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## Late-onset effects of radiation and chronic kidney disease

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Kamiya and colleagues (Aug 1, p 469)<sup>1</sup> provide a timely report of the late-onset effects of wartime and accidental radiation exposure and briefly mention chronic kidney disease as a potential late-onset effect. Chronic kidney disease is a clinically significant, but underappreciated, late-onset complication of haemopoietic stem-cell transplantation that is often linked to total body irradiation before transplantation.<sup>2</sup> Partial or total body exposures to radiation doses as low as 5 Gy in a single fraction are not lethal but can lead to radiation nephropathy.<sup>3</sup> Exposures to even lower doses of radiation are associated with late cardiovascular and renal disease.<sup>4</sup> Chronic kidney disease substantially increases human morbidity and mortality,<sup>5</sup> and renal function should be part of the immediate and long-term follow-up of individuals who have had substantial clinical or accidental radiation exposures to parts of the body that include the kidneys.



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