

## Is informed consent necessary for computed tomography in children and young adults?

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**TO THE EDITOR:** The risks of computed tomography (CT) are now well understood by radiologists and have been widely reported.<sup>1-3</sup>

Overall, the risk of fatal malignancy from a single CT scan (body, not including head) in children and young adults is about 1 in 1000 (varying from around 1 in 500 to 1 in 1500), and the high risk persists into the third decade.<sup>1,2</sup> The risk is higher in children and young adults because there is time for malignancy to manifest (usually developing decades later), and their cells are dividing more rapidly and hence more susceptible.

However, surveys of both patients and referring doctors show they have limited knowledge of the radiation risks from CT.<sup>4</sup> Hence, most patients presenting for CT scans are not informed or aware of the risk. The High Court of Australia has determined that medical staff must inform patients of potential risks that the patient might regard as important.<sup>5</sup> Patients, and their parents, may well consider a 1 in 1000 chance of fatal malignancy important.

Most hospitals and clinics routinely recommend obtaining written, informed consent before administration of general anaesthesia or intravenous contrast agents. Some also routinely provide written information to parents or patients of the risks associated with general anaesthesia and anaphylaxis following administration of intravenous contrast agents.

The risks of fatal malignancy developing later in life in children and young adults after a single CT scan are 1/500 for children aged less than 1 year, 1/1250 at 10 years, and 1/1600 at 20 years.<sup>1</sup> This is 50–200 times greater than the risk of fatality following general anaesthesia (1/56 000)<sup>6</sup> or administration of intravenous contrast agents (1/170 000).<sup>7</sup> If informed consent is regularly sought before administration of general anaesthesia and intravenous contrast agents, then it is equally appropriate and consistent to seek informed consent before CT scans in children and young adults. Anything less may not be medicolegally sustainable.

While patients rightly expect that referring doctors are able to balance the risks and benefits of any examination, they also rightly expect (and the High Court supports them) that any known risk will be revealed and discussed. Explicit and comparative information is best provided personally and in understandable written format by the referrer.<sup>8</sup>

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