As the global cancer community convenes this week in Melbourne for the UICC World Cancer Congress, thousands of experts and cancer survivors are arriving into Australia to discuss, present and move this important agenda forward. One group that will be represented and speaking, is the World Cancer Research Fund International.

Last week, WCRF published a new blog following a *Lancet Oncology* article on the links between obesity and cancer. Not the first and most obvious connection one might make, what are the facts on this relationship?

- Overweight and obesity have been increasing dramatically in the last few decades - globally.
- In a 2012 study, Stevens et al estimated that 35% of the adult population is overweight and 12% obese – a doubling of
prevalence since 1980.

- Overweight and obesity are known risk factors for a number of cancers including: oesophageal, bowel, kidney, pancreas, gallbladder, ovary, prostate and breast in women after menopause.
- One study estimated that in 2007 in the United States, about 34,000 new cases of cancer in men (4%) and 50,500 in women (7%) were due to obesity.

Now one of the major points to appreciated is the continued uncertainty around the relationship between obesity and cancer, and what causes it. But we know some things:

**Connection is both direct, and indirect**

The actual causes behind this link are still being explored by scientists around the world, but we know that some of the causes are direct, and some are indirect.

Fat cells, like many cells in the body, release hormones and some of these hormones increase the risks of certain cancers - this is a direct connection. Another such example is that these cells also produce growth factors that could increase the speed at which cancers grow once they develop. We also see that people living with obesity have chronic, low-levels of inflammation in their bodies which may also increase cancer risk.

Indirectly, obesity can sometimes make cancer diagnoses more difficult or access to medical care more challenging.

Having said all this, nothing is ever simple. In some studies, overweight and obesity have, by contrast, been found to be associated with a reduced risk of pre-menopausal breast cancer. This is another area of further current research.

**Risk highest in developed nations**

In the UK, 13,000 cases diagnosed in women in 2012 (or 8.2% of all new cancer cases) and 7,200 in men could be ascribed to overweight and obesity. Globally, cancer due to overweight and obesity is more common in higher income countries (393,000 cases, 5.2%) than lower-income countries (88,000 cases, 1.5%).

**Women most at-risk**

Finally, the WCRF also reported that women are at greatest risk from the link between obesity and cancer, and the reason goes to the cells.

The obesity-related cancer burden is higher among women mainly because common cancers of the female organs, such as post-menopausal breast cancer, have been associated with overweight and obesity. Cancers of the bowel, womb, and the breast in women after menopause,
were responsible for approximately two-thirds of all cancers due to overweight and obesity in 2012.

**UICC World Cancer Congress, 2014**

At the dawning of a big week for the global cancer community, and the causes they dedicate their time and energy to overcoming, it's time to start connecting the dots in major health challenges. Obesity is not about blaming the individual, but in a time when up to two-thirds of many nations are now overweight and obese - it's time to see the cancer prevention opportunities in tackling this growing global challenge.

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