules suspected to be pathological, and pleural effusion in the left hemithorax. Furthermore, extensive infiltration of the pectoral muscle and ribs with a fracture of the sternum were diagnosed. Nodular formations 12 mm in diameter were recognized in both axillae. The liver lesion was stable. The patient was administered sorafenib and she died the same month of respiratory failure.

(C): In December 2009 an 81-year-old woman underwent a left radical mastectomy with axillary lymph node dissection (all negative) for a tumor histologically diagnosed as ANSA. In March 2010 a CT scan of the brain, neck, chest and abdomen showed metastatic lesions in the lungs and brain. She received chemotherapy (doxorubicin every 15 days) and in May 2010 she started whole brain RT.

The patient is still alive with stable disease and on regular follow up after 8 cycles of chemotherapy.

The estimated prevalence of secondary breast ANSA after conserving therapy for breast adenocarcinoma ranges from 0.9 to 1.59 cases per 1000 patients, with an estimated relative risk of 15.9 of developing breast ANSA after breast-conserving therapy plus RT vs. breast-conserving therapy alone [1,2]. In Italy, the total number of all ANSAs (any site, primary and secondary) recorded from 1976 to 2007 was 414.

It has been hypothesized that there may be an association between the onset of primary liver ANSA and certain carcinogens such as vinyl chloride (VCM), arsenic and thorotrast [3,4].

ANSA has the worst prognosis of all types of sarcomas in terms of overall and disease-free survival [5]. Whatever the histological type, surgery is the treatment of choice. Breast ANSA is frequently advanced at diagnosis and has a tendency for locoregional recurrence. A significant number of responses to chemotherapy was observed in the metastatic setting. These data suggest that a multidisciplinary therapeutic approach should be employed in high-risk patients with large primary tumors.

It is certain that further studies are necessary to determine whether there are genetic factors predisposing to the disease and also to evaluate the effects of some carcinogens and other risk factors that may contribute to ANSA genesis.

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## Epidemiological characteristics of acrochordons

Dear Editor,

Skin tag (ST, acrochordon, fibroepithelial polyp) is the most common fibrous lesion of the skin and presents as a soft, pedunculated, skin-colored papule (1-2 mm). Epidermis has a papillomatous acanthotic pattern while the dermis is normal. Close to 50% of all individuals in the population at large have at least one skin tag [1]. Multiple acrochordons may reflect obesity and endocrine disease, whereas solitary and larger lesions may occasionally represent dermal melanocytic nevi in regression. Occasionally larger tags may be admixed with small lesions.

Results were obtained from two independent series of the dermatologic clinic of a general state hospital in Athens.

At first, data from an 8-year cross sectional study (1995-2002) regarding lifetime detection rates of ST as presenting complaint were analyzed, considered closer to incidence trends. The diagnosis was based on clinical findings. The overall denominator and reference population consisted of 50,237 self-referred Greek dermatologic outpatients, aged from 35 days to 96 years, consecutively examined by dermatologists (males 20,909; 41.6% and females 29,328; 58.4%; Table 1). All cases entered in the study were first-time referrals. Mantel-Haenszel chi-square stratified analysis was used to compare detection rates by age and gender without confounding effects [2,3].

In the second series (n=787) of consecutively examined dermatologic outpatients irrespective of the presenting complaint, 204 total cases of ST (25.9%) were diagnosed and possible associations with body mass index (BMI, for obesity) and diabetes mellitus were investigated [1,4].

In the first series, that is skin tags as presenting complaint (n=832, relative frequency 1.6%) median age was 43 years for men

(range 7-92) and 47 years for women (range 7-87). In accordance with a previous study [3], overall both sexes were equally affected. This occurred also by age groups (Table 1).

Within both sexes detection rates did not differ between childhood (0-10 years) and adolescence (11-20 years), whereas from adolescence up to 40 years a significant increment by age was noted (Table 1). From 41 to 70 years highest detection rates were detected. Thereafter, diagnoses began to decline, probably because in the elderly aesthetic concerns are overlooked. For both sexes

**Table 1.** Detection rates of skin tags as presenting complaint by gender and age

Age (y)	Men		Women	
	Exam.	STn (‰)	Exam.	STn (‰)
0-10	2326	2 (0.8)	2194	4 (1.8)
11-20	4171	15 (3.6) ¶	5491	23 (4.2) †
21-30	3184	34 (10.7) ¶‡	4616	36 (7.8) †‡
31-40	2287	67 (29.3) ‡	3980	93 (23.3) ‡
41-50	2148	79 (36.8)	3761	112 (29.7)
51-60	1975	69 (34.9)	3165	77 (24.3)
61-70	2671	64 (24.2)	3587	102 (28.4)
71-80	1630	20 (12.2)	1977	30 (15.2)
> 80	517	2 (3.9)	557	2 (3.6)
Total	20909	353 (16.9)	29328	479 (16.3)

Exam: number of patients examined, STn (‰): number of skin tag cases (per thousand).

Significant comparisons within the groups:

Males: ¶p=0.0003, OR 3.0 (1.6-5.8), ‡p<10<sup>-6</sup>, OR 2.8 (1.8-4.3)

Females: †p=0.02, OR 1.9 (1.1-3.3), ‡p<10<sup>-9</sup>, OR 3.0 (2.0-4.6)