Measures of promptness of cancer diagnosis in primary care

G Irving*,[1] and J Holden[2]

[1]Department of Health Services Research, University of Liverpool, B122 Waterhouse Buildings, 1-5 Brownlow Street, Liverpool L693GL, UK and [2]General Practitioner, Garswood Surgery, St. Helens, UK

Sir,

In their discussion Lyratzopoulos *et al* (2003) make the crucial point that they were not able to examine whether prolonged values of either the primary care interval or the number of pre-referral consultations were either justifiable or preventable. We also wish to question the widely held assumption that optimum care necessitates correctly identifying and referring a patient with serious illness (cancer) during the first consultation? This implies that reviewing a patient over time may cause harm as a consequence of delayed referral and subsequent diagnosis.

One of the most important diagnostic tasks performed by general practitioners is discriminating between the majority of patients with minor, usually self-limiting illness and the minority with serious disease such as cancer. We have previously argued that the test re-test opportunity afforded by reviewing a patient maximises the gain in certainty in low prevalence settings such as general practice, the time efficiency principle (Irving and Holden, 2013). Arranging a follow-up consultation when presented with a patient with non-specific symptoms that may indicate major pathology frequently provides an opportunity to safely and efficiently reduce the number needed to predict (the number of patients that need to be examined in order to predict a diagnosis of a given cancer in one patient).

The authors provide two examples of 'more challenging cancers without specific symptoms'.

Stomach cancer	237 cases per 1170 practices over 2 years	i.e., 1 per practice every 10 years
Multiple myeloma	176 cases per 1170 practices over 2 years	i.e., 1 per practice every 13 years

One GP can expect to see a new case of each during their whole professional career. Furthermore, the median primary care intervals for these two cancers were 14 and 21 days, respectively. This suggests that GPs may well be performing effectively by picking up these difficult cancers by using the time efficiency principle and further improvement may thus be extremely hard to achieve. Therefore, the opportunities to improve the performance of GPs may be remote. The cost of additional investigation and referral in these circumstances may also far exceed any possible benefit to patients.

We therefore consider that the key issue is 'what is the optimum number of consultations required to safely and efficiently reduce the number needed to predict while keeping delays below biologically plausible limits for individual cancers?' We should be open to the possibility that this may paradoxically be more than one consultation. Indeed, we estimate that optimum range will often be about 1–3 consultations based on the evidence presented in this paper.

REFERENCES

Irving G, Holden J (2013) The time efficiency principle: time as the key diagnostic strategy in primary care. *Fam Pract;* doi:FAMPR-312-12.R2 Available at: http://fampra.oxfordjournals.org/content/early/2013/03/20/fampra.cmt007.short.

Linn S, Grunau P (2006) New patient-oriented summary measure of net total gain in certainty for dichotomous diagnostic tests. *Epidemiol Perspect Innov* **3**: 11.

Lyratzopoulos G, Abel G, McPhail S, Neal R, Rubin G (2013) Measures of promptness of cancer diagnosis in primary care: secondary analysis of national audit data on patients with 18 common and rarer cancers. *Br J Cancer* **108**: 686–690.

*Correspondence: Dr G Irving; E-mail: greg.irving@liv.ac.uk

BJC OPEN