

Oncology and medical writers

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Editorial

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Let me start this first editorial in an old journal with a new name by explaining why a medical writing journal has a theme issue on oncology and includes articles that are not directly related to writing. Medical writers write about research that is aimed at preventing, diagnosing or treating a medical disorder. They might receive an assignment that involves a disorder they know little about and need to gain an understanding of the literature on the disorder and its treatment in a very short time to meet a deadline. Quite apart from this, flexibility, curiosity, and a zeal for learning are typical characteristics of medical writers. The fund of articles in this issue cover the gamut from the nature of cancer, its current and developing therapies, management of the disease, educating healthcare workers about treatment, and communicating with patients – to tips for writing clinical trial reports.

The first known written account of the disease was a description of breast cancer in the Egyptian 'Edwin Smith' papyrus from 3000 BC. The cut surface of a solid malignant tumour with veins stretched on all sides is like a crab with its feet on all sides of the body, hence the name 'cancer' which comes from the Greek word *carcinos*, meaning crab.¹ The vocabulary we use for cancer is loaded with metaphors, mostly taken from military quarters. We are 'at war' with and 'fight' cancer, which reflects its devastating effects and urgent need of treatment. The military metaphors also help to rationalize the radical treatments required.

Cancer encompasses many diseases and has a reputation for being a complex and deadly disease even though about one-third of cases are non-melanoma skin cancers, which are easily treated and usually cured, although they are excluded from cancer statistics precisely for this reason. In her article 'The war on cancer' (p. 8) Jo Whelan, a medical journalist, summarizes current thinking on what makes cancer cancer, the question first posed by Hanahan and Weinberg in 2000. She explains how the hallmarks of cancer that they outlined then, and added to in a 2011 update, have had a tremendous influence on scientific opinion and

research although they have not been without their critics.

The symptoms of cancer are not immediately evident and few are specific, which means that when they come to light they are often confused with symptoms of other disease, leading to inappropriate treatment. Once detected, cancer is diagnosed by examination of a tissue sample by a pathologist. This work could be taken over by computers in future. In a recent report in *Science Translational Medicine*, Daphne Koller and colleagues describe a program (C-Path) that they have produced by scanning images of slides and survival data from 248 breast-cancer patients.² With this information the program was able to grade the slides from other patients and predict whether the patients would survive for 5 years after treatment, a prediction that pathologists have not been able to make. The implications are profound not only for diagnosis, but also for ethics, because as the costs of cancer therapy increase and budgets become tighter more information will be available on which to base decisions as to who does and does not receive treatment.

At present, cancer is usually treated by chemotherapy, radiation therapy, and surgery rather than with drugs. But, as Jo mentions in her article, 900 cancer drugs are currently in phase I-II development. Cannabinoids for instance are usually associated with the palliative care of cancer. However, in *The Webscout* Karin Eichele (p. 61) explores the potential for using cannabinoids as inhibitors of tumour growth.

Unfortunately, many promising new agents fail, not least because some tumours do not respond or pathways blocked by treatment are circumvented by the disease. Nevertheless, researchers are hopeful that in 10 years' time it will be possible to stop even the most formidable advanced solid tumours from the colon, pancreas, and lungs. Jo quotes Weinberg, who believes that by then patients will have a normal lifestyle with a chronic disease.

Personalized medicine has been hailed as a promising way forward. Interestingly, the term has been

criticized as more a marketing term than a scientifically meaningful description of using measurements and biomarkers to allocate patients to groups who respond to specific therapies.⁴ Stratified medicine as used by Cancer Research UK is more appropriate because the process is a stratification leading to more and smaller groups of patients being matched to more and more specific therapies with the goal of reaching a truly personalized medicine when $N = 1$. But perhaps a treatment under development for ovarian cancer, which Adam Jacobs describes in his article (p. 14), truly deserves the tag 'personalized'. Adam is the project's statistician. The potential treatment, which aims at prolonging remission, involves extracting dendritic cells from the patient and re-injecting the cells after they have been primed to attack the cancer cells.

James Visanji (p. 10) tackles the specific challenges for the conduct of clinical trials in cancer, including efficacy endpoints and ethical issues. He also provides tips for medical writers on how to deal with adverse events in clinical study reports. The article by Vicente Alfaro (p. 23) focuses on safety sections of clinical study reports in the light of guideline E3 of the International Conference on Harmonisation (ICH).

Medical education is another area where medical writers make a contribution. Oncologists are more willing than specialists in other fields to try new strategies and technologies in an effort to prolong the life of patients in their care. However, they are challenged by the constant changes in the field and 'information overload'. Shanida Nataraja's article (p. 17) is a comprehensive overview of how medical education is ensuring that healthcare professionals working with cancer patients are informed of the latest treatment advances in research and of shifts in thinking about optimum patient management. The article covers the impact of the digital era on medical education, the different audiences that need to be targeted, and how learning preferences can be addressed. She also explores how tighter controls and the shrinking of educational grants can be overcome.

Diarmuid De Faoite and Bárbara Wicki (p. 64) discuss another opportunity for medical writers: communicating directly with the growing body of patients who are seeking information on their disease through the web and often finding it presented in language too difficult for them to understand.

Cancer is not only difficult to manage; treatment is also becoming increasingly expensive. In particular, personalized/stratified medicine is expensive to develop and deliver. This raises the obvious

question of whether cancer is preventable. Worldwide ~18% of cancers are related to infectious diseases. Genetic mutations cause <3-10% of all cancers. Can the rest of cancers, i.e., more than 70%, be prevented? Cancer has often carried a stigma of being the fault of the victim. This is epitomized by the talk therapy movement, which provided a popular alternative therapy in the 1970s. The negative attitude of people with the disease was blamed for their plight and it was thought that their cancer could be cured by correcting this attitude through psychotherapy. Few people support this concept today, but our lifestyle and diet, of which certain elements are related to cancer incidence, are personal choices. Diana Raffelsbauer (p. 44) reviews the evidence of associations between lifestyle and incidents of cancer in her medical journalism column. She also discusses the limitations of the research methods used – comprising case-control studies, prospective cohort studies, and randomized clinical trials – and calls for a focus on whole dietary patterns and other lifestyle factors which should be researched through high-quality observational studies.

New research funded by Cancer Research UK has been published since Diana wrote her article. Max Parkin's group at the University of London examined about 134 000 cases of cancers occurring in the UK in 2010 and estimated how many could be attributed to sub-optimal, past exposures to 14 lifestyle and environmental risk factors.³ They found that the 14 factors were responsible for 42.7% of the cancers cases (45.3% in men, 40.1% in women). The top risk factor by far for both men and women was smoking. Second came a lack of fruit and vegetables for men, and overweight for women. Following publication of the study Diane Abbot, Britain's shadow minister of health, criticized the UK's government's approach to tackling lifestyle-related health problems as completely inadequate. She could have equally said this about any government in the world.

Medical writers are already lined up in the battalions who are fighting the war against cancer. They prepare clinical trial reports, text for the medical education of and communications to physicians and healthcare workers, and, as medical journalists, text for the general public. There are even more opportunities to enlist the expert communication skills of medical writers. They could be looking to improve text for patients on the web, become involved with campaigns (e.g. Jamie Oliver's⁵) lobbying governments to take decisive action in influencing lifestyle, or they could work in government departments which will eventually have to

implement policies on who receives treatment paid for by the shrivelling public purse as well as possible lifestyle-connected adjustments to insurance contribution levels which will need to be communicated to the electorate. In any event, acquiring a broad knowledge of a medical area is the first step to opening new doors in the corridors which lead down the diverse paths of a medical writer's career.

References

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