

- Title** Effectiveness and safety of irreversible electroporation in the treatment of cancer of the pancreas and liver. Systematic review. Upgrade
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- Reference** Moure Rodríguez, L., Atienza Merino, G. Effectiveness and safety of irreversible electroporation in the treatment of cancer of the pancreas and liver. Systematic review. Upgrade. Santiago de Compostela: Agencia Gallega para la Gestión del Conocimiento en Salud. Unidad de Asesoramiento Científicotécnico, avalia-t 2016. Serie Avaluación de Tecnoloxías. Consultas Técnicas; Report No.:CT2016/02. Available from http://avalia-t.sergas.es/DXerais/648/CT201602_ElectroporacionIrreversible_RS_DEF.pdf

Aim

This study updates the report entitled "Effectiveness and safety of irreversible electroporation for treatment of pancreatic and hepatic cancer. A systematic review", published in 2014. The main objective was to assess the tumor resection by irreversible electroporation in the treatment of pancreatic cancer and primary and metastatic liver cancer compared with other ablative techniques and with standard treatment. The specific objectives were to assess: 1) the safety of the technique by the incidence of perioperative and long term adverse effects and 2) the effectiveness based on the results of resolution of the tumor and short and long term recurrences.

Conclusions and results

The available scientific evidence on this technique's effectiveness and safety is based on a small number of observational studies, some with methodological limitations and possible biases that might affect the results. Heterogeneity when it comes to establishing and defining outcome variables, in patient populations and in the approach to IRE, renders inter-study comparison of results difficult. What this means is that no conclusions can be drawn as to whether IRE is more effective and safer than other ablation techniques or the standard treatment, until such a time as there are results yielded by studies having a good methodological design and a long-term follow-up.

Methods

A systematic search was made, from December 2013, of the medical literature covering the main computerised biomedical databases, i.e., PubMed, Embase, ISI Web of Knowledge, Centre for Reviews and Recommendations, Cochrane, etc. To retrieve unpublished data, the process was completed by a search of the databases of ongoing studies. Two independent reviewers selected the papers in accordance with a series of pre-established selection criteria. The data were then extracted using a purpose-designed form and qualitatively summarised in evidence tables. Study quality was assessed using the CEBM (Oxford Centre for Evidence-Based Medicine Levels of Evidence Working Group) scale.

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