Cancer, obesity, and diabetes: TKIs exert multiple effects on glucose homeostasis

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We thank Drs Minglin Lin and Junfei Jin for their interest in our recent Review[1]. They are particularly interested in the effects of tyrosine-kinase inhibitors (TKIs) used in cancer treatment on glycaemic control (Cancer, obesity, and diabetes: TKIs exert multiple effects on glucose homeostasis. *Nat. Rev. Clin. Oncol.* http://dx.doi.org/10.1038/nrclinonc.2017.57; 2017)[2]. We reviewed the most important TKIs in this regard in our paper: inhibitors of the insulin/insulin-like growth factor receptor family of receptor tyrosine kinases, and downstream kinases, such as PI3K, often lead to hyperglycaemia and hyperinsulinaemia, which is not surprising as they diminish signalling downstream of the insulin receptor not only in neoplastic tissue, but also in classic insulin target organs involved in glucose regulation, including the liver, muscle, and fat[1]. Increasing interest is being placed on the possibility that hyperinsulinaemia might not only be a clinically relevant toxicity of TKIs, but that this effect might also attenuate the efficacy of these drugs in the subset of cancers that are insulin-responsive[1]. As Drs Lin and Jin mention, the effects of other TKIs on glycaemic control are more variable and the underlying mechanisms are incompletely understood.

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2. Lin, M. & Jin, J. Cancer, obesity, and diabetes: TKIs exert multiple effects on glucose homeostasis. *Nat. Rev. Clin. Oncol.* http://dx.doi.org/10.1038/nrclinonc.2017.57 (2017).

Competing interests statement
The author declares no competing interests.