**Head CT - Lens Exclusion**

**Descriptor:**

Exclusion of the lens of the eye in routine head CT examinations.

**Background:**

The exclusion of the lens from the standard brain CT examination will:

• Reduce the radiation dose to the eye

• Reduce the likelihood of lens damage and cataract formation

## The Cycle

**The standard:**

All brain scans should be performed with the base line set so as to exclude the lens of the eye.

**Target:**

100%

## Assess local practice

**Indicators:**

Percentage of routine head CT scans performed with the lens excluded from the scan field.

**Data items to be collected:**

Record the number of brain scans in which:

• The lens of one or both eyes is/are included in the (field of) examination

• The lenses of both eyes are not included

**Suggested number:**

50 consecutive routine brain scans (where the examination of the orbits was not a requirement).

**Suggestions for change if target not met:**

• Develop a protocol for brain CT in which the base line is set so as to exclude the eye lens

• Identify exclusions to this protocol (e.g. examination for diplopia or exophthalmos)

• Emphasise to radiographers the importance of excluding the eye

• Persuade supervising radiologists to avoid making exclusions to the protocol

**Resources:**

- Image file review

- Radiographer or radiologist: 2 hours to examine 50 scans

- 1 hour for report

**References:**

1. Spencer, D. CT Scanning Angles Selected for Routine CT Brain Scanning. How does the Selected CT Scanning Angle Affect the Eye-Lens Dose? MSc dissertation. London: City University, 1992.
2. NRPB ASP6 (1984). Radiography 1984;595:25–6.
3. National Radiological Protection Board. Protection of the Patient in X-ray Computed Tomography. Didcot: NRPB, 1992.

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