



Phantom (invisible) organ sign

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The “phantom organ sign” refers to the obscuration of a small organ when a large mass arising from it renders the organ invisible (Figs. 1 and 2). The sign can be seen, for example, in lesions arising from the adrenal gland: pheochromocytoma, large adenoma, and adrenocortical carcinoma [1].

A false-positive phantom organ sign can occur, however, when a large retroperitoneal mass so markedly displaces/compresses a smaller organ like the adrenal gland, or invades it, as could be seen with retroperitoneal sarcomas. Nevertheless, the phantom organ sign can be a useful tool in the identification of the organ of origin for a mass (Fig. 1) [1, 2].

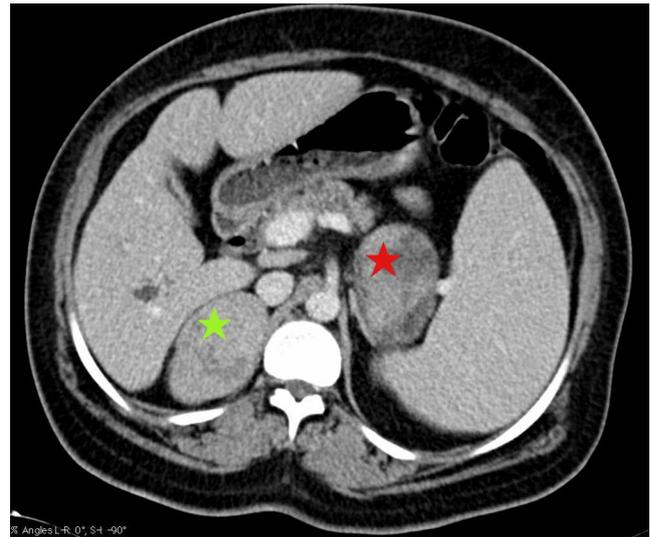


Fig. 1 Axial CT image showing a large right primary adrenal mass histologically proven adrenal adenoma (green asterisk) obscuring any normal adrenal tissue: the phantom organ sign. On the left side, an extra-adrenal mass—a retroperitoneal liposarcoma (red asterisk)—displaces the left adrenal gland

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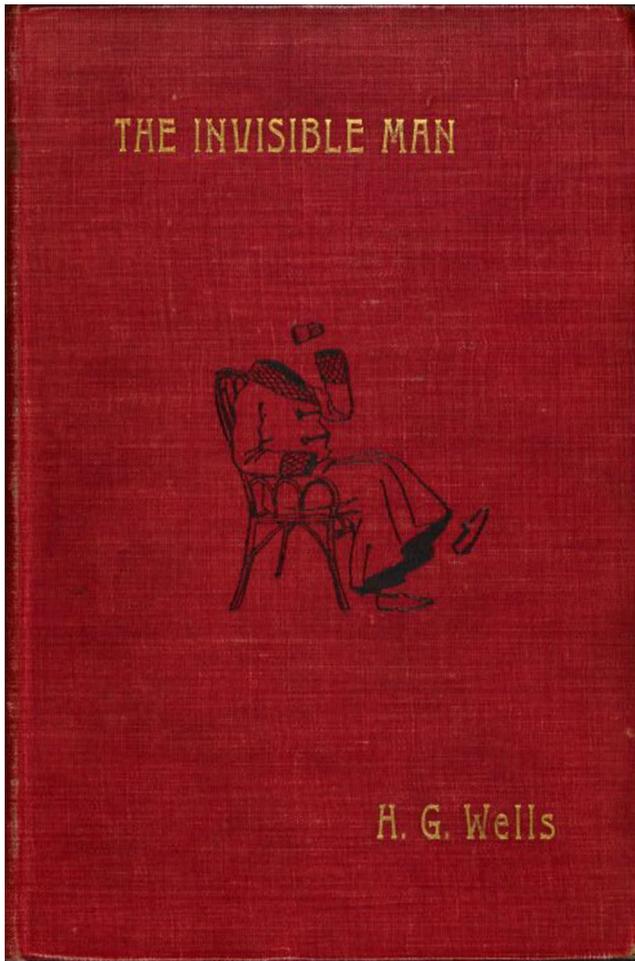


Fig. 2 One of literature's most famous invisible phantoms. First editions cover of "The Invisible Man" by H. G. Wells (London: Pearson, 1897). Open access image: https://commons.wikimedia.org/wiki/File:Wells_-_The_Invisible_Man_-_Pearson_cover_1897.jpg

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Compliance with ethical standards

Conflict of interest All authors declare that there is no conflict of interest.

Ethical approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Informed consent Informed consent was obtained from all individual participants included in the study.

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