

Short Article

The Heart Doesn't Look Down: Cardiology and Cancer

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Nowadays, there is a need for a turning point in Cardio-oncology and both cardiologists and oncologists can contribute to a big step forward. Research identified novel therapeutic targets in cancer: Human ether-a-go-go-related gene K(+) channels (HERGs) [1-5], Epidermal growth factor receptors (EGFRs) [5-10], Vascular endothelial growth factor receptors (VEGFs) [5-11,12]. Related therapies have been developed and cardiologists have been called in heart defense against their cardiotoxicity [1]. Later while doubts have arisen about the cost and the effectiveness of new anticancer therapies [13], it was discovered that many of the old cardiovascular drugs were also effective anticancer targeted therapies [3,5,11,14-16] but there was not conducted non-inferiority, randomized, controlled trials comparing cardiovascular drugs with new anticancer therapies [13]. Indeed in the name of progress and of innovation running, the proven relatively safe roads were labeled as old and outdated for venturing into new proud paths. In many cases, new therapies are derivatives but with higher cost than old drugs [5]. Nowadays, it begins to covertly observe that high prices of cancer drugs protect a drug's market share, precluding challenges from cheaper alternatives [13] and that very expensive widespread distressing, unnecessary toxicities, suffering, or "collateral damage" [17] have been marked. In this scenario, the following points are remarkable:

- HERGs (hERG; Kv11.1, KCNH2) encode the rapid delayed-rectifier K⁺-current (I_{Kr}) [4] having an essential role in cardiac action potential repolarization [3];

- The EGFR family and its ligands are a switchboard regulating multiple cellular processes [1-5]. Transactivation of EGFRs signalling is found in several cardiovascular conditions, including hypertension, heart failure, and cardiac and vascular hypertrophy [10];
- The VEGFRs play an important role in cardiovascular system [11-12]

The heart doesn't look down and there is a need to adopt the vision of a collaborative multi-disciplinary team [17]. There is a need for large studies to clear apparently conflicting observations and to expand the evidence base in cardio-oncology [18-21] promoting new strategies for the patient's safety and to encourage the patients in their heavy cancer journey [18-28]. Partnership of both basic and clinical research can help knowledge progress in both cardiovascular diseases and in cancer [18-28].

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