

Are we putting enough clinical information on whole body Trauma CT requests?

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BACKGROUND:

Whole Body CT (WBCT) is a key diagnostic tool in assessing major trauma patients, enabling rapid detection of life-threatening injuries. However, WBCT carries a high radiation burden and should be justified with sufficient clinical information. Inadequate request forms can lead to misinterpretation, missed injuries, and unnecessary radiation exposure.

This audit aimed to assess the quality and adequacy of clinical details provided in WBCT trauma requests in adults presenting after major trauma at the Countess of Chester Hospital ED department in 2024.

METHODOLOGY:

- Retrospective review of 111 WBCT requests was conducted over the year of 2024.
- Data was analysed to see if it met the criteria from the national major trauma guidelines 2024.
- This was done using a simple data collection form and analysed using Excel with descriptive charts made to display the results.

RESULTS:

- 68%** of WBCT scans done last year showed clinically relevant information.
- 35** scans showed **no acute traumatic findings** (32%) this is similar to a study by Arora et al in 2019 done at Aintree hospital.

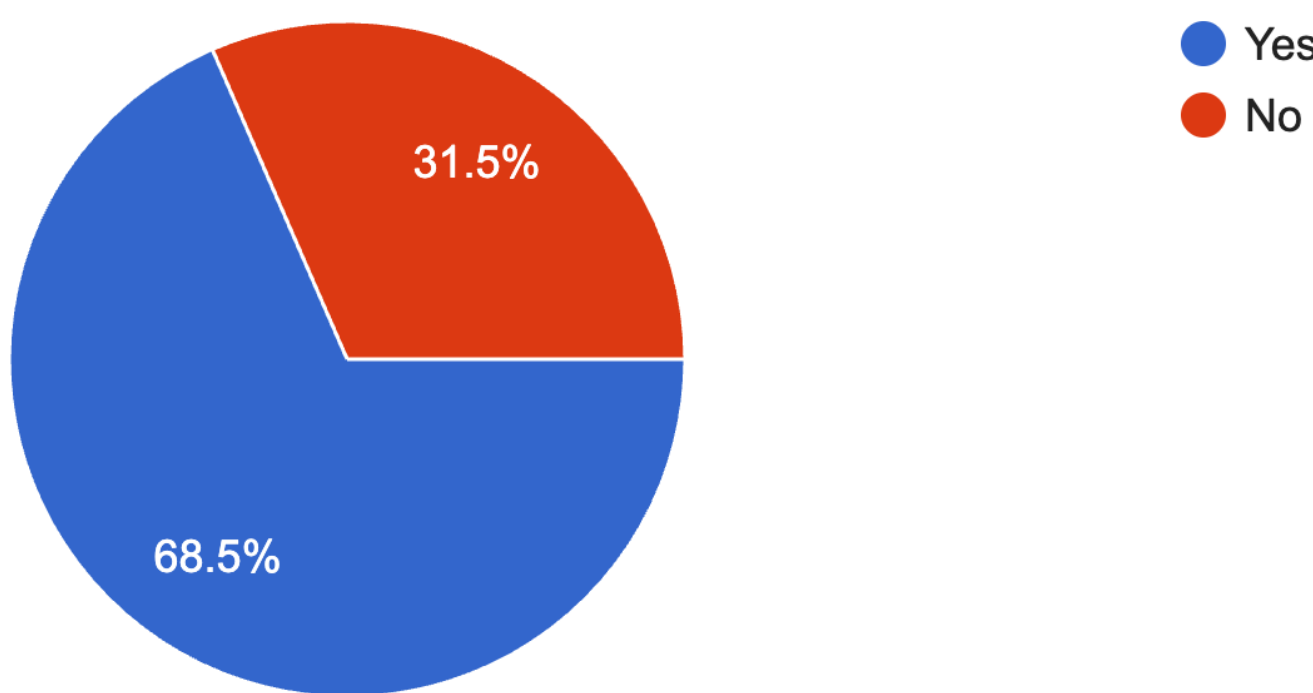
25% of requests had an unclear clinical diagnosis on request form

Examples:
?Polytrauma, ?PAN scan, ? Internal injuries, ?Fracture, ?Trauma

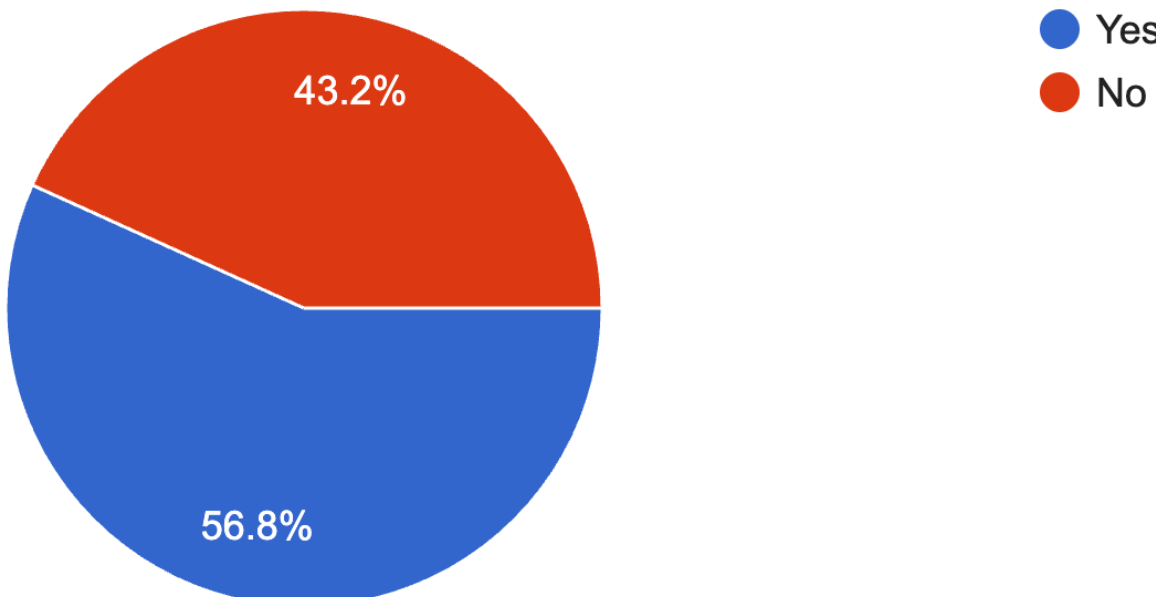
Unexpected major clinical findings picked up on scans:

- Fall, with no info on request recorded:- Multiple open book pelvic #s, pelvic haematoma, NOF #s, 8th/9th rib #s, T5 compression #s*
- Fall, no clinical info recorded:- Multiple bilateral rib #s, bilateral pleural effusions, LL collapse, metastatic prostate cancer.*
- Fall, no clinical info recorded:- Dx: IC bleed:- parieto-occipital scalp haematoma+ L 5th rib #, L scapular #, T4 burst #*

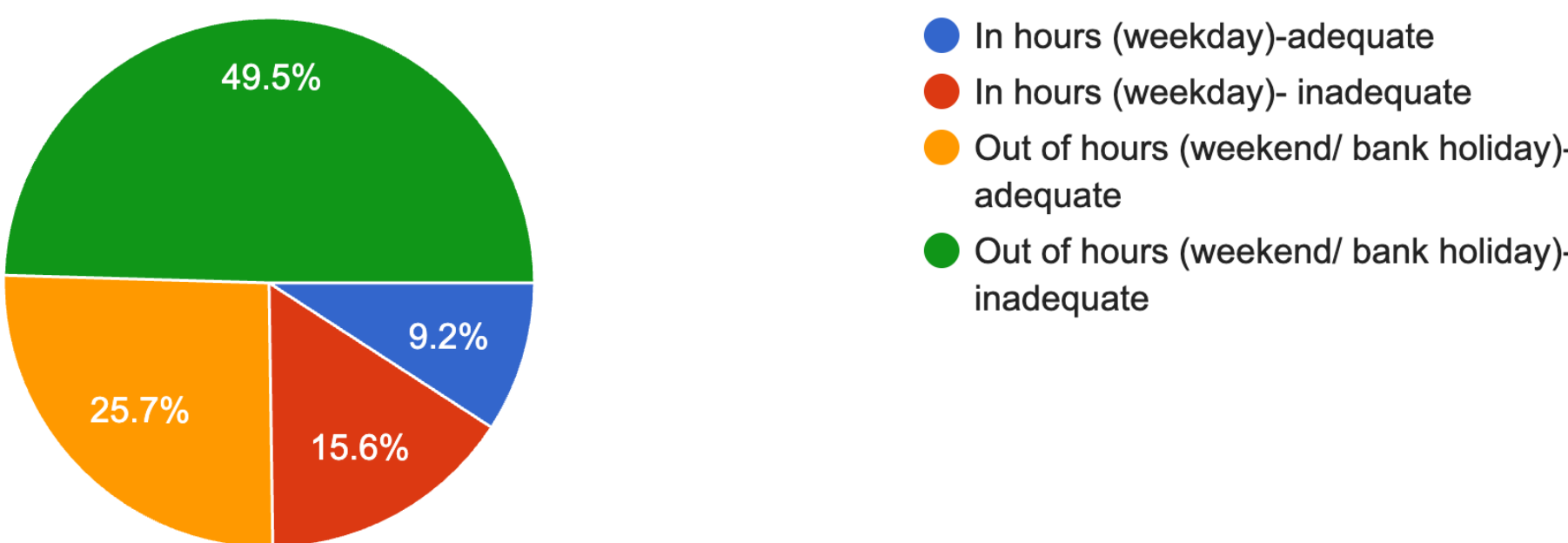
Were the primary survey findings recorded?
111 responses



Was a suspected clinical diagnosis recorded?
111 responses



Timing of scan
111 responses



LITERATURE REVIEW:

- Whole Body CT (WBCT) carry a substantial radiation risk, estimated at 1 in 1000–2000 lifetime fatal cancers (Brenner et al., Radiology 2004).
- Evidence shows that accurate clinical information significantly improves reporting accuracy, radiologist confidence, and clinical relevance (Castillo et al., 2021).
- A JAMA review found increased sensitivity without added bias when appropriate information was provided (Loy & Irwig, 2004), while prospective studies confirmed that accurate details can directly alter CT reports (Leslie et al., BJR 2000).

ACTION PLAN:

- 1) Initiative to assign a dedicated team member to request scan who is involved in the initial assessment team.
- 2) Poster on essential data to be included on requests in the resus area and general surgery/ trauma and orthopaedics offices i.e: mechanism of injury, primary survey, haemodynamic status, prior imaging, relevant PMH, and a focused clinical question.
- 3) Working in conjunction with IT department to form a customised, simple and interactive WBCT request form to streamline and improve requests.