X-ray versus gamma irradiation of blood components for prevention of transfusion-associated graft versus host disease: a brief report

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Record Status
This is a bibliographic record of a published health technology assessment. No evaluation of the quality of this assessment has been made for the HTA database.

Citation

Authors' objectives
The Technology Assessment Unit (TAU) was asked to review the available evidence in order to determine whether the two technologies were comparable in terms of effectiveness. (Comparison of costs has been carried out by the Biomedical Engineering Department.)

Authors' conclusions
No studies have been identified that directly compare the effectiveness of X-ray and gamma irradiation for the purpose of irradiating blood to eliminate TA-GvHD. On the basis of an understanding of the mechanism of disease and considerable data on cell response to ionizing radiation, it is expected that X-rays and gamma rays would have equivalent effectiveness in ablating the proliferative potential of cells responsible for TA-GvHD. The Joint Professional Advisory Committee of the UK Transfusion Services on blood components has recommended X-ray irradiation as a suitable, safe alternative that is equivalent to gamma ray irradiation. The capacity of both machines being investigated by the MUHC should be sufficient to meet the annual demand.

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