The development of X-ray technology has come a long way since the late 19th century, when X-rays were first developed. The idea of seeing inside the body in a non-invasive way has great appeal, both to doctors and to patients. However, as with all investigations, it can be used inappropriately and unnecessarily. X-rays are a form of radiation and, as such, do have dangers under certain circumstances and if used too freely. Patients, however, are often not aware of this, and are all too happy to have yet another X-ray, in the blind belief that X-rays, of any type, can reveal all.

At my running club the other evening a fellow runner was complaining of ankle pain at the site of an old injury. She was considering simply turning up at a local radiologist and asking for an ankle X-ray and then going to see her doctor, taking this X-ray with her. The idea, I suppose, was to save time (and so money) by circumventing a consultation that would possibly result in a refer for X-ray, followed by a repeat consultation to see the X-ray. I pointed out that a plain X-ray was seldom useful in soft-tissue injuries, but she was quite determined. I have no idea what the outcome was as I generally avoid medical conversations if I can.

Another friend took her limping dog to the local vet, who told her he thought the dog had torn a ligament and then did a plain X-ray. She was understandably annoyed when he told her that the X-ray didn’t show anything, but not that it wouldn’t cost anything because he really didn’t need to do it for what was essentially a clinical diagnosis.

Such are the misuses of a truly remarkable modality that has progressed so far beyond the plain film of the late 1990s that we now really can see inside the body without cutting it up.

Those of you who read my musings at the end of CME, this month will see that I suffered from patients in Labrador, Canada, who had been brought up on a diet of investigations rather than clinical diagnosis. Our lab/X-ray technician suggested that we place an airport X-ray machine at the entrance to the waiting room so that all patients were X-rayed as they came in. But, the American Journal of Roentgenology in April 1988 had an even better idea – X-ray gogs. To quote: ‘X-ray gogs, which apparently reveal internal anatomy without radiation, ultrasound, or magnetic fields, were compared with conventional imaging modalities in evaluating a variety of pediatric conditions. Conventional techniques were preferable in terms of diagnostic accuracy and image quality, and are thus recommended in most settings. Because of low cost and lack of ionizing radiation, “X-Ray Gogs” are recommended in cases where radiography is not indicated, or where the results of radiographic study will not influence patient management, or where the diagnosis has already been established by other means.’ The paper goes on to suggest that every radiologist purchase X-ray gogs and modify them to his or her needs. ‘Slowly and portentiously’ dons the X-ray gogs, ‘[gazes] solemnly about, and finally [stumbles] off in the general direction of the patient. Then, having performed the XRG examination, only one diagnosis need be pronounced: no abnormality seen’.

But, to be serious again, Ian Duncan and his team have put together an excellent and comprehensive approach to the uses of radiology that should help guide the choice of investigations in daily practice.

Edwards DK. AJR 1988; 150: 731-734.