

Weight Change in Breast Cancer Survivors

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Purpose:

Weight gain is a common issue that may lead to poor prognosis or adverse health outcomes in breast cancer (BC) survivors. The aim of this study was to investigate the pattern and degree of weight gain within 2 years after BC diagnosis and to identify its risks.

Methods:

The study cohort consisted of 1954 women with stage I-III, primary, operable BC between 2008~2010. Their body weight, body mass index (BMI) were measured before surgery and followed by 1, 3, 5, 12, 24 months after. The analysis of weight gain was also stratified by demographic data, chronic illness, menopausal status and adjuvant therapy.

Results:

This sample had a mean age of 50.5. Before the BC surgery, a majority of them were menopause (56.7%), without history of DM, hypertension or heart disease (89.5%); and they had a mean weight of 58.2kg (SD=9.55kg) and 23.8 (SD=3.9) for the BMI (table 1). Weight gain was accounted for 50% or more with the maximum of 17.3kg increased at 1, 3, 5, 12, 24 months after. The weights changed significantly along the time course, with the peak at the 5th month after the surgery (figure 1, 2). The analysis of GLM with repeat measure indicated that the risks factors of history of DM, hypertension, chemotherapy and menopausal status (figure 3,4,5,6,7,8,9).

Conclusion:

The finding can assist oncology nurses and clinicians to develop future intervention to improve the care for health promotion and risk reduction for weight gain in BC women.

Table 1.

The clinical characteristic of the study sample at operation (N = 1947)

Variable	N (%) or $M \pm SD$
Age at operation (year)	50.5 ± 10.8
Body weight (kg)	58.2 ± 9.6
Body height (cm)	156.6 ± 5.6
Body mass index (kg/m ²)	23.8 ± 3.9
Post-Menopause	1,104 (56.7)
Stage	
0	199 (10.2)
I	692 (35.5)
II	743 (38.2)
III	313 (16.1)
Disease history (with diagnosis)	
Hypertension	113 (5.9)
Hyperlipidemia	19 (1.0)
Hypercholesterolemia	17 (0.9)
Diabetes mellitus	108 (5.6)
Treatment throughout the course	
Chemotherapy	1,326 (68.1)
Harmonic therapy	1,295 (66.5)
Radio therapy	1,199 (61.6)

Figure 1

Trend of body weight at each time-point throughout the 2 year follow up

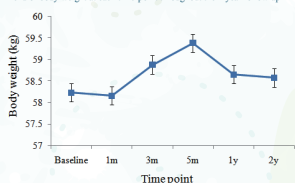


Figure 2

Trend of body mass index at each time-point throughout the 2 year follow up

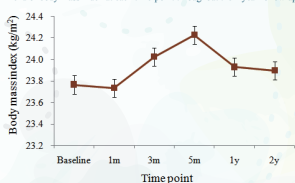


Figure 3

Trend of body weight throughout the 2 year follow up stratified by chemotherapy

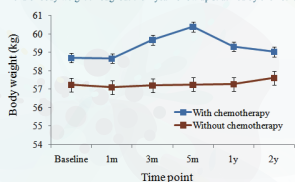


Figure 4

Trend of body weight throughout the 2 year follow up stratified by harmonic therapy

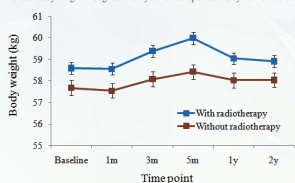


Figure 5

Trend of body weight throughout the 2 year follow up stratified by radiotherapy

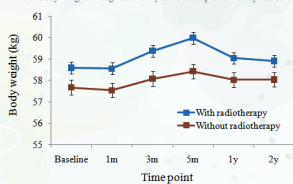


Figure 6

Trend of body weight throughout the 2 year follow up stratified by hypertension

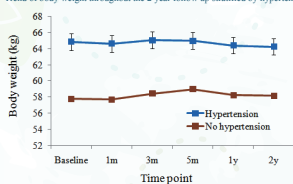


Figure 7

Trend of body weight throughout the 2 year follow up stratified by hyperlipidemia

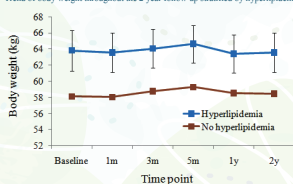


Figure 8

Trend of body weight throughout the 2 year follow up stratified by hypercholesterolemia

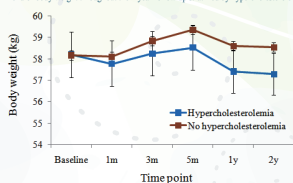


Figure 9

Trend of body weight throughout the 2 year follow up stratified by diabetes

