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Authors: Alice Agliano, Alfonso Calvo, Carol Box

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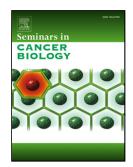
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ACCEPTED MANUSCRIPT

The challenge of targeting cancer stem cells to halt metastasis

Alice Agliano<sup>a</sup>, Alfonso Calvo<sup>b</sup> and Carol Box<sup>c</sup>

<sup>a</sup> Cancer Research UK Cancer Imaging Centre, Division of Radiotherapy and Imaging, The Institute of Cancer

Research and The Royal Marsden NHS Foundation Trust, 123 Old Brompton Road, London, SW7 3RP, United

Kingdom, Alice.Agliano@icr.ac.uk, b CIBERONC/IDISNA Program of Solid Tumours and Biomarkers, CIMA of the

University of Navarra; and Department of Histology and Pathology, School of Medicine, University of Navarra,

Pamplona, Spain, acalvo@unav.es, <sup>c</sup> Cancer Research UK Cancer Imaging Centre, Division of Radiotherapy and

Imaging, The Institute of Cancer Research and The Royal Marsden NHS Foundation Trust, 123 Old Brompton Road,

London, SW7 3RP, United Kingdom, Carol.Box@icr.ac.uk.

Corresponding author:

Dr Alice Agliano

CRUK Cancer Imaging Centre, Division of Radiotherapy and Imaging

The Institute of Cancer Research and The Royal Marsden NHS Foundation Trust

123 Old Brompton Road, London, SW7 3RP, United Kingdom

Tel. +44 20 8722 4809

Fax: +44 20 8661 0846

Email: Alice.Agliano@icr.ac.uk

**Abstract** 

Despite a continuing debate about the existence of cancer stem cells (CSCs), recent discoveries have

provided further support for their existence and their roles in drug resistance, cancer recurrence and metastasis.

CSC characteristics, such as self-renewal and tumour initiation, and supporting cellular processes, particularly the

epithelial-to-mesenchymal transition, are attracting a great deal of attention from cancer researchers as they

offer opportunities for discovering novel therapeutic targets for future drug development. However, the

identification of potential CSC targets presents clear obstacles due to a lack of truly specific CSC markers and the

reality of CSC plasticity, making this task a significant challenge. Agents that target developmental signalling

pathways, such as Notch, Wnt and Hedgehog, are now in clinical trials whilst alternative approaches including

immune-based therapies and microRNA-mediated pathway inhibitors are producing promising pre-clinical results.

Here, we discuss the contribution of CSCs to cancer metastasis and the scope of opportunities for therapeutic

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