

Post-Mortem CT for coronial death investigation: A local authority managed service evaluation

Kelly, K.^a, England, L.^a, Viner, M.^{a b c}

- a. East London Forensic Centre, London Borough of Waltham Forest, Queens road, London, England E17 8QP, UK
- b. Cranfield University, College Road, Cranfield, Bedford, England MK43 0AL, UK
- c. Institute of Dentistry, Queen Mary University of London, The Royal London Dental Hospital, Turner Street, Whitechapel, London, England E1 2AD, UK

Highlights:

- Coronary Angiography was required for roughly 1/3rd of examinations.
- Average unenhanced exam length was around 12 min.
- Average enhanced exam length was around 30 min.
- 15% of examinations required further invasive examination.
- Of these 80% showed at least partial pathology-radiology concordance.

Abstract:

Introduction Post-mortem CT (PMCT) is increasingly used in coronial death investigations. This service evaluation assesses the new PMCT service at the East London Forensic Centre (ELFC), focusing on turnaround times, conversion rates to invasive post mortems, and radiology-pathology concordance. The goal is to measure key performance indicators and guide future service development. Methods Data from 356 cases were retrospectively reviewed using emails, Civica, and a PMCT log. Information on scan and report timings, conversion rates, and radiology-pathology agreement was analysed. The impact of contrast-enhanced PMCT on workflow was also assessed. Timing data were grouped into September–January, with January separated due to holiday-related delays. Forensic and non-East London cases were excluded. Results Of the 356 cases, 35% underwent angiography. Unenhanced scans averaged just under 13 min; angiography scans took nearly 30 min. 15% required further invasive examination. Among these, nearly 80% showed at least partial radiology pathology concordance, with 6 fully concordant cases. The average turnaround from start to cause of death determination was 4.2 days. Conclusion PMCT is an effective alternative to traditional post-mortems, though 15% of cases still required invasive follow-up. Most showed good radiology-pathology agreement. Delays in January highlight operational challenges. ELFC's turnaround aligns with other services, affirming PMCT's feasibility in coronial settings. Continuous refinement of case selection is needed to reduce conversion rates. Further research should explore PMCT failure rates and compare outcomes with traditional post-mortems. Implications for practice The service evaluation supports a local authority managed service which compares to existing, successful models elsewhere in the country

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Introduction

The use of post-mortem computed tomography (PMCT) for death investigation within England and Wales has been well documented since the early 21st century ^(1,2). In 2024 31% of deaths, in England and Wales, were reported to the coroners service. Of these, 46% (81,185) were subject to a post-mortem examination, almost 20% of all post-mortem examinations included less invasive techniques and just over 10% were carried out with only less invasive techniques such as CT scanning ⁽³⁾. From 2016 to 2024 there has been a 1837% increase in number of PMCT examinations carried out across England and Wales, proving an increasing demand for these examinations. ^(3,4) PMCT has well described benefits within literature especially for severely traumatic deaths, charred remains or those which include firearms^(5,6)

The Royal College of Pathologists (RCPATH) 2021-2024 workforce census showed that 19% of Histopathologists are looking to retire in the next 5 years. With an average retirement age of 63, 29% of histopathologists are over the age of 55 so can give an idea of how many we may see retiring within 5-10 years ⁽⁷⁾.

With the number of deaths not decreasing ⁽⁸⁾, coupled with a growing workforce shortage in the histopathologist profession, an alternative to the traditional death investigation model is needed to keep up with demand.

The East London Forensic Centre (ELFC), in April 2024, became the first facility of its kind in London, and is only the second facility of its kind entirely operated and managed by the local authority, within England and Wales. Well established services, such as Leicester and Preston, are located within NHS (National Health Service) facilities and their benefits are well described ⁽⁹⁾. Worldwide, dedicated post-mortem imaging facilities are seldom seen, with eminent facilities including the Victoria Institute of Forensic Medicine (Australia) and the Virtopsy® group⁽¹⁰⁾ located at the Institute of Forensic Medicine at the University of Zurich. Whilst the coroner remains in control of what cases are referred for either scan or invasive medicolegal autopsy examination, services are traditionally described as either 'pathologist led', whereby a pathologist vets cases and provides a cause of death (CoD) based on a radiology report, or 'radiologist led' whereby there is no pathologist involvement, unless an invasive medicolegal autopsy examination is required. A good example of a radiology led service is the Preston model, where cases are vetted by a radiographer, the external examination is performed by the anatomical pathology technician (APT), and the radiology report and subsequent CoD is given by the radiologist. We describe our service as pathologist led, however cases are vetted first by

a radiologist and subsequently reported by them, the final CoD is then produced by the Pathologist.

ELFC is fully managed by the local authority, they keep the entirety of any funds generated and in turn, benefit the wider council and its residents. The facility primarily serves the East London Coroners, at no cost to the next of kin (NoK). Prior to the opening of the facility, only cases specifically requested as non-invasive by the deceased's family were undertaken at local hospitals on an ad-hoc basis and at additional cost. Our hours of operation are traditionally a 9 to 5 Monday to Friday, with requests for scanning outside of these hours taken on a case-by-case basis. There has, as of writing, been no need to scan outside core hours.

Referrals from the East London coroner's office are sent to our administrative staff for appropriate vetting for either CT or invasive medicolegal autopsy. Rarely, a case may be specifically instructed for an invasive medicolegal autopsy by the coroner. Due to this being new ground for the East London area, including for the pathologists who would be issuing a CoD, it was decided that the vetting of the scans as either suitable or unsuitable for CT would fall upon consultant radiologists experienced in PMCT. It is crucial that the radiologist vetting the scans have all available information to appropriately assess each case, including, but not limited to, coroners' instruction, death summary, general practitioner (primary care physician) summary and any other hospital/medical notes in relation to said case. A list of exclusion criteria can be seen in Appendix 1, which underwent an overhaul due a larger than anticipated number of CT cases being converted to invasive medicolegal autopsy following a scan; multi disciplinary team meetings were utilised to inform additional exclusion criteria. ELFC does not undertake PMCT ventilation.

Once vetted as suitable, the relevant coroner's officer is informed, who then arranges transfer to the facility, if they were resting in a neighbouring mortuary. Due to the large workflow at ELFC, pathologists are booked on most days, for both invasive medicolegal autopsy and external examinations for PMCT cases. They usually undertake the external examination on whoever is present at the mortuary, workload depending, as it takes a relatively short amount of time.

As per RCPATH guidance ⁽¹¹⁾ all cases undergoing PMCT firstly require an external examination performed by a qualified pathologist. Although a case may have been deemed suitable for PMCT, the pathologist holds ultimate responsibility in providing a CoD and in rare circumstances they may decide a case would be better suited for an invasive medicolegal autopsy. To ensure cases are processed in a timely manner, the instructions from the East London jurisdiction are worded as such that an invasive medicolegal autopsy is approved if CT is deemed unsuitable at any stage.

The aim of this service evaluation is to measure key performance indicators (KPI) of the service to look for areas of improvement and to set a standard to which future, similar services can compare to. The data was retrospectively collected from cases which were scanned since the 1st of October 2024 to the 31st of January 2025.

The KPIs measured in this evaluation are:

- Standard 1: Less than 10% of cases requiring an invasive medicolegal autopsy following PMCT.
- Standard 2: The time between when we can start* a PM examination and when we receive radiology report is within 72 hours.
- Standard 3: Time between when we can start* a PM examination and when we receive Pathologist CoD is within 120 hours.

* = start time is when the mortuary is in receipt of the body and the coroner's instruction to PM, as an examination cannot begin without both, and the mortuary is not in control when either are received.

Methods

As part of standard workflow, all referrals are received by e-mail and then uploaded to Civica (Civica v9.1, 2021). The Civica system is used as an electronic mortuary case management system which allows the mortuary staff to keep track of the admitted deceased to the facility, audit their stay in the facility and keep track of their relevant documentation and status, as in, if they're awaiting a certain examination, awaiting to be released/collected and if there are any outstanding tasks in relation to their examinations. Modifications were made to Civica to allow cases to be picked up by the modality (CT scanner) and function like a traditional Radiology Information System (RIS) which is commonplace in radiology departments, where orders are created and populate a worklist on the scanner. Cases are also recorded into a spreadsheet 'scanning log' (Microsoft Excel v2501, 2025) with the information and times being manually populated from the relevant documents sent via e-mail, including the coroner's instruction to post-mortem, general practitioner (GP) summary, and other supplementary documentation. Information includes patient identification, coronial jurisdiction, CT protocol, radiologist and pathologist performing/reporting, and relevant timings. Scanning time data was collected prospectively (i.e. date of instruction, date of arrival, start time for mortuary, date of external, date of scan, end of scan, radiologist informed). Whereas reporting times were collected retrospectively (i.e. date and time of report, pathologist CoD) due to the nature of the workflow. These times were collected from relevant e-mails or manually input into the scanning log when a task completed, such as the start and end time of a scan. All data was subsequently collected from the scanning log.

The 'start time for mortuary' is deemed as the time where the mortuary is in receipt of both the PM instruction and the body, as an examination cannot commence without both being present.

The time noted for when the mortuary received the instruction was taken from the email initially sent by the coroner's officer. The time of the body arriving was taken from the admittance notes within Civica. The time for the external examination was manually input after verbal confirmation with the pathologists. The total time in scan room was calculated from when the body entered the PMCT scan room, to when it left. Staff use Civica to notify the relevant radiologist that a scan had been completed and was ready to report. The time of this action would be calculated against the time of the report being received by the mortuary via email, to give the length of time to receive a radiology report. Once forwarded to the pathologist, the time of their email reply with the final CoD was calculated against the 'start time' to give an overall time for a case.

Once a deceased arrived, the pathologist would be booked for an external examination. Following external examination, a qualified radiographer conducts the CT examination. For coronary angiography (PMCTCA), radiographers are trained to undertake catheterisation for these cases. Previously, this was done in the PM room by an APT. Due to high volume of work, it would not be uncommon to wait a few hours for APTs to be free to catheterise. With radiographer led catheterisation, the entire examination concludes quicker. Keeping the deceased on the CT table allows for quick visualisation of the catheter in difficult cases, as repeated catheter check scans can be undertaken. A thorough training programme and competency assessment is in place for all those undertaking catheterisation, with cut-down techniques supported by trained APTs and the techniques needed for catheter placement, initial checking of placement and injection of contrast media taught by the lead radiographer.

All catheterisation and angiography was performed within the HTA licensed premise. A UnoQuip single use all silicone foley catheter 16fr (400mm length, 30ml balloon) is used, catheterisation followed a well described and published method⁽¹²⁾. Neat contrast (Omnipaque 300/350), which was unused and destined for pharmaceutical waste was kindly donated by 2 local hospitals, approximately 17 Litres was collected at the start of the service. The neat contrast is then diluted in a ratio of 1:20, 1 part contrast to 20 parts water. For the positive contrast run, 200ml of this contrast solution is used for the positive run and 300ml of air is injected for the negative run, a common issue to occur is that the Right Coronary Artery (RCA) can sometimes fail to fill on the positive run and the left coronary branches would fail to fill on the negative run, to alleviate this, and if staffing levels would allow, individuals would be placed in a right lateral decubitus position, where gravity would help subsequent positive injections fill the RCA, on the negative run this would help air travel up into the left branches.

All scans (regardless of angiography and except for private referrals in which only limited areas had been consented for) cover the areas of interest in 4 overlapping blocks, as follows:

- Vertex to mid neck (to include whole mandible)
- Base of skull to mid chest
- Thorax, Abdomen, Pelvis
- Lower limbs (to include iliac crests superiorly and toes inferiorly)

All times were calculated in hours, including weekend and bank holidays (as some reports would be sent and received out of hours) and displayed in 'HH:MM:SS' format. Both PMCT report and pathologist CoD times were gathered from the time the respective e-mails. In review, the minimum, maximum, and mean times were calculated.

The data was reported collectively (September 2024- January 2025) and any result which concerned timings were further split into time periods September 2024- December 2024 and January 2025. January 2025 was separated due to delays throughout the pathway due to holidays and staff availability. The data given between September and December 2024 will give values which are more representative of the rest of the year. All scanning data was retrospectively collected into a separate spreadsheet, with patient identifiable data removed. The mortuary record number (MRN) was included to enable further data scrutiny. Between September 2024 and January 2025, a total of 470 individuals were scanned at ELFC. Excluding forensic cases and non-East London Coronial Jurisdiction, 356 cases remained for evaluation. September and December 2024 yielded 256 scans, January 2025 had 100 scans.

Data was also analysed by number of studies requiring contrast enhancement, to see how this affected overall scan time. Unenhanced scans include whole body, non-contrast scans $\pm$ calcium score, whereas enhanced scans include angiography in addition to the unenhanced scans.

Results

Demographics

Of those scanned, males accounted for 66.76% (n=239) and females 32.40% (n=116) of the demographic (Table 1). The mean age for all patients was 66.95 (range 18-97, including one unknown individual). Males had a mean age of 65.47 (range 18-91) and females a mean age of 70.51 (range 18-97).

	Total	%
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Male	239	66.76%
Female	116	32.40%
Unknown	1	0.28%

Table 1: Patient demographics

	Overall	%	September-December 2024	%	January 2025	%
# Scans	356	100.00%	256	100.00%	100	100.00%
# Enhanced	123	35.00%	83	32.42%	40	39.60%
# Unenhanced	233	65.00%	173	67.58%	60	59.41%

Table 2: PMCT scans by contrast enhancement

For all time periods, 34% (n=123) of cases required angiography, with 39.6% (n=235) of January 2025 cases requiring angiography (Table 2). However, this does not consider cases where catheterisation or angiography techniques have failed.

Examination length

PMCT examination lengths ranged from 6 minutes to 3 hours and 3 minutes, with an average time of just under 13 minutes for unenhanced cases, and 29 minutes for angiography cases (Table 3).

	Overall (HH:MM:SS)	September-December 2024 (HH:MM:SS)	January 2025 (HH:MM:SS)
Unenhanced	0:12:41	0:13:07	0:11:24
Angio	0:29:00	0:27:01	0:33:12

Table 3 Average examination length per examination type

Cases requiring invasive medicolegal autopsy following PMCT.

	Overall	%	September-December 2024	% Period	January 2025	% Period
No autopsy Required	302	84.83%	215	83.98%	87	87.00%
Autopsy Required	54	15%	41	16.02%	13	13.00%
Total	356		256		100	

Table 4: Number of cases requiring invasive medicolegal autopsy following PMCT, per period

15% (n=54) of cases went to invasive medicolegal autopsy after PMCT between September 2024 and January 2025 (Table 4). Between September and December 2024 16.02% (n=41) of cases went for invasive medicolegal autopsy after PMCT, in January 2025 13.00% (n=13) cases went for invasive medicolegal autopsy after PMCT.

Cases transferred out of facility for invasive medicolegal autopsies and cases still pending test results (e.g. toxicology and histopathology) were excluded as the outcomes were not available. This removed 30 cases (September - December 2024 n=24, January 2025 n=4).

	Overall	%	September- December 2024	% Period	January 2025	% Period
Do not match	5	20.83%	3	17.65%	2	28.57%
Mostly match	13	54.17%	10	58.82%	3	42.86%
Completely match	6	25.00%	4	23.53%	2	28.57%

Table 5: PMCT reports matching Pathologist CoD

Overall, between September 2024 and January 2025, almost 80% of cases showed at least a partial concordance between radiology and pathology results with a complete concordance in 25% of cases.

Case	PMCT Findings	Pathological finding	Report Match
1	Pulmonary oedema	Pulmonary embolism	P
2	Duodenal ulcer, acute pancreatitis	Cardiac arrest, chronic pancreatitis	P
3	Chronic Obstructive Pulmonary Disease, no features of Congestive Cardiac Failure, possibility of Pulmonary Embolism and Deep Vein Thrombosis	Chronic Obstructive Pulmonary Disease, Congestive Cardiac Failure.	P
4	Cardiogenic pulmonary oedema	Unascertained	D

5	Pulmonary fibrosis, Chronic Obstructive Pulmonary Disease, bronchiectasis	Acute on chronic respiratory failure	M
6	Intrathoracic haemorrhage	Haemothorax, dissected thoracic aorta	M
7	Bronchopneumonia	Bronchopneumonia	M
8	Congestive Cardiac Failure	Acute cardiorespiratory failure	D
9	Left ventricular hypertrophy	Hypertensive heart disease	P
10	Metastatic cancer, multiorgan failure	Bronchopneumonia, Pyelonephritis, hydronephrosis, Chronic Obstructive Pulmonary Disease, Ischaemic Heart Disease	D
11	Frailty, hypertension, Atrial Fibrillation	Bronchopneumonia, Chronic Obstructive Pulmonary Disease, Atrial Fibrillation, Chronic Kidney Disease, aortic valve stenosis	P
12	Perforation of colon, peri-colic abscess	Bronchopneumonia and colonic abscess, Chronic Obstructive Pulmonary Disease, congestive cardiac failure, colonic cancer	P
13	Congestive Cardiac Failure, haemorrhagic pleural effusion, haemorrhagic free fluid within the peritoneal cavity	Pulmonary Embolism, Congestive Cardiac Failure, pulmonary infarction	P
14	Pulmonary oedema, possible Deep Vein Thrombosis	Pulmonary Embolism, spontaneous Deep Vein Thrombosis	P
15	Coronary Artery Disease, no features of Congestive Cardiac Failure	Acute cardiac failure, Ischaemic Heart Disease, Coronary Artery Disease, Chronic Kidney Disease, Chronic Obstructive Pulmonary Disease	M
16	Stenosis of the Left Circumflex, bronchiectasis	Pulmonary Embolism, Deep Vein Thrombosis, hypertension, old stroke	D
17	Emphysema, pleural effusions and atelectasis	Acute cardiac failure, Ischaemic Heart Disease, severe cad, mild pneumonia, diabetes, hypertension	P
18	Unascertained	Unascertained	M
19	Hypoxic ischaemic injury, Congestive Cardiac Failure, intraperitoneal haemorrhage	Unascertained	D
20	Emphysema	Acute upper gastrointestinal haemorrhage, severe Chronic Obstructive Pulmonary Disease (emphysema)	P
21	Congestive Cardiac Failure & Obesity	Acute pulmonary oedema, Congestive Cardiac Failure and obesity	P

22	Cardiac failure, Coronary Artery Disease, Chronic Obstructive Pulmonary Disease	Coronary artery disease, hypertensive heart disease	M
23	Emphysema	Acute pulmonary oedema	P
24	Mild Coronary Atherosclerotic Disease, Congestive Cardiac Failure, pneumonia, intraperitoneal haemorrhage	Pulmonary Embolism	D

Table 6: Summary of cases requiring further examination. M=Match, P= Partial Match, D= Does Not Match

Length of time between starting an examination and receiving radiologist CoD

	Overall	September-December 2024	January 2025
Mean	55:57:18	49:11:52	72:36:09

Table 7: Time between mortuary start time and receiving PMCT report

The mean time for reports for all time periods was 55:57:44 (Table 7). The average time for January 2025 was significantly higher at 72:36:09, where the maximum time for report was 273:17:00 (11 days), the quickest report was received 2 hours and 7 minutes after the radiologist was informed the scan was complete.

Length of time between starting an examination and receiving pathologist CoD

	Overall	September-December 2024	January 2025
Mean	101:14:31	102:45:13	97:14:01

Table 8: Time between mortuary start and receiving pathologist CoD

The times range from 13:10:00 to 816:06:00 (34 days) between being able to start a PM examination and receiving the pathologists CoD. On average, this took 101:14:31(4.2 days) (Table 8).

Discussion

Although death rates have been seen to be falling, the percentage of cases requiring post-mortem examination has increased, including the use of PMCT⁽¹⁵⁾. It can be used as a useful alternative, as is proved by the data presented here, in 2024, over 10% of all cases referred for a post-mortem examination was done so via minimally invasive techniques

only⁽³⁾. From the implementation of the scanning service at ELFC it is expected this figure to steadily increase as the majority of East London cases for examination are referred for CT in the first instance.

It should be noted that comparison of the time periods could be skewed throughout the evaluation due to the sample sizes of each period not being equal, however a census approach was used, to incorporate all available data.

Overall, it took just over 4 days for a case to complete the entire process once the mortuary was in receipt of both the instruction and the body. Between the time periods, January 2025 showed a slight improvement, which is discussed further below. Overall, there were clear delays throughout the PMCT process due to the Christmas holiday.

Examination length

For all time periods, unenhanced examination length averaged at just under 13 minutes. For angiography cases, for all time periods, average times for scans was 29 minutes. This is double the length of unenhanced scans, due to the additional scanning, techniques, and challenges, required of angiography.

Whilst no thorough data is available in published literature the for average examination time for PMCT with and without coronary angiography, this data serves as a guide for service planning for future PMCT services.

When compared to an invasive medico-legal autopsy it can be deemed a quicker examination, typically an invasive medicolegal autopsy can take between 30 minutes and a number of hours to complete, this is compounded if multiple cases are performed at the same time, post-case cleaning/decontamination and reconstruction of the deceased.

Examinations requiring invasive medicolegal autopsy following PMCT.

A key component of the service evaluation was ensuring that turnaround times were kept as low as possible. Having an invasive medicolegal autopsy examination following a scan, would undoubtedly increase an individual's total time with us, delaying their release to their loved ones.

Overall, 15% of all PMCT examinations went on for a further invasive medicolegal autopsy, this was mainly due to that no clear radiological cause of death could be drawn from the CT scan. It was noted that potentially cases in which should have had angiography that didn't due to failure (misplaced catheter, inability to insert due to patient size etc) could cause this number to increase, this was not explored during the service

evaluation. However, as angiography accounts for a third of examinations, and an even smaller proportion succumbing to failed angiography, it is unlikely that could be an issue.

Once accounting for invasive medicolegal autopsy examinations which occurred in another facility and those which are still pending histological examination, this left 24 cases to be included for this part of the evaluation. Of the 24 cases 6 PMCT reports did not match the Pathologists CoD, including one unascertained case where the Pathologists CoD overruled the PMCT report (Table 5).

Overall, PMCT reports were shown to give the same results as invasive medicolegal autopsy in 25% (n=5) of cases, however 25% (n=6) of cases came to a different conclusion than at invasive medicolegal autopsy, 54.17% (n=13) showed a partial match (Table 6). Interestingly, 2 of the cases where the reports did not match, were drug related deaths, a factor that has since been added to the exclusion criteria for scanning at ELFC. Of the remaining 4 cases, 2 were given CoDs of pulmonary embolus, a known limit of PMCT^(1,13) and the remaining cases were given other cardiothoracic based CoDs. In cases where PMCT reports matched, 5 CoDs were cardiothoracic based and one decomposed case had an unascertained death agreed upon (Table 6).

Prior to scanning, all cases are screened against exclusion criteria, an example of typical exclusion criteria can be seen within literature⁽¹⁴⁾. Compared to other services, ELFC had a higher conversion to autopsy rate. This was noted separately from the service evaluation, and during multi-disciplinary team meetings the existing exclusion criteria went under vigorous scrutiny and further additions made. Most notable was the exclusion of cases in which a drug overdose (both prescription or illicit) was likely, as it is likely that the CT would be inconclusive and as such a CoD would have to be given via toxicology. By undertaking the invasive medicolegal autopsy first, the pathologist could be satisfied that there would be nothing further they could do and could provide a short form CoD with the stipulation that toxicology results are pending.

Although higher than other services⁽⁹⁾ it is somewhat concordant with other research suggesting PMCT with targeted coronary angiography can reduce need for invasive medicolegal autopsies examinations to around the 10% mark⁽¹⁾.

It is hypothesised that the increased scrutiny of cases going for CT will reduce the number of cases that do have a CT scan to require further invasive medicolegal autopsy examinations, this will be explored in future research.

Where cases required invasive medicolegal autopsy were scrutinized; reports were deemed not to match when no CoD was given by PMCT, or alluded to or ruled out, that were later proven by an invasive medicolegal autopsy. Reports were deemed as 'mostly matched' when there was shared diagnosis, but the overall, or primary, CoD was not agreed upon.

Turnaround time for radiology reports

The times varied between 4 hours and almost 12 days. Although the maximum time for receiving a radiology report was in October, and is not attributed to the holiday period delays, times in January were noticeably longer, with a mean time of 49 hours from September to December 2024 and 72 hours in January 2025. Due to the delays caused by the Christmas period there was a backlog of cases to process in the new year, increasing case load put an extra demand on all aspects of the service, including the reporting of cases.

Turnaround time for pathologist decision on Cause of Death

This is the only standard where January 2025 cases were completed quicker, with an average time of 97 hours, compared to September - December 2024, which had an average time of 102 hours, overall the average from September 2024 to January 2025 was 101 hours. There were ongoing efforts from all individuals to ensure quick turnaround on cases due to the backlog, it may also be attributed to the Christmas period that would have delayed receiving the CoD. Whereas in January there was quick recovery from the Christmas backlogs. It is believed that due to annual leave of pathologists in December caused an increase in being able to get the deceased an external examination prior to scanning.

Set side by side with the Preston model ⁽¹⁶⁾, the timings were similar. Preston had an average time of 4.3 days from scan to report (in their model, the radiologist provides the CoD), whereas for ELFC this was 4.2 days. It is worth noting that the standards are not directly comparable due to the addition of pathologists in the ELFC model to perform the external examination prior to scanning and their requirement to provide a CoD from a radiology report.

Conclusion

In April 2024 ELFC became only the second PMCT facility in the country to be managed directly by the local authority. As part of initial operating period this service evaluation looked at key areas which are important to the running of such services. In summary, two of the three standards were met. The issue of the slightly higher than average number of cases requiring further invasive medicolegal autopsy examination is still undergoing scrutiny as the centre tightens its exclusion criteria. This is an ongoing process involving all stakeholders and will be regularly reviewed; it is hoped that in future evaluations of the service this will decrease to below 10% following recommendations made from this service evaluation.

Recommendations

Further communication and education of coronial and mortuary staff of PMCT exclusion criteria could also facilitate the decrease in number of PMCT cases requiring additional invasive medicolegal autopsy. This would prevent delays for non-suitable cases.

Further research could be undertaken into PMCTA failure rates, how often they occur and why, to highlight and provide improved learning and technique, to minimise PMCTA failure rates and examination times.

Comparison of PMCT to non-PMCT service times from referral to CoD, could provide further evidence to the benefits of PMCT services.

Continued encouragement and facilitation of open communication of staff availability (namely around bank holidays), could allow for better planning and streamlining of workloads to minimise delays.

For subsequent service evaluations and to inform workforce planning, it is recommended to review PMCT examination lengths when performed by just 1 radiographer or 2 radiographers to see if 1) the PMCT examination time is reduced and 2) to see if an increased caseload can be performed in a single day.

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Generative AI statements:

During the preparation of this work the author(s) used ChatGPT in order to improve readability of the abstract and to keep it under 250 word limit. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the published article.



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Kelly, Keiran; England, L.; Viner, Mark

2026-03

Elsevier

<https://doi.org/10.1016/j.fri.2025.200668>

Kelly K, England L, Viner M. (2026) Post-mortem CT for coronial death investigation: a local authority managed service evaluation. Forensic Imaging, Volume 44, March 2026, Article number 200668