# Contrast extravasation in CT [QSI Ref: XR-513]

**Descriptor:**

An audit of the assessment & management of patients who sustained contrast extravasation during CT examination

**Background:**

Contrast extravasation is a potentially limb-threatening event and is not an infrequent occurrence during CT examinations. Ensuring that patients receive timely assessment & aftercare following contrast extravasation is crucial to prevent irreversible limb damage.

This audit aims to determine:

1) Whether contrast extravasations are recorded in the radiology department & whether a local protocol for assessing & managing them exists in the department

2) To audit whether the radiology department is meeting the local protocol

## The Cycle

**The standard:**

1) Ensure there is a locally agreed protocol for contrast extravasation in CT & that there is a record/database of patients that sustained contrast extravasations.

2) A locally agreed protocol could include (for example): the need for all patients to be assessed by a healthcare professional (defined in the local protocol) following contrast extravasation with clear documentation on limb assessment, the volume of contrast injected & further management (e.g. if referral made to plastics or if not then giving advice/leaflet to patient/ward team about icing & elevation of limb & symptoms to watch out for). This information may be recorded on RIS or in a patient's hospital record or in the CT report.

**Target:**

1) 100% of contrast extravasations should be reviewed by a health care professional before the patient is sent home (if outpatient CT) or (if inpatient CT) before being sent back to the ward.

2) Documentation on the extravasation should include: the volume of contrast injected (100%), assessment of the limb (100%), further management (100%).

## Assess local practice

**Indicators:**

% of records containing the information set out in the standard, i.e. documentation of limb assessment, the volume of contrast injected & further management.

**Data items to be collected:**

For each documented incident of contrast extravasation:

Whether health care professional reviewed (yes/no)

Volume of contrast injected (yes/no)

Assessment of limb (yes/no - diagram or written description)

Further management (referral to plastic surgery/discharge with advice)

**Suggested number:**

20 cases or all that occur within a 3-month period.

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

If no local protocol & documentation exists regarding contrast extravasation, then this should be established with standards as specified in this template.

If <100% of patients being assessed by health care professional, recommend radiographers ask health care professionals that are reporting in closest proximity to CT scanner to review patients.

If <100% of records complete, pro forma can be developed to accurately record contrast extravasation & arrange meeting with radiographers & radiologists to explain information that needs to be recorded when contrast extravasation occurs (as set out in standard).

**References:**

1. ACR manual on contrast media. ACR committee on drugs and contrast media Version 10.3 (<https://www.acr.org/Clinical-Resources/Contrast-Manual>); 2017. Accessed 22 December 2018.

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