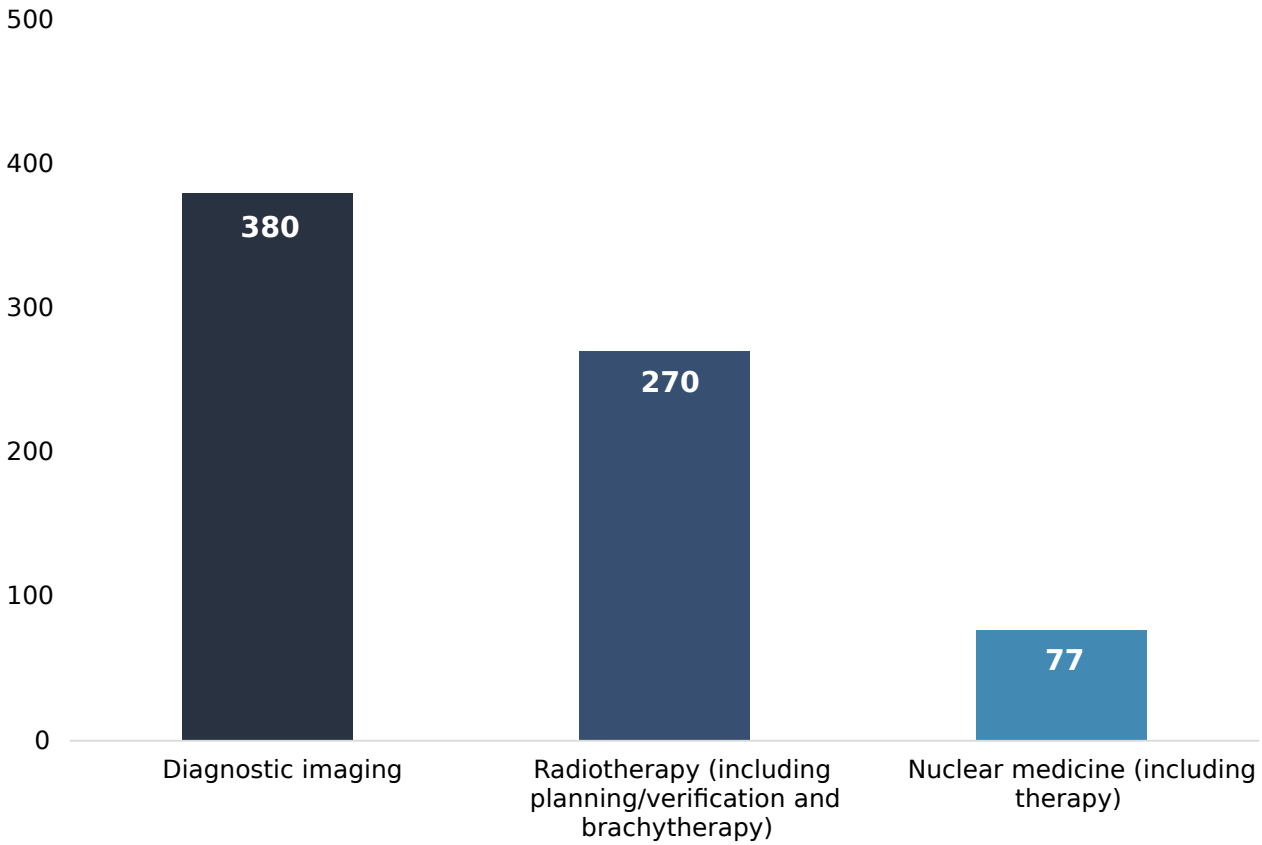
Notifications received in 2022/23

- From 1 April 2022 to 31 March 2023, we received 727 statutory notifications of significant accidental and unintended exposures (SAUE notifications) across all modalities. This compares with 611 received in 2021/22, an increase of 19%.
- The largest proportion of notifications came from diagnostic imaging (52%).

Figure 1: Notifications received by modality, 1 April 2022 to 31 March 2023



Source: CQC notifications data 2022/23

Activity data in England

NHS England collects information about tests carried out on NHS patients in England in the Diagnostic Imaging Dataset. Data for 2022/23 shows that between April 2022 and March 2023, NHS services in England carried out 43.5 million imaging tests across all modalities. Of these examinations, 29.2 million used ionising radiation (including plain film X-rays, CT, fluoroscopy, nuclear medicine, PET-CT and SPECT, as opposed to other types of test such as ultrasound, MRI scans or medical photography).

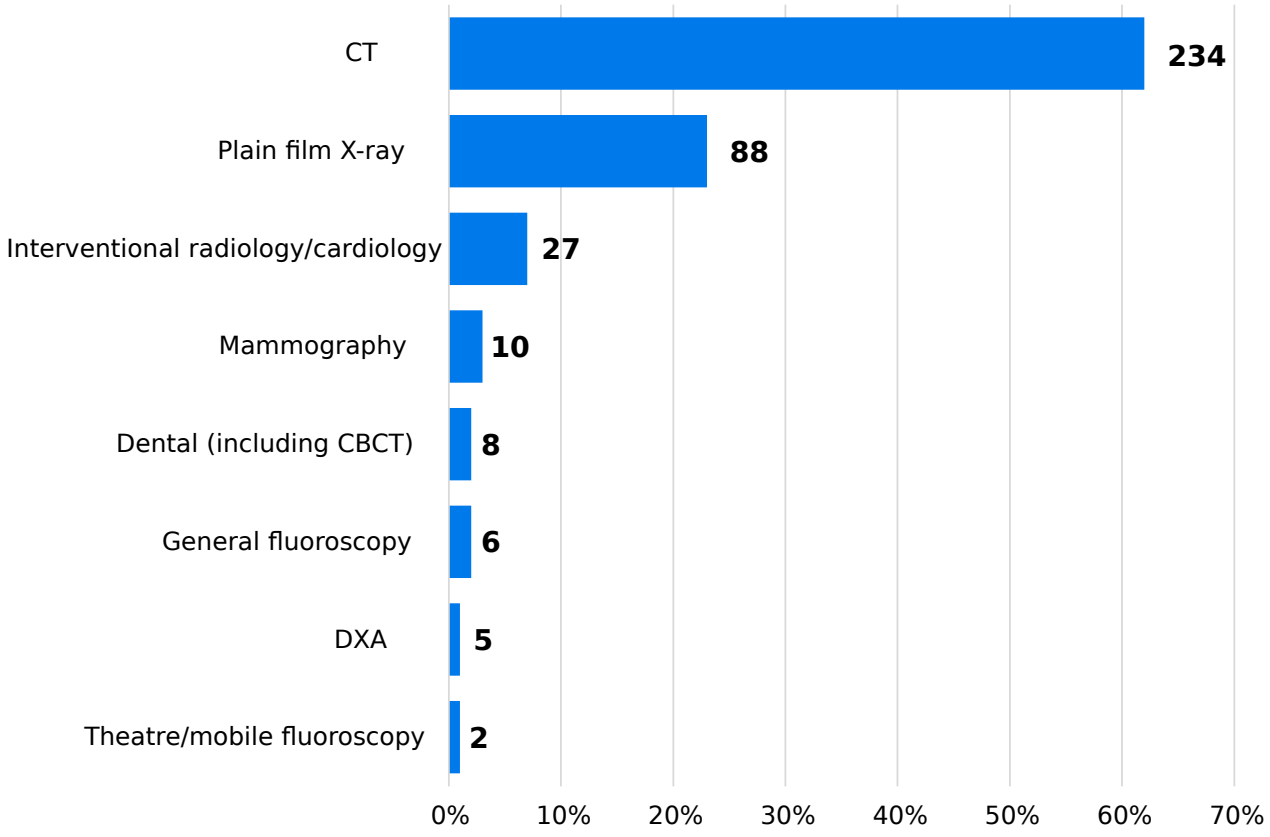
The Radiotherapy Dataset (RTDS) is managed by the National Disease Registration Service (NDRS). It collects, curates and analyses data on all radiotherapy activity delivered in NHS hospitals in England. In 2022/23, there were over 142,000 episodes of radiotherapy treatment in England, an increase of 10% on the previous year.

Note: the completeness of radiotherapy activity data varies by NHS trust and trusts may submit historical data at a later date. Therefore, it is possible that some data may still be missing and that there may be changes to overall figures as the RTDS is updated over time.

Notifications from diagnostic imaging

- 380 notifications received (366 notifications received in 2021/22)
- represents 52% of all notifications received
- 89% of notifications were from NHS acute trusts
- the highest proportion of notifications from diagnostic imaging (62%) was from CT (computed tomography)

Figure 2: Notifications from diagnostic imaging received by sub-modality, 1 April 2022 to 31 March 2023



Source: CQC SAUE notifications data 2022/23

Note: Figures may not add to 100% due to rounding

Types of error

As in the previous year, the most common error was where a patient received an examination meant for another patient (25% of all diagnostic imaging notifications).

We received 60 notifications where the wrong patient had been referred for diagnostic imaging examinations, and 35 where the operator failed to correctly identify a patient. Operator errors accounted for the highest origin of incidents (45%), followed by referrer errors (26%). Again, this is similar to the previous year.

We have seen a notable increase in the number of incidents due to the operator either setting up the patient incorrectly or selecting an incorrect protocol (79 incidents, up from 44 last year).

Figure 3 shows the number of detailed errors where tier 1 is the causative factor, with tiers 2 and 3 the contributory factors.

Figure 3: Notifications from diagnostic imaging by detailed error type, 1 April 2022 to 31 March 2023

Tier 1: Employer (3 notifications)

Tier 2	Tier 3
Employer's responsibility (3)	Equipment not fit for purpose (2) Inadequate training/supervision (1)

Tier 1: Referrer (99 notifications)

Tier 2	Tier 3
Incorrect referral (65)	Wrong patient (60) Wrong requested modality (3) Wrong timing (2)

Tier 2	Tier 3
Incorrect information (34)	Failure to cancel (16) Duplicate/no check of previous imaging (15) Inaccurate clinical information (3)

Tier 1: Practitioner (13 notifications)

Tier 2	Tier 3
Justification (9)	Incorrect justification (9)
Safety checks (2)	Imaging history check failure (2)
Protocol (2)	Illegible/unclear protocol (2)

Tier 1: Operator (170 notifications)

Tier 2	Tier 3
Pre-exposure checks (95)	Wrong patient position/setup/protocol (79) Wrong use of equipment (16)

Tier 2	Tier 3
Patient checks (38)	Patient ID error (35) Failure to check pregnancy/ breastfeeding (3)
Clinical history (18)	Failure to check history/details (18)
Post examination (14)	Failure to upload images (9) Reporting failure (5)
Authorisation (5)	Incorrect authorisation (5)

Tier 1: Equipment (52 notifications)

Tier 2	Tier 3
Equipment related (52)	Hardware (26) Software (14) IT failure (11) Ancillary failure (1)

Tier 1: Other (43 notifications)

Tier 2	Tier 3
DRL/Deterministic (20)	Deterministic effects (10) 10x DRL (10)
Patient related (8)	Unknown pregnancy (5) Patient issue (3)
Made in error or withdrawn (12)	Duplicate notification/other error (11) Below threshold (1)
Administrative staff error (1)	RIS input error (1)
Test results (1)	Request based on incorrect results (1)
Other (1)	Not listed (1)

Total notifications 380

Notifications from nuclear medicine

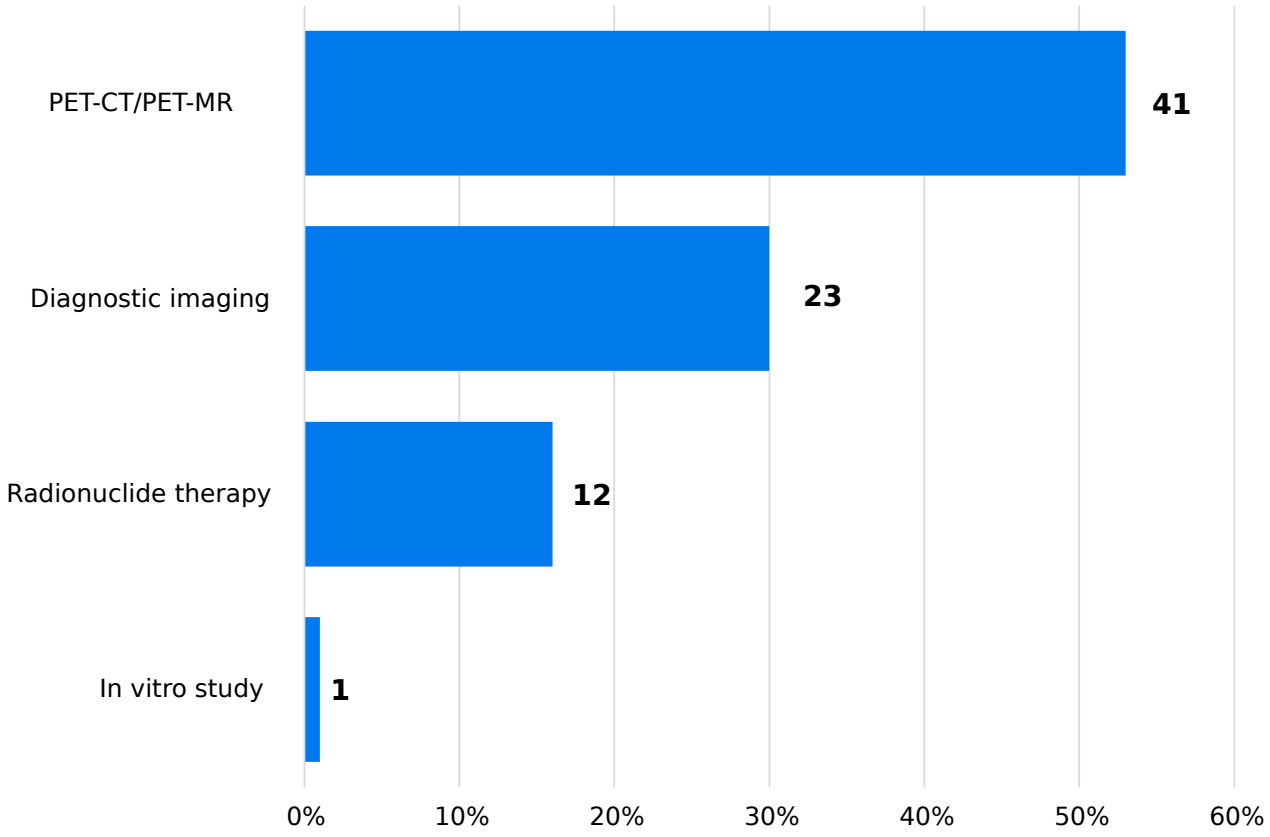
- 77 notifications received (63 notifications in 2021/22)
- Represents 11% of all notifications received
- 71% of notifications were from NHS acute trusts
- 27% of notifications were from independent healthcare providers

- 53% of notifications related to PET-CT and PET-MR studies

There continues to be an increase in the number of nuclear medicine notifications compared with previous years. Notifications from PET imaging now make up more than half of those received in this modality (up from 38% last year), and account for the increase in total notifications received from 2021/22 to 2022/23.

These figures do not include any notifications relating to licensing breaches, where a SAUE did not occur. We manage these voluntary notifications through a separate process and webform.

Figure 4: Notifications from nuclear medicine by sub-modality, 1 April 2022 to 31 March 2023



Source: CQC SAUE notifications data 2022/23

Note: Figures may not add to 100% due to rounding

Types of error

As in previous years, most notifications related to operator errors, but they represent a smaller proportion (27% this year compared with 38% in 2021/22). The number of mistakes by operators in the administration of radiopharmaceuticals has increased (from 5 to 10).

In 2022/23, we received more nuclear medicine notifications related to referrer and equipment errors. This has increased the total number of nuclear medicine notifications. Hardware related incidents have nearly doubled since last year, suggesting that ageing equipment continues to affect service delivery in nuclear medicine. Ancillary system failures also continue to be a common contributing factor to equipment breakdowns.

There has also been a large increase in the number of notifications from referrers failing to cancel requests. This re-iterates the importance of effective cancellation processes. Employers must provide clear instructions for referrers on how they should cancel requests, particularly when requesting electronically. Many errors happened because referrers should have contacted departments directly to cancel, but instead they cancelled using e-requesting, which was not then communicated to the radiology information system (RIS) or department ahead of the appointment.

We also received one notification caused by inadequate employer's procedures relating to pregnancy checks. It is imperative that employers implement appropriately detailed procedures and protocols for duty holders to follow.

Figure 5 shows the number of detailed errors where tier 1 is the causative factor, with tiers 2 and 3 the contributory factors.

Figure 5: Notifications from nuclear medicine by detailed error type, 1 April 2022 to 31 March 2023

Tier 1: Employer (1 notification)

Tier 2	Tier 3
Employer's responsibility (1)	Inadequate procedures (1)

Tier 1: Referrer (19 notifications)

Tier 2	Tier 3
Incorrect information (10)	Failure to cancel (10)
Incorrect referral (9)	Wrong patient (7) Wrong requested modality (2)

Tier 1: Practitioner (1 notification)

Tier 2	Tier 3
Justification (1)	Incorrect justification (1)

Tier 1: Operator (21 notifications)

Tier 2	Tier 3
Pharmaceutical/Contrast (18)	Administration (10) Preparation (8)
Clinical history (1)	Failure to check history/details (1)
Patient checks (1)	Patient ID error (1)
Pre-exposure checks (1)	Wrong use of equipment (1)

Tier 1: Equipment (19 notifications)

Tier 2	Tier 3
Equipment related (19)	Hardware (13) Ancillary failure (4) IT failure (1) Software (1)

Tier 1: Other (16 notifications)

Tier 2	Tier 3
Administrative staff error (5)	RIS input error (3) Other admin error (2)
Patient related (3)	Patient (2) Unknown pregnancy (1)
Made in error or withdrawn (1)	Duplicate/other (1)
Test results (1)	Request based on incorrect results (1)
Other (6)	Not listed (6)

Total notifications 77

Source: CQC SAUE notifications

Licensing notifications

Employers can notify us voluntarily about licensing breaches using a separate webform, as this is outside of the process for statutory notification of SAUEs. We have received only a small number of notifications in this area, but key themes included:

- omitting certain procedures from the application form when applying for a new or renewed licence
- carrying out procedures under a research licence that has expired after the trial had ended, without applying for a new licence for routine use

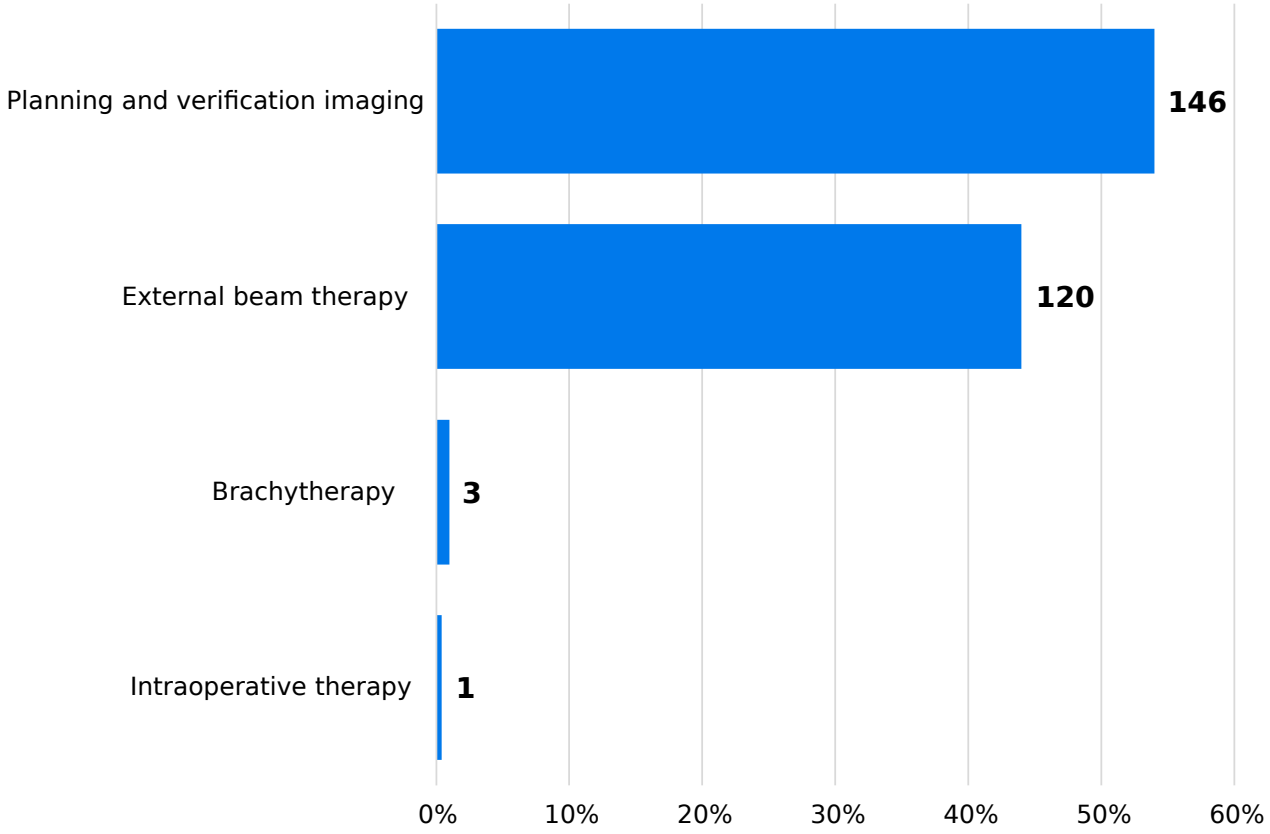
- using an incorrect radiopharmaceutical that was appropriate for the type of study, but different from that specified on the employer licence.

Employers must review licences regularly, so they are aware when all licences are due to expire – not just employer licences. When renewing or applying, individuals should take care to include all relevant procedure codes.

Notifications from radiotherapy

- 270 notifications received (182 notifications received in 2020/21)
- represents 37% of all notifications received
- 94% of notifications were from NHS acute trusts
- planning and verification imaging accounted for 54% of all radiotherapy notifications received

Figure 6: Notifications from radiotherapy by sub-modality, 1 April 2022 to 31 March 2023



Source: CQC SAUE notifications data 2022/23

Note: Figures may not add to 100% due to rounding

Types of error

In 2022/23, we received more notifications in radiotherapy than the previous year. This was almost entirely in planning and verification imaging, which increased from 110 to 146 notifications. This was due to a continued increase in the use of short course fractionation regimes, for example five fraction breast treatments. Furthermore, if any additional image needs to be taken because of equipment or procedural failure when carrying out these regimes, it triggers the notification threshold.

Figure 7 shows the number of detailed errors where tier 1 is the causative factor, with tiers 2 and 3 the contributory factors.

Figure 7: Notifications from radiotherapy by detailed error type, 1 April 2022 to 31 March 2023

Tier 1: Referrer (19 notifications)

Tier 2	Tier 3
Incorrect information (8)	Failure to check relevant patient RT history (8)
Incorrect referral (11)	Not in accordance with guidelines (6) Wrong treatment protocol or dose requested (5)

Tier 1: Practitioner (5 notifications)

Tier 2	Tier 3
Justification (5)	Failure to cancel radiotherapy (2) Incorrect justification (1) Justify/authorise wrong plan or treatment protocol on prescription (2)

Tier 1: Operator (178 notifications)

Tier 2	Tier 3
Patient checks (2)	Patient ID error (2)
Pre-exposure checks (10)	Wrong patient position/set-up/protocol (9) Wrong use of equipment (1)
Planning (37)	Inappropriate plan generated (17) Inappropriate verification carried out (7) Incorrect data transfer/input (10) Wrong dataset used (3)
Pre-treatment (11)	Incorrect scan protocol selected/procedure followe d (2) Marking of patient or immobilisation device (8) Positioning of patient (1)
Treatment (118)	Geographical miss - no verification image (5) Geographical miss - shift error (8) Geographical miss - verification image offline (14) Geographical miss - verification image online (11) Incorrect immobilisation applied (47) Incorrect verification image type selected (25) p-ID/queuing error (7) Skin app treatment (1)

Tier 1: Equipment (52 notifications)

Tier 2	Tier 3
Equipment related (52)	Ancillary failure (2) Hardware (24) IT failure (1) Software (25)

Tier 1: Other (16 notifications)

Tier 2	Tier 3
Administrative staff error (1)	Other admin error (1)
Clinically significant (1)	Not related to other (1)
Made in error or withdrawn (8)	Below threshold (1) Duplicate notification/other error (7)
Patient related (4)	Patient (2) Unknown pregnancy (2)
Other (2)	Not listed (2)

Total notifications 270