INAHTA Brief

Title

Agency

Criteria for appropriate use of Fludeoxyglucose Positron Emission Tomography (FDG-PET) in malignant lymphoma

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Aim

To define criteria for appropriate use of FDG-PET for patients affected by Hodgkin's lymphoma or aggressive non-Hodgkin's lymphoma. The criteria reported in this document are to be intended as guidance for programs of clinical governance aimed at: supporting clinicians on the use of FDG-PET, post hoc analyses of appropriate use of FDG-PET, contributing to the planning of the regional health service.

Conclusions and results

For each disease the panel examined and assessed the role of FDG-PET for six clinical indications (for a total of 12 clinical questions). Nine systematic reviews and 33 primary studies, evaluating diagnostic accuracy of FDG-PET, were included.

Recommendations

Criteria for the appropriate use of FDG-PET in Hodgkin's lymphoma:

Appropriate (level of evidence: moderate)

- Staging of Hodgkin's lymphoma
- During treatment evaluation of early response to therapy
- End of treatment evaluation of response to therapy

<u>Appropriate</u> (level of evidence: very low)

- Staging of recurrence in treated patients

<u>Indeterminate</u> due to lack of studies - Dose painting definition in involved-field radiation treatment

Inappropriate (level of evidence: low)

- Follow up of treated patients, with no suspicion of recurrence

Criteria for the appropriate use of FDG-PET in aggressive non Hodgkin's lymphoma:

<u>Appropriate</u> (level of evidence: moderate)

- Staging of aggressive non-Hodgkin's lymphoma
- End of treatment evaluation of response to therapy

<u>Appropriate</u> (level of evidence: very low)

- Staging of recurrence in treated patients

Indeterminate due to lack of studies

- Dose painting definition in involved-field radiation treatment

<u>Inappropriate</u> (level of evidence: moderate) - During treatment evaluation of early response to therapy

Inappropriate (level of evidence: very low)

- Follow up of treated patients, with no suspicion of recurrence

For all the above clinical indications the panel reached an agreement.

Methods

A panel of 25 experts working in Health Trusts and Teaching Hospitals of Emilia-Romagna was convened to discuss and agree on the methodology for a research program aimed at defining the criteria for appropriate use of FDG-PET in oncology. For each indication a systematic review was performed. The GRADE approach was applied to assess the level of evidence of included studies. The RAND method was used to vote the appropriateness criteria.

To assign a level of appropriateness to the use of FDG-PET, the working group agreed on the following definitions:

<u>Appropriate</u> Clinical indications for which there is a rationale for change in management related to a patient-important clinical outcome, there is a high or moderate level of evidence for diagnostic accuracy of PET and the presumed benefit resulting from the test results - is greater than the presumed harm.

<u>Uncertain</u> Clinical indications for which there is a rationale for change in management related to a patient-important clinical outcome, but there is a low or very low level of evidence for diagnostic accuracy of FDG-PET and balance between harms and benefit is unclear.

<u>Inappropriate</u> Clinical indications for which there is no rationale for change in management related to a patientimportant clinical outcome or clinical indications for which there is a rationale for change in management related to a patient-important clinical outcome, there is a high or moderate level of evidence on poor diagnostic accuracy of FDG-PET and/or the presumed harm - resulting from the test results - is greater than the presumed benefit.

<u>Indeterminate</u> Clinical indications for which there is a rationale for change in management related to a patient-important clinical outcome, but there are no data on diagnostic accuracy of FDG-PET.

Further research/reviews required

Not applicable.

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