Breast cancer profiles of women presenting with newly diagnosed breast cancer at Universitas Hospital (Bloemfontein, South Africa)

To the Editor: *Breast cancer is the most common cancer and the leading cause of cancer deaths among women worldwide.* Of relevance to South Africa in this regard is that the majority of South African women have limited knowledge of their relative risk of developing breast cancer, of associated risk factors and of the diversity of potential breast cancer-related symptoms.[1]

Breast cancer is arguably the most-researched cancer in the world. Environmental factors, including diet and lifestyle, have been widely investigated, but these variables have not been able to explain international or ethnic variability in breast cancer. In South Africa breast cancer is most prevalent amongst white and Asian women and is the second most common cancer among black and coloured women.[2] In South Africa an alarming increase in the incidence of breast cancer among young black women, a group that was previously considered to have the lowest breast cancer risk, is reported.[3] There are several possible reasons why increasingly more young women appear to be contracting breast cancer.

Thus, knowledge about exposure to both endogenous and exogenous factors of predisposition to breast cancer among racial/ethnic groups and about the hormonal effects of such exposures can enhance our understanding of the aetiology of breast cancer that is associated with reproductive landmarks such as age at menarche and parity. Since several environmental and lifestyle factors are believed to contribute to the development of breast cancer, it is of interest to establish whether these factors operate equally among individuals. We conducted a lifestyle study of women presenting with newly diagnosed breast cancer at our local provincial hospital.

Consenting women scheduled to undergo diagnostic breast surgery (biopsy or mastectomy and/or lumpectomy) at the Mammogram Clinic of the Universitas Hospital, Bloemfontein, South Africa were enrolled in the study. Each woman had to complete a one-page interviewer-administered demographic questionnaire. The study ran from May 2006 to April 2007, and 56 women were enrolled. At the end of the study the pathology records of the women were accessed and compared with the risk factor analysis data. The breast cancer risk factor profiles of the participants were summarised by percentages.

The general characteristics of the women presenting with breast cancer are given in Table I. Racial groups represented were black, coloured and white only. Most women were postmenopausal (63%) and ≥ 50 years old (mean 58 years). A small portion (12.5%) of the postmenopausal women had undergone a hysterectomy. Premenopausal women made up only a quarter (25%) of the study group. Thirty-nine per cent of women had a positive family history of breast cancer and most of them were well past the age of 50, whereas the remaining 61%, including the young breast cancer sufferers, reported to have no knowledge of any member of their family (close or distant) having had breast cancer. Less than half (41%) of the women used contraceptives for periods ranging from one month to 20 years.

Most women (92%) had at least more than one full-term pregnancy with an average of three children each. They also had, on average, their first child at 21 years, with only two having had their first child after 30 years. Only five (8%) women had never been pregnant.

Twenty-one per cent of the women were smokers, varying from one cigarette a day to 20 per day. Very few of these women reported to have been regular alcohol consumers. Most were occasional drinkers who consumed alcohol in moderation only on rare social occasions. Included in both smoker and drinker groups were also women who reported to have stopped either or both activities due to having been previously diagnosed with other health problems such as diabetes, lung disease or heart disease.

Women with different racial or ethnic backgrounds have different breast cancer risks, due to environmental and genetic factors.[4] In South Africa breast cancer is most prevalent amongst Asian (24.4%) and white (17.9%) women.[3] In our study we also found that more white (46%) than black (41%) and coloured (13%) women had breast cancer. Our study group consisted largely (63%) of postmenopausal, older women. However, a small portion of our study group consisted of young (≤ 39 yrs) breast cancer sufferers, the majority (4 of 5) of whom were black women. It has always been thought that the low incidence of breast cancer among black African women is due to the fact that they usually have their first child at an early age and are multiparous.[3] The fact that our study population was small but the presence of young breast cancer sufferers was still evident is an indication that the incidence of breast cancer among young black women in South Africa is rising. Similar reports from Europe and the United States documenting the rise in early onset breast cancer among young black women are available.[5]

Only 39% of women in this study group had a positive family history of breast cancer and most of them were well past the age of 50, whereas the rest (61%), which included the young breast cancer sufferers, reported to have no knowledge of any member of their family (close or distant) with breast cancer.

Even though reproduction has a complex effect on breast cancer, the emphasis has always been on the positive effects; however, our results showed that 92% of the women had at least more than one full-term pregnancy with an average of three children each. Similar studies also report that even though multiple pregnancies and young age at first full-term pregnancy are very common in the developing world, early onset breast cancer is also unexpectedly highly prevalent.[1] Moreover, American studies have also shown that early onset breast cancer is more common among African-American women than among white women[6] and, more importantly, that multiparity increases the risk of breast cancer in these women.[7]

Older women aged between 50 and 60 years comprised the majority of breast cancer sufferers in the study population. Young breast

Table I: Characteristics of women presenting with breast disease at Universitas Hospital (Bloemfontein, Free State) during the period May 2006 to April 2007

	All races		Blacks		Coloureds		*Whites*	
	n	%	n	%	n	%	n	%
Total no of women	56	100	23	41	7	13	27	*46*
Age at diagnosis (years)								
≤ 39	5	9	4	7	0	0	1	*2*
40–49	8	14	3	5	2	4	3	*5*
50–59	18	32	7	13	1	2	10	*18*
60–69	13	23	6	11	2	4	5	*9*
≥ 70+	12	21	3	5	2	4	7	*13*
Mean ± SD	58 ± 13							
Median (range)	58 (34–89)							
Menopausal status								
Premenopause	14	25	9	16	2	4	3	*5*
Postmenopause	35	63	14	25	4	7	17	*30*
Hysterectomy	7	13	0	0	1	2	6	*11*
Parity								
Parous	51	92	21	38	6	11	24	*43*
Number of live births (Maximum)	3 ± 2 (7)							
Age at first full-term pregnancy (Maximum)	22 ± 4 (32)							
Nulliparous	5		8	2	4	1	2	2
History of breast cancer								
Personal history	10		18	2	4	1	2	7
Family history (any relative)	22		39	6	11	3	5	13
Oral contraceptive use	23		41	10	18	2	4	11
Duration (months)	45 62							
Median (range)	24 (1–240)							
Alcohol use	27		48	10	18	2	4	15
Smoker	*12*		*21*	*3*	*5*	*1*	*2*	*8*

cancer sufferers (< 40yrs) were mostly parous black women. This may suggest that pregnancy and parity were risk factors in this racial group.

Matatiele PR, PhD
Van den Heever WMJ, PhD
School of Health Technology, Central University of Technology, Bloemfontein

Correspondence to: Dr PR Matatiele,
e-mail: puleng.matatiele@nioh.nhls.ac.za

References

1. Pillay AL. Rural and urban South African women's awareness of cancers of the breast and cervix. Ethn Health 2002;7(2):103–14.
2. Vorobiof DA, Sitas F, Vorobiof G. Breast cancer incidence in South Africa. J Clin Oncol 2001; 19(18 Suppl):125S–127S.
3. Health24-Woman. Breast cancer rise alarming. 2006. http://www.health24.com/Woman/Medical/711-727-1506,19202.asp (Accessed 31-05-2006).
4. Li CI, Malone KE, Daling JR. Differences in breast cancer hormone receptor status and histology by race and ethnicity among women 50 years of age and older. Cancer Epidemiol Biomarkers Prev 2002;11(7):60–17.
5. Bouchardy C, Fioretta G, Verkooijen HM, et al. Recent increase of breast cancer incidence among women under the age of forty. Br J Cancer 2007; 96(11):1743–6.
6. Smigal C, Jemal A, Ward E, et al. Trends in breast cancer by race and ethnicity: update 2006. CA Cancer J Clin 2006; 56(3): 168-83.
7. Polyak K. Pregnancy and breast cancer: the other side of the coin. Cancer Cell 2006; 9(3): 151-3.