Sociodemographic and economic factors are essential determinants of weight gain between before and after cancer diagnosis: results from the prospective NutriNet-Santé cohort

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B-074 - Sociodemographic And Economic Factors Are Essential Determinants Of Weight Gain Between Before And After Cancer Diagnosis: Results From The Prospective NutriNet-SantÈ Cohort

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Purpose: While many cancer patients are affected by weight loss, others tend to gain weight, which may impact prognosis and risk of recurrence and of second primary cancer. The aim of this prospective study was to investigate weight variation between before and after cancer diagnosis and socio-demographic, economic, lifestyle and clinical factors associated with moderate-to-severe weight gain.

Materials and methods: 1051 incident cases of first primary cancer were diagnosed in the NutriNet-Santé cohort between 2009 and 2015. Weight was prospectively collected every 6 months since subjects' inclusion (i.e. an average of 2y before diagnosis). Mean weights before and after cancer diagnosis were compared with paired Student's t-test. Factors associated with moderate-to-severe weight gain (≥5% of initial weight) were investigated by multivariable logistic regression.

Results: Weight loss was observed in men (-3.54kg in those who lost weight, p=0.0002) and in colorectal cancer patients (-3.94kg, p=0.0012). Weight gain was observed in breast and skin cancers (2.83kg, p=0.047, and 2.96kg, p=0.03 respectively). Women (OR=1.99[1.18-3.35]), younger patients (OR=1.78[1.05-3.03]), those with lower education (OR=2.17[1.07-4.37]), those with excess weight before diagnosis (OR=1.53[1.02-2.30]) and those who stopped smoking after diagnosis (OR=4.60[2.06-10.25]) were more likely to experience moderate-to-severe weight gain. In breast cancer patients, induced menopause was associated with weight gain (OR=4.12[1.76-9.67]), but no association was detected for tumor characteristics or treatments.

Conclusion: This large prospective cohort provided original results on weight variation between before and after cancer diagnosis, highlighting different weight trajectories. Socio-demographic and economic factors appeared to strongly influence the risk of weight gain, illustrating social inequalities in health