

Resolving the cancer/diet paradox: New special issue on cancer in metabolism

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How much does diet affect the cancer patient? Do "antioxidants" really play an important role in health, or are they causing more cancers than they cure? And what exactly is the relationship between obesity and cancer?

The latest special issue of *ecancermedicalscience* collects four original articles from experts in cancer and metabolism, addressing the hottest areas of research in this rapidly developing field.

"In our clinical practice, cancer patients often ask 'Doctor, is there something specific I should eat or avoid eating?'" says Dr Luca Mazzeola of the European Institute of Oncology, Milan, Italy, guest editor of this special issue.

"This *ecancer* special issue tries to equip the practicing oncologist with an up-to-date and critical collection of evidence to provide the best answer to this question."

The relationship between cancer and metabolism was overlooked for decades— metabolism has long been typecast as an uninteresting research subject.

But the past five years have seen an incredible surge of interest. Now, it seems that every cancer-related article in the popular press claims a new connection between food and cancer—whether positive or negative, or sometimes both.

Take the relationship between cancer and obesity, for example. As Mazzarella explains, the molecular mechanisms underlying the links between cancer and obesity have not been properly studied and are poorly understood, leading to mixed messages.

"As the scientific community is insecure on what messages it should deliver, administrators are uncertain as to what exactly to recommend, and consumers are confused about whom to believe," he explains.

"This leaves the field flooded with pseudo-scientific recommendations that are hard to eradicate."

Antioxidants are another area where the juggernaut of popular belief has outpaced the scientific understanding of their role in cancer. Dr Marco Giorgio of the European Institute of Oncology prepared an expert review on the "unfulfilled promise" of antioxidants in cancer.

"In 2013, researcher Jim Watson wrote in *Open Biology* that antioxidant supplementation 'may have caused more cancers than they have prevented,'" Giorgio writes. Clearly, there is a disconnect between research frontiers and dietary marketing - Giorgio explains the role of oxidative stress in [cancer metabolism](#) to clarify the issue.

"Many beliefs about food and breast cancer persist in the absence of supporting scientific evidence," writes Dr Krizia Ferrini of the European Institute of Oncology, author of an article connecting the dots between lifestyle, nutrition and breast cancer.

"Despite current awareness on the role of nutrition on cancer outcomes, there is inadequate translation from research findings into [clinical practice](#)."

The fourth article in the special issue addresses the important topic of

biomarkers. Researchers led by Dr Cecilia Bosco of King's College London, UK examined the data produced by the Swedish Apolipoprotein MOrtality RISK study (AMORIS) to look for metabolic serum biomarkers, which may be used for the prediction of cancer.

This collection of articles spans the breadth of current understanding in [cancer](#) metabolism. It is our hope that health care professionals will be able to use the information in this special issue to inform their own best practice - if not their own diets.

Provided by Cancer Intelligence

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