Prostate Cancer Incidence in Jamaica before and after the Introduction of Prostate-specific Antigen

The Editor,

Sir,

I read with interest the article by Gibson *et al* on "Thirty-year Trends in Incidence and Age-distribution of Prostate Cancer in Kingston and St Andrew, Jamaica, 1978–2007" published in the January 2011 issue of the West Indian Medical Journal (1). The authors assert that "there has been a steady rise in the incidence of prostate cancer in Jamaican men since the 1983–1987 reporting period" of the Jamaica Cancer Registry. However, they then erroneously state that "This may be partially due to the effect of prostate specific antigen (PSA) testing, as serum testing for PSA first became available in Jamaica in 1983." The publication of the discovery of PSA by Wang *et al* took place in 1979 (2) and the clinical usefulness of PSA as a tumour marker was subsequently investigated over the next decade before it came into widespread clinical use in the United States of America (USA) in the late 1980s (3) after it was passed by the Food and Drug Administration (FDA) of the USA in 1987. It was not until 1989 that PSA was introduced into Jamaica (Mr Trevor Campbell – personal communication) and so it could therefore not have contributed even "partially" to the rise in prostate cancer incidence during the 1983–1987 reporting period as asserted by the authors. The effect of PSA testing being introduced in 1989 in Jamaica was to cause an already rising prostate cancer incidence curve to become steeper.

It is extremely important to not only document that the incidence of prostate cancer had been increasing in Jamaica prior to the introduction of PSA testing in 1989 for historical accuracy but also to highlight that this suggests that there are potential modifiable risk factors for the disease that should be sought in earnest.

The documented increase in prostate cancer incidence prior to the introduction of PSA is not unique to Jamaica but was also witnessed in Cuba, our closest neighbour in terms of geographical proximity, where there is neither PSA screening nor case finding (4). Unfortunately, not taking into consideration secular trends in prostate cancer incidence before and after PSA is introduced may lead to the false conclusion that rising prostate cancer incidence is solely driven by PSA testing. This notion could potentially divert research efforts from focussing on finding modifiable risk factors for the disease. Apart from the fact that Jamaica's population is ageing and the over 65s are expected to double by 2050 (5), there may be local environmental and other risk factors for prostate cancer which could partly account for the rising incidence. Moreover, approximately 50% of Jamaican men in Kingston and St Andrew with incident prostate cancer present for medical care on the basis of symptoms of locally advanced or metastatic disease alone rather than on the basis of having a screening PSA test (6). Anecdotally, the situation in rural Jamaica is far worse with less than 6% of men presenting with prostate cancer being suitable for localised treatment (unpublished data). It is clear that factors other than PSA testing are driving the increasing incidence of prostate cancer in Jamaica. Sustained and robust research efforts backed by adequate funding are urgently needed to tackle this disease.

From: WD Aiken, Division of Urology, Department of Surgery, Radiology, Anaesthesia and Intensive Care, The University of the West Indies, Kingston 7, Jamaica.

Correspondence: Dr WD Aiken, Division of Urology, Department of Surgery, Radiology, Anaesthesia and Intensive Care, The University of the West Indies, Kingston 7, Jamaica. E-mail: william.aiken@uwimona.edu.jm

REFERENCES

1. Gibson TN, Hanchard B, Waugh N, McNaughton D. Thirty-year trends in incidence and age-distribution of prostate cancer in Kingston and St Andrew, Jamaica, 1978–2007 [Internet]. West Indian Med J 2011; **60:** 9–12 [cited 2011 Aug 15]. Available from: http://www.ncbi.nlm.nih.gov/pubmed/21809704
2. Wang MC, Valenzuela LA, Murphy GP, Chu TM. Purification of a human prostate specific antigen [Internet]. Invest Urol 1979; **17:** 159–63 [cited 2011 Aug 15]. Available from: http://www.ncbi.nlm nih.gov/pubmed/89106
3. Stamey TA, Yang N, Hay AR, McNeal JE, Freiha FS, Redwine E. Prostate-specific antigen as a serum marker for adenocarcinoma of the prostate [Internet]. N Engl J Med 1987; **317:** 909–16. [cited 2011 Aug 15]. Available from: http://www.ncbi.nlm.nih.gov/pubmed/2442609
4. Fernández L, Galán Y, Jiménez R, Gutiérrez A, Guerra M, Pereda C et al. Sexual behaviour, history of sexually transmitted diseases, and the risk of prostate cancer: A case-control study in Cuba [Internet]. Int J Epidemiol 2005; **34:** 193–7 [cited 2011 Jul 8]. Available from: http://www.ncbi.nlm.nih.gov/pubmed/15375086
5. Population Projections Jamaica 2000–2050. Kingston: The Statistical Institute of Jamaica; 2008.
6. Aiken WD, Tulloch T, Freeman V, Bennett F, Coard K, Panton B et al. Differences in patient characteristics in black men with prostate cancer from Jamaica and Chicago. In: Proc Am Soc Clin Oncol 2003; **22:** (abstr 1764).

Dr Aiken's letter was passed on to Dr Gibson et al for a comment. Their response follows.