



## Genitourinary oncology

# MULTIDISCIPLINARY PROGRESS IN RESEARCH AND TREATMENT OF GENITOURINARY CANCERS

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In introducing this forum on genitourinary cancers, choosing appropriate terminology was problematic. We live in an era that could be characterised for its love of awful neologisms. The beautiful English language surely should have no room for abominable terms such as 'cankle' (calf merging with ankle) or the even more horrible 'chillax'. Medicine has had its share of linguistic catastrophes (neoadjuvant is an example of mixing Greek and Latin roots), but its main transgressions have been in taking perfectly innocent and reasonable terms and twisting their meaning beyond recognition. Below are some recent examples.

### Multidisciplinary

The Victorian Cancer Action Plan includes as a goal, "increasing the number of patients assessed and treated by specialist multidisciplinary teams".<sup>1</sup> Does this mean more than one type of medical professional (such as surgeon, medical oncologist, radiation oncologist); or does it mean involvement of more than one professional discipline (such as doctors, nurses, allied health)? It encourages various disciplines to work together, however there has been little agreement on how best to achieve this. When well meaning individuals or organisations attempt to overlay strictures on busy clinicians and clinics, the best intentions are often buried in logistical landslides.

### Translational

Even people who claim they are performing translational research can rarely agree on what this term means. Most would understand it as work that moves discoveries in the laboratory through to clinical application. However, this definition is also inadequate, as it could easily cover contracted industry-sponsored research. The Victorian Cancer Agency, in a recent call for applications for funding support for translational research, defined it as: "... a general term encompassing research which focuses on clinical outcomes, quality research principles, multi and cross-disciplinary teams that explicitly address how knowledge created from research will be used to drive advances in an area of patient clinical need. The core elements that distinguish translational cancer research

from more traditional bench-top research are patient clinical need and collaboration between research and clinical disciplines."<sup>2</sup> This definition could apply to a wide range of research not usually considered to be 'translational'.

### Consumer

In the context of cancer, this term raises the image of someone in a supermarket browsing a range of cancer care products, looking for the ones on special. In many respects the term is almost insulting and dismissive. In other contexts, such as disbursement of public funds for research, it could be justifiably argued that the consumer is the researcher and not the cancer patient. Leading organisations such as the Victorian Cancer Agency, the Cancer Institute NSW and Cancer Australia all actively engage consumers and promote their involvement at all levels of cancer care including research. This engagement is an admirable goal that should be strongly supported. However, there is often substantial confusion about how it should be done. If "consumer representation" degenerates to a single unheard vote on a committee then not only is it ineffective, but it is also a tragic waste of resources. Consumer representation should be an opportunity for the community to participate and enlighten the research agenda; improve researchers' understanding of communities perceptions and priorities; provide a conduit back to the community to communicate research findings; and enhance community engagement in, and support of, research.

### Evidence-based

In 2010, we pride ourselves on understanding the scientific basis for many of our treatments and treatment decisions, and call our practice evidence-based. The sad reality is that most of what we do falls outside what the evidence tells us. As soon as we treat a patient whose circumstances would not have met the eligibility criteria for the registration in a clinical trial, we are acting outside the evidence and need to be aware of this. The positive aspect of this is that new research questions are constantly able to be generated and new tools are becoming available to help us answer them.

## Outcomes

In common with terms already discussed, there are many valid definitions for this term. From a government perspective, a good outcome might be a hospital coming in under budget. It must be very depressing working in such government departments. From a hospital perspective, a good outcome might be reduction of waiting lists, or ability to tick off key performance indicators, or even improving staff retention. For a basic scientist, a good outcome might be grant success that staves off unemployment for another couple of years. For an academic medical oncologist, a good outcome might be instituting a multidisciplinary translational research program with good consumer representation and leading to better evidence-based medicine. For someone suffering from cancer, either their own or that of a loved one, a good outcome might be living a normal life span, or getting his or her pain under control, or being seen in clinic on time, or even simply getting someone to listen.

This edition of *Cancer Forum* is a celebration of a decade of change in the care of patients with genitourinary cancers. Even more, it is a real attempt at redressing some of the linguistic offences referred to above. As examples:

- Multidisciplinary contributions to this forum from the broad range of oncology clinicians and researchers highlight both the need for, and the advantages of, true meaningful multidisciplinary care of patients with genitourinary cancers.
- Translational - Not only have new biological discoveries been translated into the clinic, but we are now seeing development and application of novel technologies in radiation (Patanjali and Williams)<sup>3</sup> and surgery (Patel and Frydenberg).<sup>4</sup> Grimison and Toner<sup>5</sup> outline some of the research priorities still to be addressed in testicular germ cell cancers. Many of these studies will raise new questions that can be addressed in the laboratory.
- Consumer - Two papers concentrate on quality of life and psychosocial research and interventions (Luckett, King and Stockler<sup>6</sup>; Chambers, Baade and Pinnock<sup>7</sup>). These issues sometimes become overwhelmingly important to the patient and their family, particularly once the immediate medical treatment of the cancer is complete.
- Evidence-based - All of the papers summarise and add to the body of evidence in the literature on which we base our treatment decisions. It is critically important to evaluate these recommendations in the light of Australian issues and access to treatments.
- Outcomes - Every paper in this issue, ranging from screening through basic science, active medical treatment and on to supportive care and psycho-oncology, addresses key issues that can be called major outcomes for cancer treatment and research.

Over recent years, few areas of oncology have undergone a revolution as profound as that concerning genitourinary cancers. Twenty years ago, multidisciplinary care for patients with genitourinary cancers was the exception rather than the rule. Medical oncology has seen the development of effective treatments for metastatic prostate

cancer,<sup>8,9</sup> and renal cell carcinoma,<sup>10-15</sup> and treatments for bladder cancer that are as effective but better tolerated.<sup>16</sup> Even testicular germ cell cancer, a highly curable disease, still holds clinical questions that can be addressed by careful research.<sup>17</sup> Radiation oncology has seen dramatic improvements in imaging, planning and delivery contribute to more effective and better tolerated treatment. Uro-oncologic surgery has also seen remarkable improvements in local treatments of prostate, kidney and bladder cancer. Psychosocial and quality of life research has improved our understanding of the impact of genitourinary cancers and their treatment, and how to deal better with these impacts. All of these improvements have resulted from clinical research translating meticulous science into wider practice.

It became clear to many of us several years ago that it would be necessary to institute multidisciplinary (in every sense) care for such patients as part of routine medical practice, as well as in order to facilitate the conduct of clinical trials. With that in mind, the Clinical Oncological Society of Australia's (COSA) Urologic Oncology Group was established in late 2006 and rapidly grew to include a large and eclectic membership. This was the first time in Australia that all disciplines involved in any type of genitourinary cancer came together, with the aims of:

- Providing an inclusive forum for cross-discipline communication between health care professionals involved in the care of patients with urological cancers.
- Acting as a national body in order to facilitate clinical and basic research in urological cancers in Australia.
- Developing cooperative and complementary laboratory research programs in urological cancer, including development and maintenance of tissue bank resources.
- Facilitation of success in multicentre research grant applications.
- Development of common data sets for collection of clinical information from patients with urological cancer, with a view to development and integration of national databases.
- Providing a key point of contact for industry and other sponsors of clinical trials.
- Promotion of public awareness of urological malignancies.
- Acting as a source of expert advice to government, industry and other bodies.
- Participation in COSA activities, including contributing to the Annual Scientific Meeting.

The development of the Australian and New Zealand Urogenital and Prostate Cancer Trials Group Ltd (ANZUP) was a direct result of this initiative. ANZUP is now the peak group covering all aspects of genitourinary cancer cooperative clinical trials within Australia and New Zealand.

As evident in this Forum, contemporary oncology is not all depression and gloom. We hope you enjoy this edition of *Cancer Forum*.

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## References

1. Department of Human Services, Victorian Government. Victoria's Cancer Action Plan, 2008. Available from: <http://www.health.vic.gov.au/cancer/docs/vcap/vcaactionplan.pdf> [accessed 10 February 2010].
2. Victorian Cancer Agency. Expressions of Interest for Translational Cancer Research Funding. Guidelines for EOI Proposals 2008-09. Available from: <http://www.victoriacanceragency.org.au/Portals/0/Translational%20Funding%20EOI%20Guidelines%20v2.pdf> [accessed 10 February 2010].
3. Patanjali N and Williams S. Advances in radiation therapy for prostate cancer. *Cancer Forum*. 2010 March;34(1): 6-11.
4. Patel MI and Frydenberg M. Major advances in surgical technique for the treatment of genitourinary cancers. *Cancer Forum*. 2010 March;34(1): 12-15.
5. Grimison PS and Toner GC. Management of testicular cancer. *Cancer Forum*. 2010 March;34(1): 16-19.
6. Luckett T, King MT and Stockler MR. Quality of life research in prostate and testicular cancer. *Cancer Forum*. 2010 March;34(1): 20-23.
7. Chambers SK, Baade P and Pinnock C. Supportive care intervention in prostate cancer: recent advances and future challenges. *Cancer Forum*. 2010 March;34(1): 23-26.
8. Tannock IF, de Wit R, Horti J, Pluzanska A, Chi KN, Oudard S, et al. Docetaxel plus Prednisone or Mitoxantrone plus Prednisone for Advanced Prostate Cancer. *N Engl J Med*. 2004;351(15):1502-1512.
9. Berthold DR, Pond GR, de Wit R, Eisenberger M, Tannock IF. Survival and PSA response of patients in the TAX 327 study who crossed over to receive docetaxel after mitoxantrone or vice versa. *Ann Oncol*. 2008;19(10):1749-53.
10. Motzer RJ, Hutson TE, Tomczak P, Michaelson MD, Bukowski RM, Rixe O, et al. Sunitinib versus Interferon Alfa in Metastatic Renal-Cell Carcinoma. *N Engl J Med*. 2007;356:115-124.
11. Motzer RJ, Hutson TE, Tomczak P, Michaelson MD, Bukowski RM, Oudard S, et al. Overall Survival and Updated Results for Sunitinib Compared With Interferon Alfa in Patients With Metastatic Renal Cell Carcinoma. *J Clin Oncol*. 2009;27(22):3584-3590.
12. Escudier B, Eisen T, Stadler WM, Szczylik C, Oudard S, Siebels M, et al. Sorafenib in Advanced Clear-Cell Renal-Cell Carcinoma. *N Engl J Med*. 2007;356:125-134.
13. Escudier B, Eisen T, Stadler WM, Szczylik C, Oudard S, Staehler M, et al. Sorafenib for Treatment of Renal Cell Carcinoma: Final Efficacy and Safety Results of the Phase III Treatment Approaches in Renal Cancer Global Evaluation Trial. *J Clin Oncol*. 2009;27(20):3312-3318.
14. Hudes G, Carducci M, Tomczak P, Dutcher J, Figlin R, Kapoor A, et al. Temsirolimus, Interferon Alfa, or Both for Advanced Renal-Cell Carcinoma. *N Engl J Med*. 2007;356:2271-2281.
15. Motzer RJ, Escudier B, Oudard S, Hutson TE, Porta C, Bracarda S, et al. Efficacy of everolimus in advanced renal cell carcinoma: a double-blind, randomised, placebo-controlled phase III trial. *Lancet*. 2008;372:449-456.
16. von der Maase H, Hansen SW, Roberts JT, Dogliotti L, Oliver T, Moore MJ, et al. Gemcitabine and cisplatin versus methotrexate, vinblastine, doxorubicin, and cisplatin in advanced or metastatic bladder cancer: results of a large, randomized, multinational, multicenter, phase III study. *J Clin Oncol*. 2000;18:3068-77.
17. Toner GC, Stockler MR, Boyer MJ, Jones M, Thomson DB, Harvey VJ, et al. Comparison of two standard chemotherapy regimens for good-prognosis germ-cell tumours: a randomised trial. Australian and New Zealand Germ Cell Trial Group. *Lancet*. 2001;357:739-45.