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Letters

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**Letters To The Editor:
 Comments on *The Role of
 Reproductive and Menstrual
 Factors in Cancer of the Breast
 Before and After Menopause*,
 Talamini *et al.*, *Eur J Cancer*, 32A,
 No. 2, pp. 303–310, 1996**

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LARGE BIRTH WEIGHT AND RISK OF POSTMENOPAUSAL BREAST CANCER

IN THE paper of R. Talamini and associates recently published in your journal [1], some differences were demonstrated in reproductive risk factors between pre- and postmenopausal breast cancer patients. Thus, premenopausal patients had a greater risk of breast cancer development associated with longer duration of menstrual bleeding, multiparity and high age at last birth. In both pre- and postmenopausal women, breast cancer risk was equally high for patients whose age at first birth was lower than 20 years.

We wish to add to this important list our observation on the incidence of large birth-weight babies (>4000 g) in breast cancer patients. According to our data, the incidence of this sign of hormonal-metabolic disturbances is higher in postmenopausal than in premenopausal patients [2]. As most babies >4000 g are born due to hyperglycaemia-hyperinsulinaemia during pregnancy [3] and are associated with early menarche [4, 5], large birth-weight may be considered both as a marker of predisposition to postmenopausal early breast cancer development as well as a possible indication for disease prevention strategies [2].

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4. Loffer FD. Decreased carbohydrate tolerance in pregnant patients with an early menarche. *Am J Obstet Gynecol* 1975, 123, 180–184.
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Response from: S. Franceschi,¹ R. Talamini¹
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L. BERSTEIN REPORTS an association between the frequency of large-baby births and breast cancer risk in postmenopausal women. Albeit we did not collect information on the weight at birth of the offspring of study women, we had data on history of diabetes mellitus which provides further evidence on the point he raised.

Postmenopausal women who reported history of diabetes had an odds ratio (OR) of 1.5 (95% confidence interval, CI: 1.1–2.0) (Table 1). Although this was strongly correlated with severe obesity (i.e. body mass index, BMI, kg/m² > 28.8), another risk factor for breast cancer in our study [1], diabetes seemed to enhance risk independently (Table 1). Conversely, among diabetic premenopausal women, there was no risk elevation (OR = 0.9; 95% CI: 0.4–2.1). With respect to age at onset of diabetes, an association emerged only for onset after 55 years of age, most likely to be type-2 non-insulin-dependent diabetes (not shown).

Thus, these data also lend support to the possibility that hyperinsulinaemia with insulin resistance may increase breast cancer in older women [2, 3]. Insulin and insulin-like growth factors (IGF) can act both directly on the growth of breast cancer cells and indirectly, as they are inversely correlated to sex-hormone binding globulins [2]. Since insulin and IGF levels are partly modifiable [4], these findings, if confirmed and better understood, can have implications on prevention