

# **Diagnostic Imaging Dataset Annual Statistical Release 2020/21**

NHS England and NHS Improvement



## **Diagnostic Imaging Dataset**

### **Annual Statistical Release 2020/21**

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## 1 Introduction

The Diagnostic Imaging Dataset (DID) is a monthly data collection covering data on diagnostic imaging tests on NHS patients in England. It provides estimates of GP usage of direct access to key diagnostics tests for cancer, for example chest imaging, non-obstetric ultrasound and Brain MRI.

The DID was introduced to monitor progress on *Improving Outcomes: A Strategy for Cancer*<sup>1</sup>. This strategy set out how the Government, NHS and public can help prevent cancer, improve the quality and efficiency of cancer services and move towards achieving outcomes that rival the best. One aspect of that is to ensure that GPs have access to the right diagnostic tests to help them to diagnose or exclude cancer earlier. The DID therefore reports on imaging activity, referral source and timeliness.

These data are collated from Radiology Information Systems (RISs), which are hospital administrative systems used to manage the workflow of radiology departments, and uploaded into a database maintained by NHS Digital.

This publication finalises estimates of imaging activity in 2020/21.

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<sup>1</sup> [Improving Outcomes: A Strategy for Cancer](#), first published 12 January 2011.

The cancer strategy is now part of the NHS Long Term Plan, see <https://www.longtermplan.nhs.uk/online-version/chapter-3-further-progress-on-care-quality-and-outcomes/better-care-for-major-health-conditions/cancer/>.

## 2 Headline Messages

### For all imaging activity:

- 34.9 million imaging tests were reported in England in the year to March 2021, compared with 44.9 million in the previous year, a decrease of 22%. This reduction reflects the impact of the COVID-19 pandemic, with services significantly affected from mid-March 2020.
- Plain Radiography (X-ray) was most common with 16.8 million procedures (down 27% from 2019/20), followed by Diagnostic Ultrasonography (Ultrasound, 8.2 million, down 20%), Computerized Axial Tomography (CT Scan, 5.6 million down 6%) and Magnetic Resonance Imaging (MRI, 3.0 million, down 21%)
- The median period between the request being made and the test being performed varied from the same day for X-ray, Fluoroscopy and Medical Photography up to 16 days for MRI scans and Nuclear Medicine in 2020/21.
- Across all types of imaging, emergency admissions and inpatients have shorter waits than outpatients and referrals made under GP direct access arrangements. During 2020/21, all waits were initially shorter, as the focus was on the most urgent cases, but then became longer as routine elective activity resumed and the backlog started to be cleared.
- The median period from a test being performed to the report being issued varied from the same day for CT scan, Ultrasound, Fluoroscopy and Medical Photography up to 2 days for MRI in 2020/21 (down from 3 days in 2019/20).

### For the key tests<sup>2</sup> Chest X-ray or CT, Brain MRI and Non-obstetric Ultrasound of the Abdomen and/or pelvis or Kidney/bladder:

- In 2020/21, GPs requested 18.2% of all tests that may have been used to diagnose or discount cancer, under direct access arrangements. This reduction from 25.6% in 2019/20 affected all tests and reflected the impact of the COVID pandemic.
- The test most commonly requested by GPs was Chest X-ray with 1.1 million tests (down 48% from 2019/20), whilst the test with the highest proportion of GP referrals was ultrasounds that may have been used to diagnose ovarian cancer, 41% of which were requested by GPs in 2020/21.
- The median period between the request being made and the test being performed was lower in 2020/21 than in 2019/20 for most of the key tests under GP direct access arrangements except Chest X-ray, as the COVID-19 pandemic led to a focus on the most urgent cases.

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<sup>2</sup> Although these tests are used to diagnose cancer, many of the tests also have wider clinical uses. Within this dataset it is not possible to distinguish the different uses of these tests.

### 3 Annual Imaging Activity

#### 3.1 Imaging Activity by modality

- 3.1.1. 34.9 million imaging tests were reported in England in the year to March 2021, compared with 44.9 million in the previous year, a decrease of 22%. This reduction reflects the impact of the COVID-19 pandemic, with services significantly affected from mid-March 2020<sup>3</sup>.
- 3.1.2. Plain Radiography (X-ray) had the biggest share of all tests performed during the year, with 16.8 million X-rays reported in 2020/21 (down 27% from 2019/20). The next most common procedures were Ultrasound (8.2 million, down 20%), CT scans (5.6 million, down 6%) and MRI Scans (3.0 million, down 21%). Most other modalities also decreased in 2020/21: Fluoroscopy by 26%, Nuclear Medicine by 32%, SPECT by 26% and Medical Photography by 11%. Only PET-CT scans were little changed, rising 0.3%. Table 1 shows the imaging counts and growth for each modality.
- 3.1.3. April 2020 was the month with least reported activity during 2020/21 as the first national lockdown was in force. At 1.6 million tests, that was only 42% of imaging activity in the previous April. March 2021 had the most, at 3.6 million, which was 120% of activity in March 2020 and 93% of activity in March 2019. Graph 1 shows this seasonal fluctuation overall and by modality.

Further information on the tests included in these tables is given in the glossary at Section 6.3.

Monthly breakdowns of activity by modality, provider and referral source setting are given in Tables 1 - 6 (separate excel files), available from [NHS England DID website](#).

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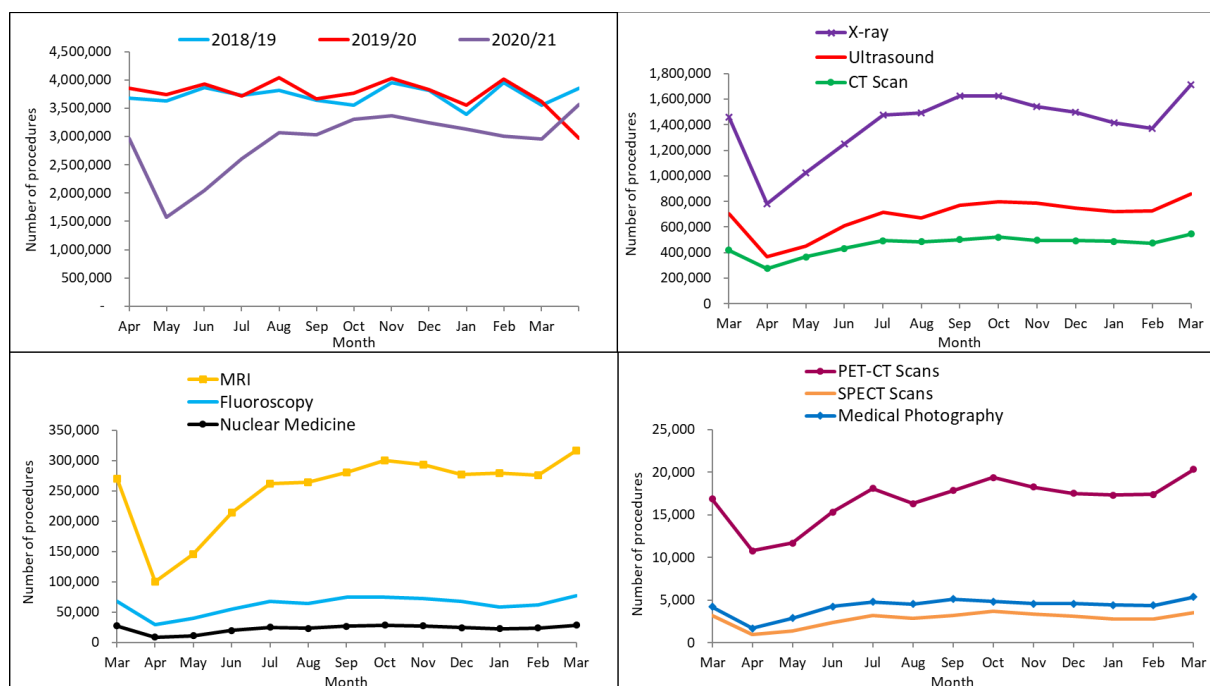
<sup>3</sup> There was little change in data completeness in this period: 99.9% in 2019/20 to 100% in 2020/21.

**Table 1: Count of NHS imaging activity in England, 2012/13 to 2020/21**

	X-ray	Ultrasound	CT Scan	MRI	Fluoro-scropy	Nuclear Medicine	PET-CT Scans	SPECT Scans	Medical Photography	% organisations included	Total <sup>1</sup>
<b>2012/13<sup>2</sup></b>	21,195,275	7,807,695	3,474,970	2,352,090	1,061,980	439,470	71,485	19,205	6,090	93.6%	36,428,260
<b>2013/14</b>	21,845,725	8,176,945	3,825,130	2,617,110	1,051,370	444,830	75,650	21,370	10,525	97.8%	38,068,660
<b>2014/15</b>	22,637,935	8,596,590	4,210,630	2,898,465	1,023,720	436,505	89,245	27,690	16,180	99.2%	39,936,960
<b>2015/16</b>	22,572,915	8,919,015	4,461,975	3,085,065	1,043,980	428,400	97,990	32,080	23,945	99.6%	40,665,365
<b>2016/17</b>	22,908,620	9,351,480	4,815,890	3,358,485	1,057,115	427,145	132,745	36,075	31,225	99.7%	42,118,780
<b>2017/18</b>	22,908,795	9,507,560	5,146,475	3,464,010	1,025,330	417,460	154,270	40,015	37,550	100.0%	42,701,465
<b>2018/19</b>	23,467,930	10,161,965	5,665,930	3,743,995	1,034,025	421,650	177,330	45,365	52,875	99.8%	44,771,065
<b>2019/20</b>	23,150,820	10,261,890	5,959,860	3,811,415	1,001,770	396,350	199,585	45,110	57,650	99.9%	44,884,450
<b>2021/21</b>	16,815,875	8,221,710	5,574,475	3,008,970	745,385	269,350	200,175	33,180	51,305	100.0%	34,920,420
<b>% Change<sup>3</sup></b>	-27.4%	-19.9%	-6.5%	-21.1%	-25.6%	-32.0%	0.3%	-26.4%	-11.0%	0.1%	-22.2%
<b>2020/21</b>											
<b>Apr</b>	779,560	365,510	275,195	100,585	29,790	8,595	10,790	965	1,685	100.0%	<b>1,572,675</b>
<b>May</b>	1,021,340	448,385	366,505	145,315	40,315	11,325	11,685	1,385	2,870	100.0%	<b>2,049,130</b>
<b>Jun</b>	1,252,350	608,900	431,550	214,630	55,480	19,575	15,305	2,335	4,255	100.0%	<b>2,604,375</b>
<b>Jul</b>	1,477,675	715,715	494,525	261,870	67,385	24,925	18,075	3,160	4,805	100.0%	<b>3,068,135</b>
<b>Aug</b>	1,491,335	673,670	485,155	264,410	64,465	23,010	16,315	2,870	4,535	100.0%	<b>3,025,765</b>
<b>Sep</b>	1,626,645	769,095	501,935	280,730	74,620	26,805	17,860	3,195	5,095	100.0%	<b>3,305,970</b>
<b>Oct</b>	1,623,295	795,365	519,630	300,030	75,060	28,440	19,365	3,705	4,825	100.0%	<b>3,369,715</b>
<b>Nov</b>	1,544,285	787,860	497,025	293,610	72,535	27,140	18,250	3,365	4,560	100.0%	<b>3,248,630</b>
<b>Dec</b>	1,498,725	749,705	493,055	276,845	68,200	24,525	17,505	3,080	4,560	100.0%	<b>3,136,205</b>
<b>Jan</b>	1,413,475	721,845	487,675	279,020	58,895	22,850	17,305	2,775	4,395	100.0%	<b>3,008,235</b>
<b>Feb</b>	1,374,045	726,515	475,275	275,510	61,855	23,755	17,390	2,780	4,375	100.0%	<b>2,961,500</b>
<b>Mar</b>	1,713,155	859,145	546,945	316,410	76,785	28,405	20,335	3,565	5,345	100.0%	<b>3,570,085</b>

**Notes:**

1. Totals do not always equal the sum of parts due to rounding.
2. 2012/13 was the first year of the DID collection and as such some of the changes since then may be due to improved coverage of the dataset.
3. % Change is between 2019/20 and 2020/21.

**Graph 1: NHS imaging activity in England, April 2020 to March 2021**

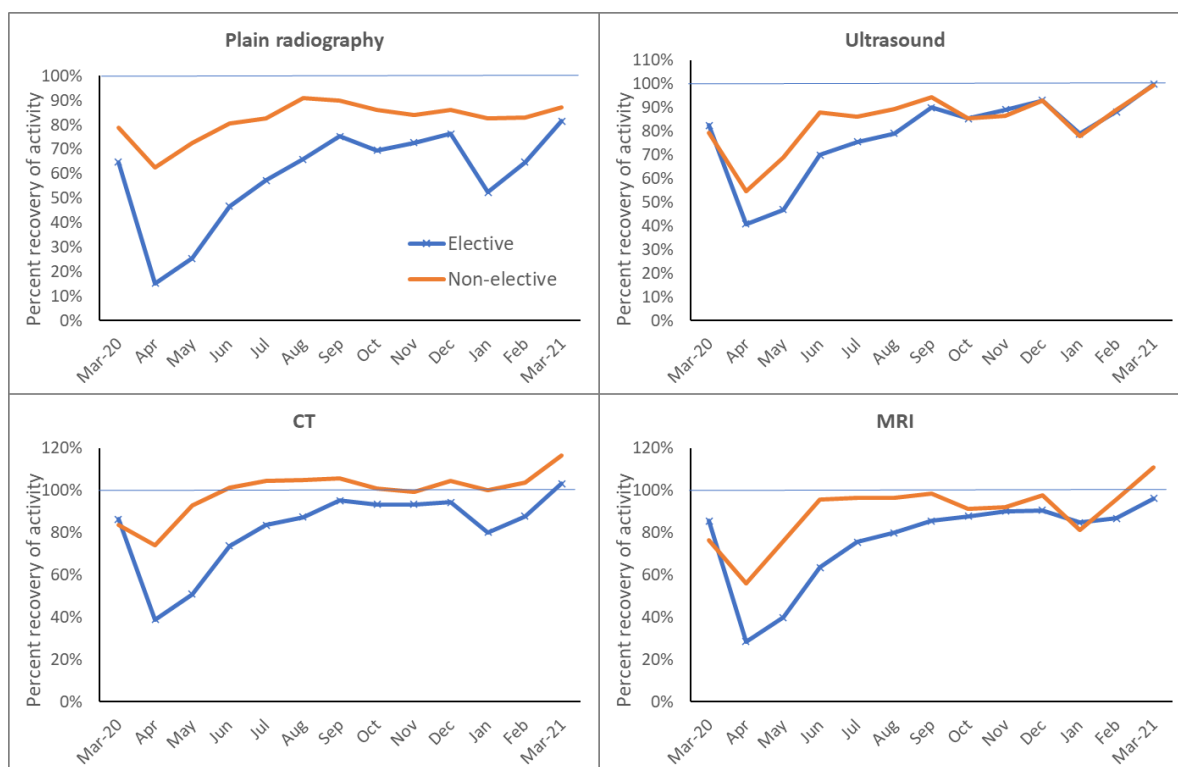
## 3.2 Imaging recovery

- 3.2.1. The COVID-19 pandemic started to impact NHS imaging service in England from March 2020, with the biggest reduction in April 2020. The reduction was greatest for elective activity, that is referrals arising from outpatient appointments or GP direct access. Referrals from A&E departments or for admitted patients<sup>4</sup> were generally less impacted, with some modalities contributing to COVID diagnostics.
- 3.2.2. The recovery of elective services during 2020/21 took longer than that of non-elective imaging, with subsequent national and local lockdowns slowing progress especially in January 2021. Graph 2 shows activity in the months of 2020/21 as a percentage of that in the same period of the previous year, for selected modalities.

<sup>4</sup> Analysis of admitted patient data suggests that imaging requests are most likely to be raised for patients admitted as an emergency, although some are elective or for other admission methods.



**Graph 2: NHS imaging activity, selected modalities by grouped Patient source setting, March 2020 to March 2021 compared with same month previous year**



#### Notes

1. Elective referrals are from Outpatients or GP direct access; Non-elective are from A&E departments or all admitted patients.
2. Activity is compared with same month of previous year, with no adjustment for working days, except March 2021 is compared with March 2019.

### 3.3 Imaging Activity by Age and Gender

- 3.3.1. 5.7 million more tests were performed on females than on males in 2020/21. The largest differences occurred for Ultrasound procedures (4.1 million more on females) and for X-rays (1.5 million more). The rate of most imaging modalities increased markedly with age; the exception was ultrasound, where the rate was highest for women aged 15 to 44. Most of the 1.5 million extra X-rays for females than males were attributable to demographic differences, especially the higher number of older women compared to older men. Conversely there were more CT, Fluoroscopy and PET-CT scans on males than females. Table 2 shows the age and gender of patients who have received diagnostic tests in 2020/21.

**Table 2: NHS Imaging activity in England by gender and age, 2020/21**

	X-ray	Ultrasound	CT Scan	MRI	Fluoro- scopy	Nuclear Medicine	PET-CT Scan	SPECT Scan	Medical Photography	Total <sup>1</sup>
Female	9,136,340	6,141,655	2,755,735	1,632,760	341,750	142,300	92,085	17,960	25,585	20,286,170
Male	7,663,600	2,019,550	2,813,405	1,373,150	402,760	126,920	108,045	15,215	25,700	14,548,345
Not known / specified <sup>2</sup>	15,935	60,500	5,335	3,060	875	130	40	5	20	85,900
0 -14	1,335,835	372,180	48,680	123,890	42,875	12,425	520	280	3,590	1,940,275
15 - 44	3,796,465	4,384,765	894,465	892,825	117,325	42,060	20,080	6,860	8,390	10,163,235
45 - 59	3,552,020	1,441,045	1,123,150	812,840	162,760	59,110	43,825	6,765	7,980	7,209,495
60 - 74	4,013,310	1,183,380	1,659,170	776,175	235,245	92,765	85,675	11,075	12,465	8,069,260
75+	4,107,670	835,170	1,844,845	401,955	186,925	62,910	50,060	8,195	18,880	7,516,610
Not known	10,575	5,170	4,165	1,280	260	80	10	5	-	21,545

**Notes:**

1. Totals do not always equal the sum of parts due to rounding.
2. "Not Specified" means that the patient did not want to reveal their gender. "Not known" means that the patient's gender was recorded as "Not known" or else was not reported.

## 4 Patient Test Times

### 4.1 Patient Test Times – Request to test

4.1.1. The DID collects data on four dates for each imaging event:

- Date of test request (made by a health care professional).
- Date of test request received (by the organisation providing the imaging).
- Date of test
- Date of test report Issued (by a health care professional interpreting the imaging output).

4.1.2. This publication is based on all imaging which had a Date of test between April 2020 and March 2021.

4.1.3. There were big differences in the median period between the request being made (or received) and the test being performed for the different tests. The median ranged from the same day for X-Ray, Fluoroscopy and Medical Photography to 16 days for MRI scans and Nuclear Medicine. However, there was also considerable variability within individual tests over the course of the year, see Table 3, largely reflecting the impact of COVID and especially the ratio of urgent to routine elective activity (see below).

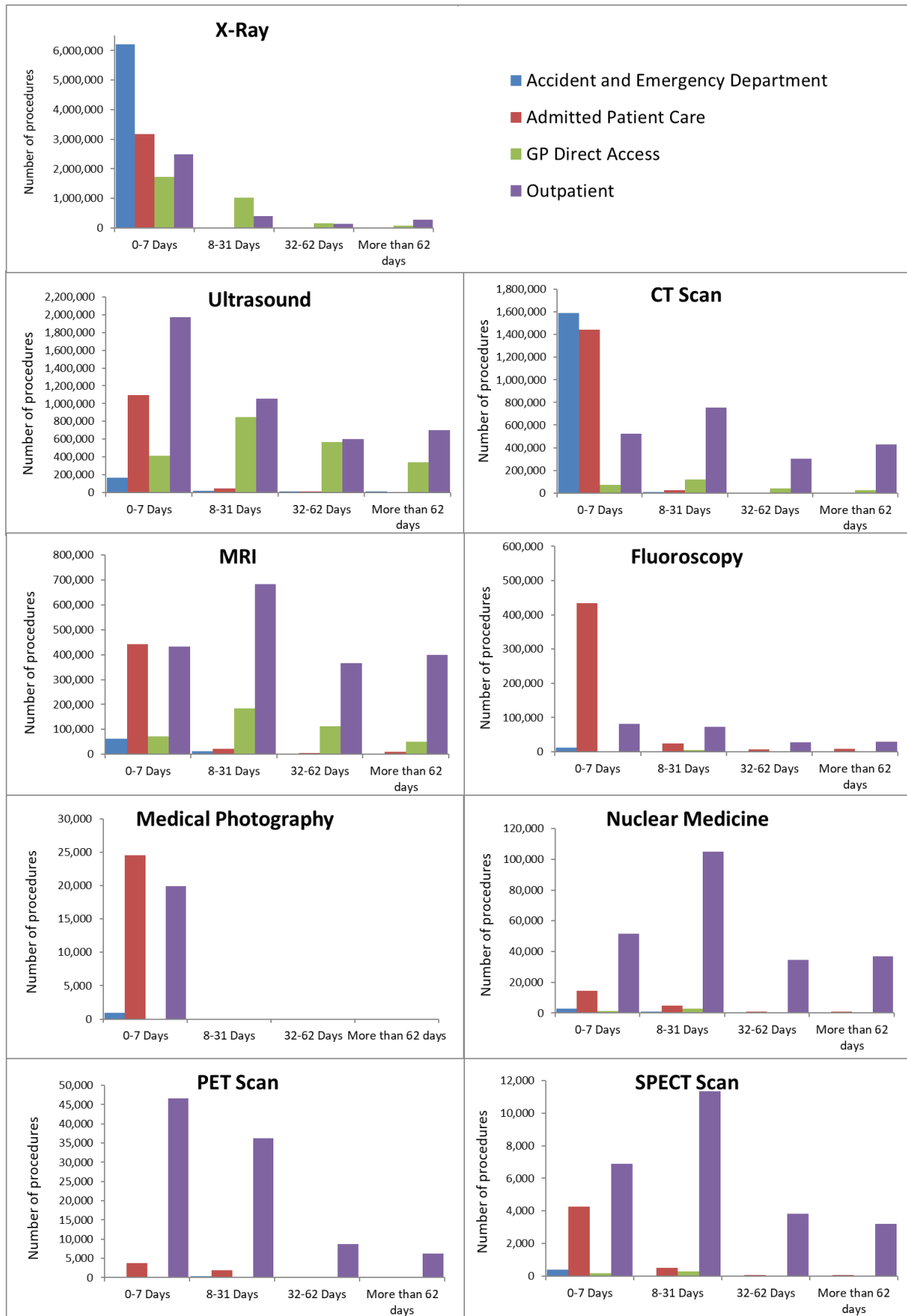
**Table 3: Median number of days between date of test request and date of test, by modality, April 2020 to March 2021**

	X-ray	Ultra-sound	CT Scans	MRI	Fluoro-scopy	Nuclear Medicine	PET-CT Scans	SPECT Scans	Medical Photography
2012/13	0	13	2	23	0	15	8	14	0
2013/14	0	13	2	24	0	14	7	17	0
2014/15	0	13	2	24	0	15	8	15	0
2015/16	0	13	1	22	0	16	7	15	0
2016/17	0	13	1	22	0	16	7	17	0
2017/18	0	14	1	21	0	18	7	17	0
2018/19	0	14	1	21	0	19	8	18	0
2019/20	0	14	1	21	0	19	8	17	0
2020/21	0	10	1	16	0	16	8	13	0
Apr	0	5	0	8	0	8	7	7	0
May	0	5	0	8	0	10	7	8	0
Jun	0	7	0	12	0	14	7	12	0
Jul	0	8	1	14	0	17	7	14	0
Aug	0	11	1	17	0	18	7	15	0
Sep	0	12	1	17	0	18	9	15	0
Oct	0	13	1	17	0	16	8	14	0
Nov	0	13	1	18	0	17	8	13	0
Dec	0	12	1	18	0	15	8	13	0
Jan	0	13	1	21	0	20	8	16	0
Feb	0	11	1	17	0	15	7	11	0
Mar	0	12	1	16	0	15	8	12	0

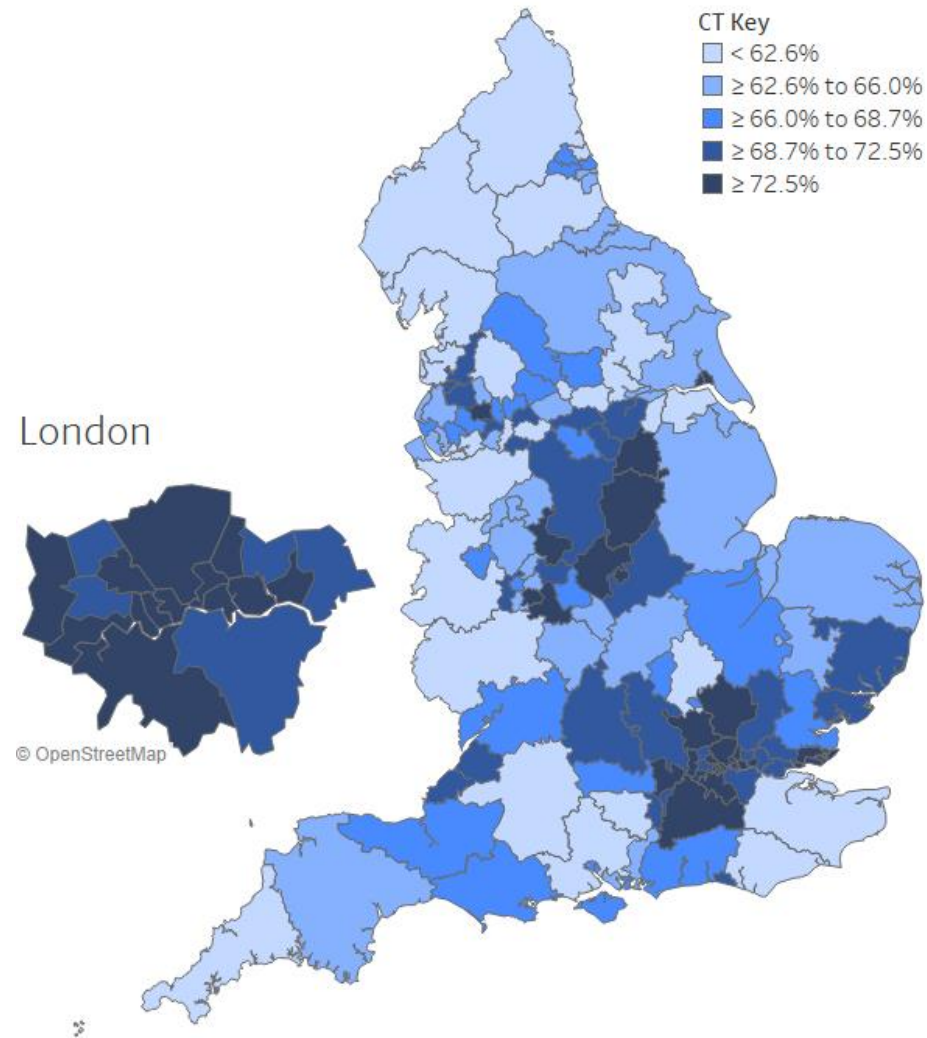
Note: Median values of 0 occur where at least 50% of activity has the same day for both 'date of test request' and 'date of test'. Where 'Date of test request' was missing in 2020/21, 'Date of test request received' was used instead. Records where both dates were missing were excluded from the median calculation.

- 4.1.4. The figures in Table 3 should not be compared to “waiting time” statistics that measure how long patients are on a waiting list for a procedure, since these figures included both planned and unplanned imaging activity. In addition, these figures exclude any cancelled or missed appointments and they count the period for individual tests not each patient appointment.
- 4.1.5. The median period between test request (or test request received) and test was lower overall in 2020/21 for Ultrasound, MRI, Nuclear Medicine and SPECT, compared with 2019/20. All of these have relatively high proportions of activity for elective purposes (over 80% GP direct access or outpatient requests) but much shorter waits for non-elective activity (requests from A&E departments or for admitted patients). During 2020/21, waits were initially shorter, as the focus was on the most urgent cases, but then became longer as routine elective activity resumed and the backlog started to be cleared.
- 4.1.6. For all modalities, patients from Accident & Emergency departments and admitted patients have shorter waits for their scan than other sources of referral. GP direct access and outpatient referrals show a longer “waiting time” distribution, affecting the median number of days from request to test for those modalities with more outpatient and GP referrals. This is illustrated in Graph 3, which shows the distribution of periods from request to test for individual procedures, by patient source setting and modality. Table 9 (separate Excel file) gives the underlying figures for these charts.
- 4.1.7. There was some regional variation in the proportion of imaging which occurred within seven days of the test being requested (or received) for CT Scans and within fourteen days of the test being requested (or received) for Ultrasound and MRI Scans. Maps 1-3 illustrate this for each CCG in England (with a fifth of CCGs in each band shown). The underlying data for these charts are given in Table 7a (separate Excel file).

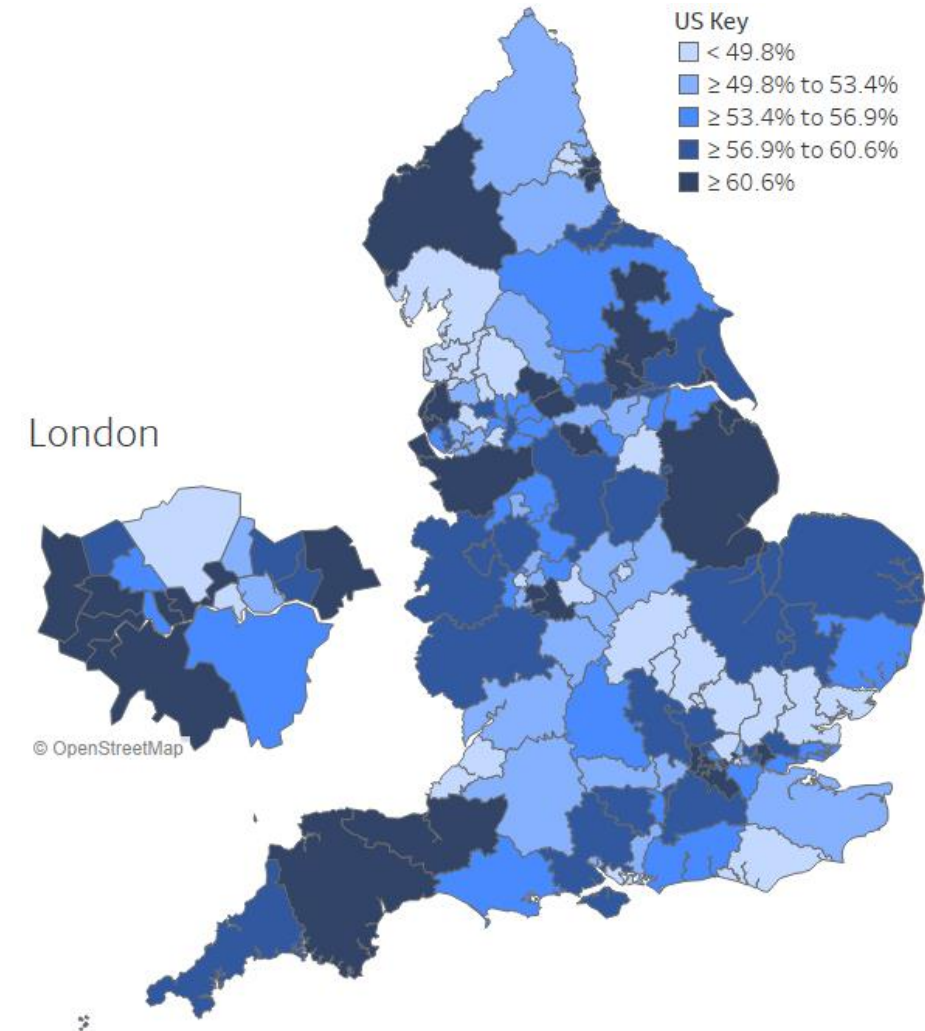
**Graph 3: Imaging activity by number of days from date of test request to date of test, by modality and source of referral, 2020/21**



**Map 1: Proportion of CT scans where date of test is up to 7 days after date of referral, for each CCG, 2020/21**

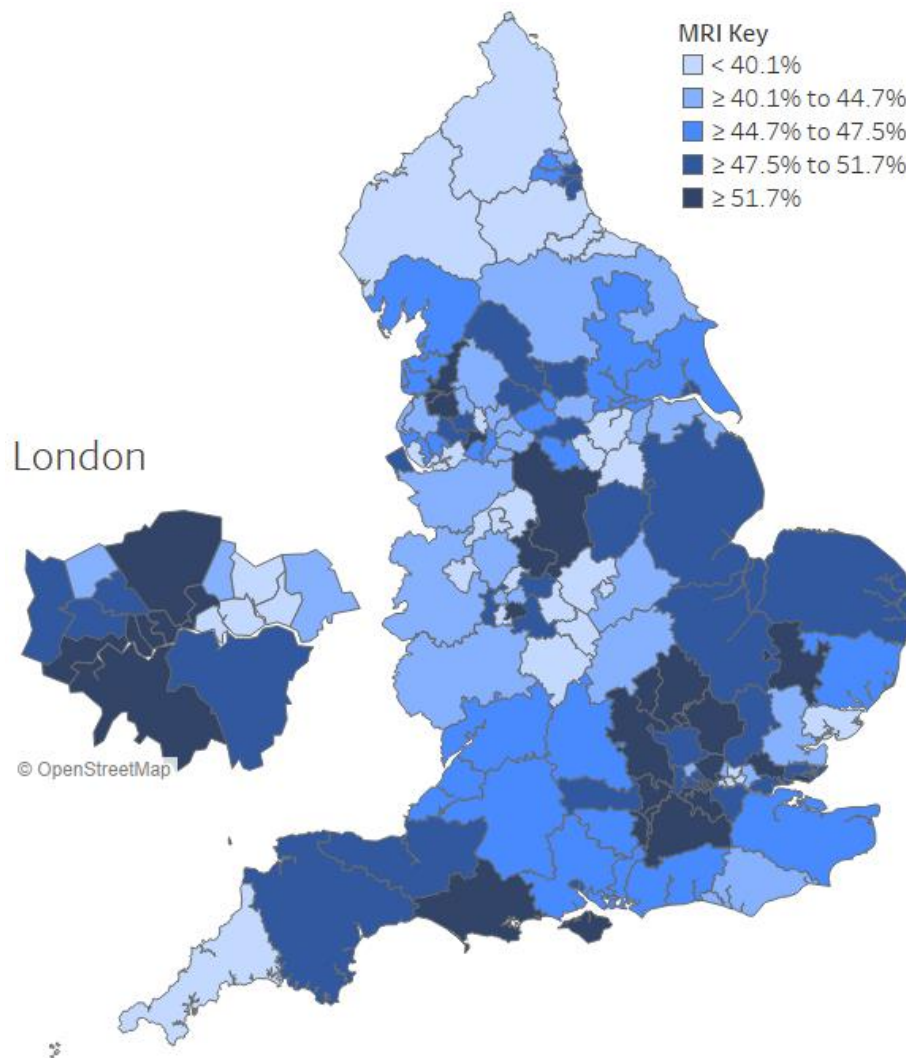


**Map 2: Proportion of Ultrasounds where date of test is up to 14 days after date of request, for each CCG, 2020/21**





**Map 3: Proportion of MRI Scans where date of test is up to 14 days after date of request, for each CCG, 2020/21**



## 4.2 Patient Test Times – Test to report

- 4.2.1. Different test types varied in the median period for the report to be issued after the test, see Table 4. For Ultrasound, CT Scans, Fluoroscopy and Medical Photography, at least half the procedures (with a report issue date) were reported the same day as the test (that is, a median of 0). For MRI the median period was 2 days and for the other modalities the median period was 1 day.
- 4.2.2. Within several modalities, the median turnaround time for a test report in 2020/21 fell as a result of the COVID lockdown and focus on urgent scans in the earliest months of the year, resuming later. However, the overall median period to report was one day lower in 2020/21 than previous years for MRI and PET-CT scans.

**Table 4: Median number of days between date of test and date test report issued, by modality, April 2020 to March 2021**

	X-ray	Ultra-sound	CT Scans	MRI	Fluoro-scscopy	Nuclear Medicine	PET-CT Scans	SPECT Scans	Medical Photography
2012/13	1	0	0	2	0	2	2	1	1
2013/14	1	0	0	2	0	1	2	1	0
2014/15	1	0	0	3	0	1	2	1	0
2015/16	1	0	0	3	0	1	2	1	0
2016/17	1	0	0	3	0	1	2	1	0
2017/18	1	0	0	3	0	1	2	1	0
2018/19	1	0	0	3	0	1	2	1	0
2019/20	1	0	0	3	0	1	2	1	0
2020/21	1	0	0	2	0	1	1	1	0
Apr	0	0	0	0	0	0	1	1	0
May	0	0	0	1	0	1	1	1	0
Jun	1	0	0	1	0	1	1	1	0
Jul	1	0	0	2	0	1	1	1	0
Aug	1	0	0	2	0	1	1	1	0
Sep	1	0	0	2	0	1	1	1	0
Oct	1	0	0	2	0	1	2	1	0
Nov	1	0	0	2	0	1	1	1	0
Dec	1	0	0	3	0	1	1	1	0
Jan	1	0	0	2	0	1	1	1	0
Feb	1	0	0	2	0	1	1	1	0
Mar	1	0	0	2	0	1	1	1	0

4.2.3. The National Imaging Board guidance states that investigations will be seen and accurately reported within as short a time as possible and stresses the importance of reporting imaging activity in a timely manner. It suggested that Inpatient and Accident & Emergency referrals should be reported the same working day whilst all other referrals should be reported by the next working day. A tolerance of 90% for this was considered reasonable.

4.2.4. Table 5 shows the percentage of reports that were issued the same day as the test and those issued by the end of the next day separately for Admitted patient and A&E referred tests and for Outpatient and GP direct access tests, for each modality. The improvement in reporting times in the early months of the year, as activity reduced because of COVID, affects elective activity as well as Admitted patient and A&E referred tests. Table 10 (separate Excel file) gives this breakdown by provider.



**Table 5: Proportion of imaging reports that were issued, either the same day as the test or by the end of the following day, by modality, April 2020 to March 2021**

**Inpatient and A&E**

Reported by:		X-ray		Ultrasound		CT Scans		MRI		Fluoroscopy		Nuclear Medicine		PET-CT Scans		SPECT Scans		Medical Photography	
		Same day	Next day	Same day	Next day	Same day	Next day	Same day	Next day	Same day	Next day	Same day	Next day	Same day	Next day	Same day	Next day	Same day	Next day
Inpatient and A&E	<b>2012/13</b>	25%	50%	91%	94%	81%	92%	64%	81%	70%	79%	58%	76%	23%	54%	75%	84%	20%	59%
	<b>2013/14</b>	25%	51%	92%	96%	84%	94%	65%	81%	71%	80%	59%	78%	28%	52%	73%	84%	48%	76%
	<b>2014/15</b>	26%	53%	93%	96%	85%	95%	66%	82%	72%	81%	60%	78%	29%	57%	67%	87%	49%	73%
	<b>2015/16</b>	28%	55%	94%	96%	88%	96%	67%	83%	72%	82%	62%	77%	35%	61%	72%	85%	52%	74%
	<b>2016/17</b>	29%	55%	94%	96%	88%	96%	65%	80%	73%	82%	64%	77%	39%	64%	76%	85%	48%	66%
	<b>2017/18</b>	28%	53%	95%	97%	88%	97%	66%	80%	73%	82%	66%	79%	36%	61%	80%	88%	52%	65%
	<b>2018/19</b>	28%	53%	95%	97%	89%	97%	69%	83%	73%	81%	66%	79%	33%	62%	78%	87%	51%	62%
	<b>2019/20</b>	28%	53%	96%	98%	90%	97%	70%	83%	75%	82%	65%	79%	28%	58%	80%	88%	52%	62%
	<b>2020/21</b>	36%	64%	97%	98%	91%	98%	75%	89%	77%	85%	69%	83%	35%	67%	83%	91%	54%	68%
	<b>Apr</b>	61%	89%	97%	98%	93%	99%	83%	95%	77%	86%	77%	90%	39%	71%	87%	96%	54%	72%
	<b>May</b>	49%	78%	97%	98%	92%	98%	81%	93%	77%	85%	72%	87%	38%	70%	87%	95%	55%	70%
	<b>Jun</b>	42%	73%	97%	98%	92%	98%	78%	92%	77%	85%	68%	83%	39%	73%	79%	86%	52%	69%
	<b>Jul</b>	35%	64%	97%	98%	91%	98%	76%	89%	78%	85%	67%	83%	33%	66%	79%	89%	57%	72%
	<b>Aug</b>	30%	57%	97%	98%	91%	98%	73%	87%	78%	85%	64%	80%	30%	61%	81%	89%	56%	68%
	<b>Sep</b>	30%	58%	97%	98%	91%	98%	74%	88%	77%	85%	65%	81%	32%	65%	81%	90%	64%	79%
	<b>Oct</b>	31%	58%	96%	98%	91%	98%	74%	87%	77%	84%	67%	81%	32%	60%	82%	90%	57%	71%
	<b>Nov</b>	32%	61%	96%	98%	91%	98%	74%	88%	76%	84%	70%	84%	37%	68%	82%	90%	47%	63%
	<b>Dec</b>	30%	55%	97%	98%	91%	98%	74%	87%	78%	85%	71%	85%	36%	67%	83%	92%	47%	60%
	<b>Jan</b>	34%	62%	96%	98%	91%	98%	74%	87%	77%	85%	70%	84%	38%	72%	87%	94%	53%	69%
	<b>Feb</b>	33%	61%	97%	98%	91%	98%	75%	88%	77%	84%	72%	84%	33%	66%	87%	91%	52%	63%
	<b>Mar</b>	30%	58%	97%	98%	91%	98%	74%	88%	78%	85%	68%	82%	34%	69%	82%	91%	52%	65%

## Outpatient and GP Direct Access

Reported by:		X-ray		Ultrasound		CT Scans		MRI		Fluoroscopy		Nuclear Medicine		PET-CT Scans		SPECT Scans		Medical Photography	
		Same day	Next day	Same day	Next day	Same day	Next day	Same day	Next day	Same day	Next day	Same day	Next day	Same day	Next day	Same day	Next day	Same day	Next day
Outpatient and GP Direct Access	2012/13	37%	53%	84%	90%	34%	50%	20%	35%	54%	68%	23%	45%	9%	39%	23%	46%	25%	70%
	2013/14	38%	53%	87%	91%	32%	47%	19%	34%	56%	70%	25%	46%	9%	35%	22%	43%	66%	90%
	2014/15	38%	54%	88%	93%	29%	45%	18%	33%	59%	72%	26%	47%	10%	38%	20%	44%	70%	86%
	2015/16	39%	54%	89%	93%	27%	42%	17%	32%	61%	73%	29%	50%	13%	38%	23%	44%	57%	76%
	2016/17	38%	54%	90%	94%	27%	40%	17%	31%	63%	74%	30%	50%	16%	41%	24%	44%	58%	72%
	2017/18	39%	54%	91%	94%	25%	37%	16%	29%	65%	76%	31%	51%	14%	43%	23%	43%	60%	71%
	2018/19	39%	54%	92%	95%	23%	36%	15%	29%	64%	74%	30%	49%	12%	39%	24%	42%	62%	70%
	2019/20	38%	53%	93%	95%	21%	33%	14%	28%	63%	74%	30%	50%	11%	37%	23%	43%	62%	71%
	2020/21	47%	64%	94%	96%	26%	43%	19%	36%	67%	78%	37%	58%	17%	50%	28%	49%	74%	83%
	Apr	77%	90%	96%	97%	54%	74%	41%	65%	75%	84%	53%	73%	25%	61%	36%	62%	60%	79%
	May	66%	82%	95%	97%	42%	62%	32%	53%	72%	83%	47%	66%	22%	56%	36%	55%	71%	84%
	Jun	57%	75%	95%	97%	35%	57%	27%	50%	69%	81%	40%	60%	20%	59%	33%	54%	73%	80%
	Jul	48%	65%	94%	97%	27%	44%	20%	38%	66%	77%	36%	58%	17%	52%	31%	51%	77%	83%
	Aug	43%	60%	94%	96%	21%	36%	15%	31%	65%	77%	34%	55%	15%	45%	27%	48%	70%	77%
	Sep	42%	58%	94%	96%	22%	38%	16%	33%	65%	76%	34%	55%	15%	48%	26%	48%	80%	90%
	Oct	44%	60%	93%	96%	22%	38%	16%	31%	66%	77%	35%	55%	15%	43%	28%	49%	79%	88%
	Nov	47%	64%	93%	96%	23%	40%	16%	32%	65%	76%	35%	55%	15%	47%	28%	47%	70%	77%
	Dec	46%	62%	94%	96%	22%	36%	16%	31%	67%	77%	36%	57%	16%	48%	26%	46%	72%	79%
	Jan	49%	68%	93%	96%	24%	41%	17%	34%	67%	77%	38%	59%	18%	52%	27%	49%	77%	85%
	Feb	46%	63%	94%	96%	24%	39%	17%	33%	67%	77%	37%	58%	16%	46%	27%	49%	72%	84%
	Mar	42%	58%	93%	96%	22%	37%	16%	31%	67%	78%	36%	56%	16%	49%	26%	46%	78%	86%

## 5 Imaging Tests that could contribute to Early Diagnosis of Cancer

### 5.1 Definition of the tests

5.1.1. One of the main drivers for establishing the DID was to assess the use of diagnostic imaging that could contribute to the early diagnosis of cancer and in particular General Practitioner (GP) direct access to these tests. To enable this analysis, a subset of procedures that are often used to diagnose or discount a diagnosis of cancer has been identified:

- **Brain (MRI)**

This may diagnose brain cancer, this includes – MRI of brain (often with contrast);

- **Kidney or bladder (Ultrasound)**

This may diagnose kidney or bladder cancer, this includes – ultrasound of kidney, ultrasound scan of bladder or ultrasound and Doppler scan of kidney;

- **Chest and/or abdomen (CT)**

CTs which may diagnose lung cancer, this includes – chest + abdominal CT, CT of chest (high resolution or other), CT thorax + abdomen with contrast, CT thorax with contrast or CT chest + abdomen;

- **Chest (X-ray)**

This may diagnose lung cancer, this includes – plain chest X-ray only;

- **Abdomen and/or pelvis (Ultrasound)**

This may diagnose ovarian cancer, this includes – ultrasonography of pelvis, ultrasonography of abdomen (upper, lower or other) or abdomen + pelvis.

5.1.2. Although these tests are used to diagnose cancer, many of them also have wider clinical uses. Within this data, it is not possible to distinguish between the different uses of these tests.

5.1.3. Brain MRI, chest X-ray, and ultrasounds of the abdomen and pelvis to diagnose Ovarian Cancer were three of the key tests outlined in *Improving Outcomes: a Strategy for Cancer*.

### 5.2 Imaging activity and GP referral

5.2.1. In 2020/21, 9.1 million of these tests that may have been used to diagnose or discount cancer were performed, down 20% from 11.3 million in 2019/20. This reduction reflects the impact of the COVID-19 pandemic, with services significantly affected from mid-March 2020. Ultrasound was most impacted, with pelvic and kidney or bladder ultrasound activity reducing 27% and 26% respectively in 2020/21 compared with 2019/20. Chest X-rays reduced by

19%, Brain MRI by 14% and Chest and/or abdomen CT scans fell by 12%, see Table 6.

**Table 6: Imaging activity for groups of tests suitable for diagnosing cancer, for all patients referred and for those directly referred by a GP, April 2020 to March 2021**

	Brain (MRI)		Kidney or bladder (Ultrasound)		Chest and/or abdomen (CT)		Chest (X-ray)		Abdomen and/or pelvis (Ultrasound)	
	All	GP	All	GP	All	GP	All	GP	All	GP
2012/13	472,820	31,035	220,270	67,455	388,640	32,210	7,728,945	1,993,455	1,165,540	536,945
2013/14	529,285	39,540	220,045	65,390	438,190	39,180	7,694,255	1,931,255	1,246,130	570,170
2014/15	584,755	50,150	228,810	67,060	490,140	46,680	8,170,075	2,128,450	1,303,945	600,390
2015/16	629,050	68,325	222,740	65,920	512,825	50,995	8,070,205	2,019,280	1,312,635	600,365
2016/17	686,365	76,925	233,440	65,990	539,405	58,875	8,253,310	2,167,875	1,286,845	576,665
2017/18	717,650	82,115	228,970	62,700	566,610	63,790	8,332,405	2,161,805	1,264,240	559,955
2018/19	774,845	87,320	240,255	65,745	611,620	68,105	8,280,540	2,051,840	1,312,270	586,075
2019/20	802,490	90,970	237,355	63,870	638,905	75,910	8,347,800	2,079,920	1,290,100	581,370
2020/21	689,780	75,280	176,455	43,665	561,555	52,775	6,723,690	1,090,125	947,380	390,705
Change	-14.0%	-17.2%	-25.7%	-31.6%	-12.1%	-30.5%	-19.5%	-47.6%	-26.6%	-32.8%
<b>2020/21</b>										
Apr	27,270	2,510	5,720	825	29,040	1,920	427,115	28,615	27,175	6,500
May	39,345	3,190	8,600	1,430	37,640	2,730	468,880	53,975	44,415	12,730
Jun	52,415	4,460	13,075	2,720	43,575	3,695	509,410	74,915	69,590	25,565
Jul	61,230	5,690	16,190	3,770	50,385	4,640	550,470	91,835	86,080	34,060
Aug	59,730	6,285	15,320	3,740	48,795	4,720	523,580	83,155	82,430	33,710
Sep	62,595	6,735	16,970	4,320	50,810	4,850	553,990	94,040	92,855	39,450
Oct	66,035	7,365	18,375	4,800	53,515	5,170	597,290	102,690	96,775	42,565
Nov	64,590	7,735	17,150	4,560	49,940	5,020	589,535	103,490	93,030	41,070
Dec	60,870	7,555	15,660	3,875	47,915	4,885	609,255	100,455	85,840	37,300
Jan	61,395	7,840	15,505	4,195	47,435	4,510	654,700	96,885	83,980	37,070
Feb	62,235	7,505	15,725	4,410	47,520	4,800	583,325	109,910	85,925	37,580
Mar	72,070	8,410	18,160	5,020	54,995	5,835	656,145	150,160	99,290	43,115

1. Totals do not always equal the sum of parts due to rounding.

2. % Change is between 2019/20 and 2020/21.

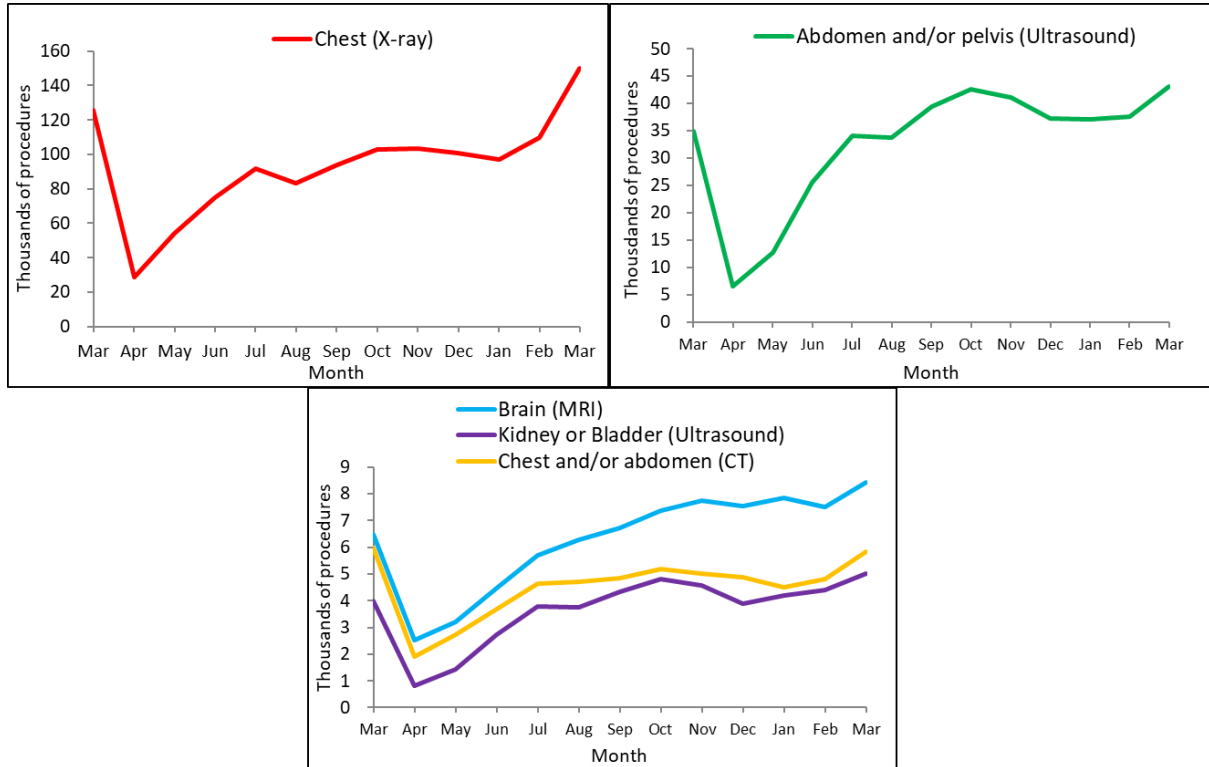
5.2.2. Chest X-ray remained the most common of these tests, with 6.7 million tests being requested through all source settings in 2020/21. This was also the most common test requested by GPs, at 1.1 million. Next most common were tests that may have been used to diagnose ovarian cancer (abdominal or pelvic ultrasound, 0.9 million), with 41% of such tests being requested by a GP. The reduction due to COVID was more marked for GP requested diagnostics than overall: Chest X-ray referrals from GPs were down 48% from 2019/20, abdomen/pelvis and kidney/bladder ultrasound down 33% and 32% respectively, Chest or abdomen CT down 30% and Brain MRI down 17%. Table 6 shows the total number of tests suitable for diagnosing cancer, with the subset of these that had a referral source of GP direct access. The fluctuation in the number of these tests directly referred by GPs over the year is shown in Graph 4.1.

5.2.3. Of the 9.1 million tests suitable for diagnosing cancer requested in 2020/21, 18.2% were requested by GPs under direct access arrangements, compared with 25.6% in 2019/20. This significant reduction in the proportion referred by GPs affected all tests and reflected the impact of the COVID pandemic. Graph 4.2 shows the proportion of each test requested by GPs. The lowest

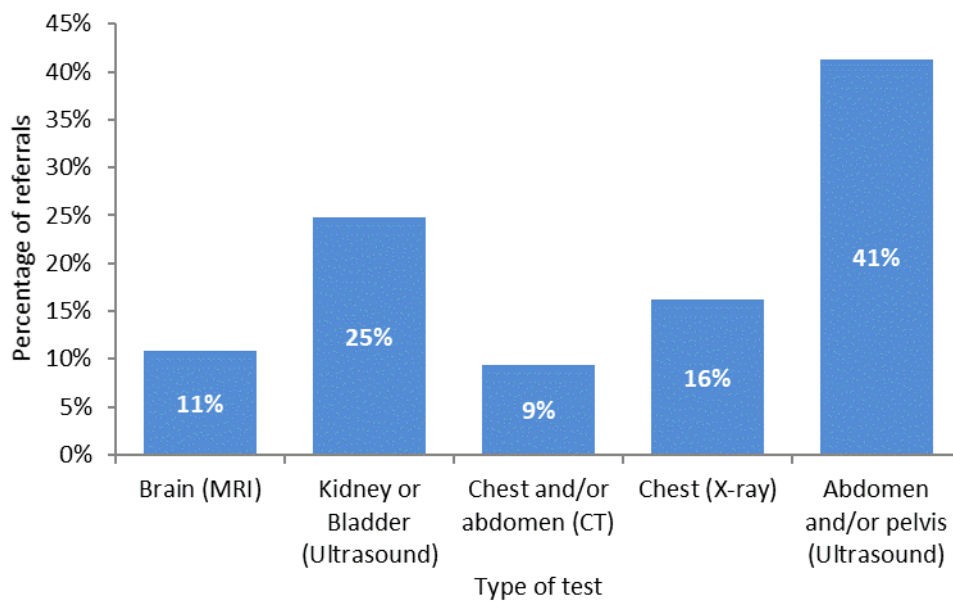
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proportions of GP direct access were for Chest and/or abdomen CT (9%) and Brain MRI (11%).

**Graph 4.1: Imaging activity for patients directly referred by a GP, April 2020 to March 2021**



**Graph 4.2: Percentage of referrals made by GPs by type of test, 2020/21**



### 5.3 Patient test times

#### Patient test times – Request to test

5.3.1. For the key tests that may be used to diagnose or discount cancer, the median period from a test request being made (or received) to being performed is longer for GP direct access than for all referrals, see Table 7. The main reason for this difference is that 'all referrals' includes tests on emergency admissions and inpatients, which have shorter waits.

**Table 7: Median number of days between date of test request and date of test for groups of tests suitable for diagnosing cancer, overall and for GP Direct Access, April 2020 to March 2021**

	Brain (MRI)		Kidney or bladder (Ultrasound)		Chest and/or abdomen (CT)		Chest (X-ray)		Abdomen and/or pelvis (Ultrasound)	
	All	GP	All	GP	All	GP	All	GP	All	GP
2012/13	21	25	13	23	13	17	0	0	14	22
2013/14	21	25	13	23	13	16	0	0	15	24
2014/15	21	26	13	24	14	17	0	0	17	26
2015/16	19	21	11	26	14	16	0	0	17	27
2016/17	19	21	12	27	14	17	0	0	17	27
2017/18	19	22	12	27	15	18	0	0	17	27
2018/19	19	22	13	28	16	18	0	0	20	30
2019/20	18	23	13	27	16	19	0	0	19	30
2020/21	12	21	11	25	13	16	0	5	13	26
Apr	4	19	1	20	1	14	0	1	1	17
May	5	10	3	14	4	11	0	1	2	13
Jun	8	14	7	19	12	14	0	3	6	17
Jul	11	19	11	22	14	17	0	5	10	21
Aug	13	22	13	26	18	18	0	5	14	26
Sep	13	23	14	28	17	19	0	5	16	30
Oct	14	23	14	25	16	18	0	6	16	28
Nov	14	23	12	25	15	15	0	6	15	28
Dec	14	23	10	23	14	14	0	6	14	26
Jan	16	26	14	31	15	17	0	4	18	31
Feb	13	21	11	24	14	15	0	5	14	26
Mar	13	20	13	26	13	14	0	6	15	27

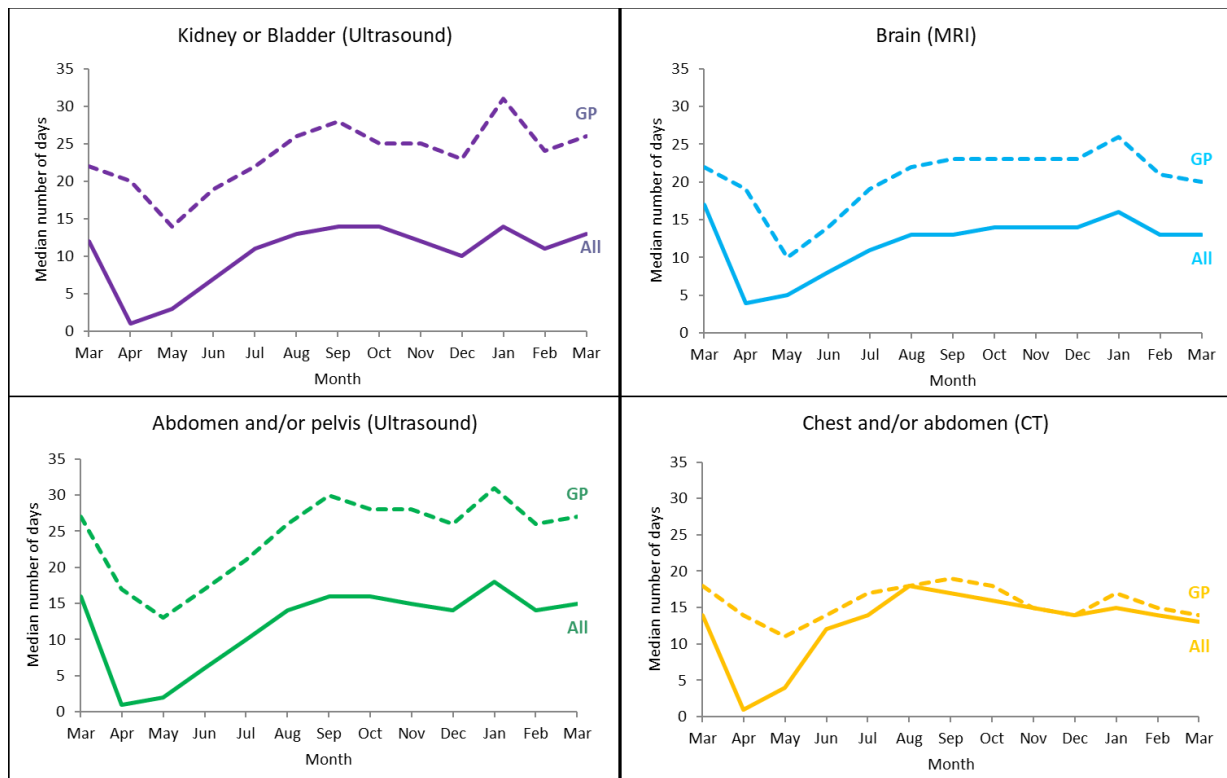
Note: Median values of 0 occur where at least 50% of activity has the same day for both 'date of test request' and 'date of test'. Where 'Date of test request' was missing in 2020/21, 'Date of test request received' was used instead. Records where both dates were missing were excluded from the median calculation.

5.3.2. Most median periods from request to test were lower in 2020/21 than in 2019/20, as the COVID-19 pandemic led to a focus on the most urgent cases. The exception was Chest X-ray, where there was no change overall but an increase of 5 days in the median period from request to test for GP direct access; previously over 50% of such requests were seen the same day but this reduced to 20% in 2020/21.

5.3.3. As the impact of COVID changed over the year, the median number of days between date of request and date of test varied during 2020/21 for tests that are suitable for diagnosing cancer as shown in Graph 5. The initial impact in April and May was a marked reduction for all tests as only the most urgent

cases were seen, but this reverted to more typical median waits from request to test later in the year for most tests.

**Graph 5: Median number of days between date of test request and date of test for groups of tests suitable for diagnosing cancer, overall and for GP Direct Access, April 2020 to March 2021**



### Patient test times – Test to report

5.3.4. As for all imaging modalities, the period between the date of test and the date the report was issued fell in the early months of the COVID-19 pandemic for those tests suitable for diagnosing cancer that are not reported the same day. The median report turnaround time reduced from 2 days to 1 day for Brain MRI and Chest X-ray in 2020/21 compared with 2019/20 and from 3 days to 1 day for Chest CT, as shown in Table 8.

5.3.5. For ultrasound and X-ray, there is generally little difference in the time taken for a test report to be issued for GP direct access and all referrals for tests suitable for diagnosing cancer. However, for Brain MRI and Chest and/or abdomen CT, the median period from test to report was 2 days for GP-referred cases compared with 1 day overall. These differences are reflected in the percentages of tests reported the same day, which were very high in the early months of the year. They subsequently fell again for most tests, but for Brain MRI, Chest CT and Chest X-ray, they remained above the level in 2019/20.



**Table 8: Median number of days between date of test and date test report issued and Percentage of records where report issued on day of test, for groups of tests suitable for diagnosing cancer, All referrals and GP Direct Access, April 2020 to March 2021**

	Brain (MRI)				Kidney or bladder (Ultrasound)			
	All Median	All % Same day	GP Median	GP % Same day	All Median	All % Same day	GP Median	GP % Same day
2012/13	2	32%	3	17%	0	85%	0	80%
2013/14	2	34%	3	18%	0	89%	0	85%
2014/15	2	33%	3	18%	0	91%	0	88%
2015/16	2	35%	3	21%	0	92%	0	89%
2016/17	2	33%	3	19%	0	93%	0	89%
2017/18	2	32%	3	16%	0	94%	0	90%
2018/19	2	33%	3	17%	0	95%	0	92%
2019/20	2	33%	3	17%	0	95%	0	92%
2020/21	1	39%	2	23%	0	95%	0	92%
Apr	0	63%	1	45%	0	97%	0	96%
May	0	55%	1	37%	0	97%	0	95%
Jun	1	48%	1	34%	0	96%	0	91%
Jul	1	41%	2	25%	0	96%	0	93%
Aug	2	36%	2	19%	0	96%	0	92%
Sep	1	37%	2	23%	0	96%	0	93%
Oct	2	35%	2	21%	0	95%	0	92%
Nov	2	35%	2	19%	0	95%	0	92%
Dec	2	36%	2	21%	0	95%	0	91%
Jan	1	36%	2	22%	0	95%	0	90%
Feb	1	36%	2	21%	0	95%	0	93%
Mar	2	36%	3	20%	0	95%	0	92%

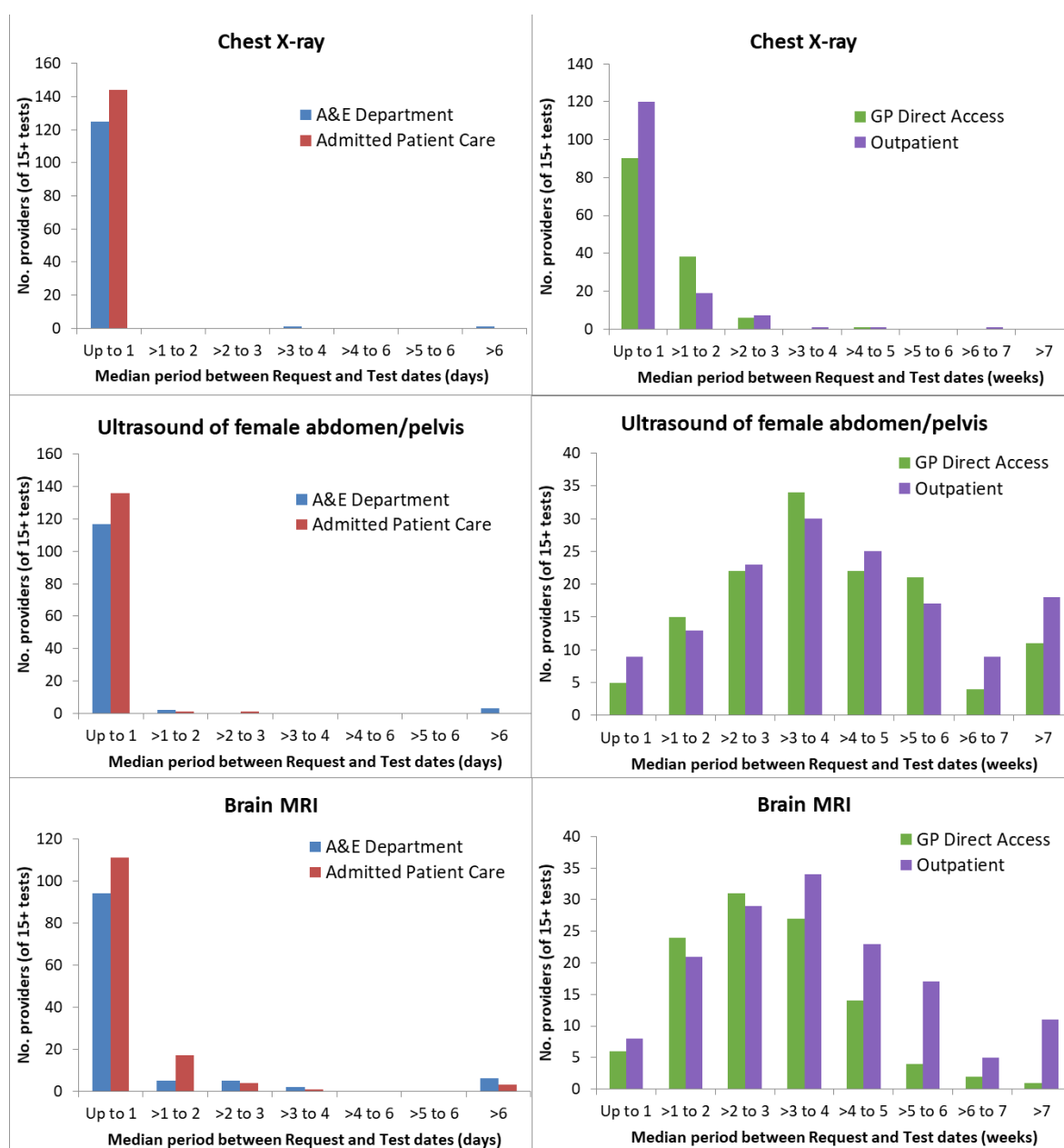
	Chest and/or abdomen (CT)				Chest (X-ray)				Abdomen and/or pelvis (Ultrasound)			
	All Median	All % Same day	GP Median	GP % Same day	All Median	All % Same day	GP Median	GP % Same day	All Median	All % Same day	GP Median	GP % Same day
2012/13	1	42%	2	32%	2	25%	2	29%	0	86%	0	84%
2013/14	1	40%	2	29%	2	25%	2	28%	0	89%	0	88%
2014/15	1	38%	2	27%	2	25%	2	28%	0	90%	0	89%
2015/16	1	36%	2	25%	2	26%	2	29%	0	92%	0	90%
2016/17	2	36%	3	23%	2	26%	2	27%	0	93%	0	91%
2017/18	2	34%	4	19%	2	24%	2	28%	0	94%	0	92%
2018/19	3	32%	4	19%	2	24%	1	29%	0	95%	0	93%
2019/20	3	30%	4	16%	2	24%	2	28%	0	95%	0	94%
2020/21	1	39%	2	23%	1	35%	1	43%	0	96%	0	93%
Apr	0	72%	1	49%	0	67%	0	79%	0	98%	0	96%
May	0	61%	1	43%	0	55%	0	68%	0	97%	0	95%
Jun	1	47%	1	32%	1	45%	0	58%	0	96%	0	94%
Jul	1	38%	2	22%	1	35%	1	46%	0	96%	0	94%
Aug	2	32%	3	19%	1	28%	1	37%	0	96%	0	94%
Sep	2	33%	3	19%	2	27%	1	36%	0	95%	0	93%
Oct	2	32%	3	18%	1	28%	1	38%	0	95%	0	93%
Nov	2	33%	2	19%	1	30%	1	41%	0	95%	0	93%
Dec	2	33%	3	19%	2	27%	1	38%	0	95%	0	93%
Jan	1	36%	2	20%	1	32%	1	43%	0	95%	0	93%
Feb	2	34%	2	20%	1	31%	1	39%	0	95%	0	93%
Mar	2	33%	3	19%	2	27%	1	34%	0	95%	0	93%



### Patient test times – Variation by provider

5.3.6. The median period between the date the test request was made (or received) and the test date varies by provider as well as by referral source and modality, see Graph 6.1 for Chest X-ray, Ultrasound of the abdomen and/or pelvis in females and Brain MRI. For Chest X-ray, there is less variation by provider in the median period from request to test, with the median for A&E and admitted patients universally up to a day and those for GP referrals and outpatients generally up to a week, but with an increased spread over a week that wasn't seen pre-COVID. The median from request to test was also generally up to one day for Ultrasound of female abdomen/pelvis and Brain MRI for A&E and admitted patients. However, there was much more variation in the median from request to test for GP direct access and outpatients for these tests, with providers differing in their median request to test period by several weeks.

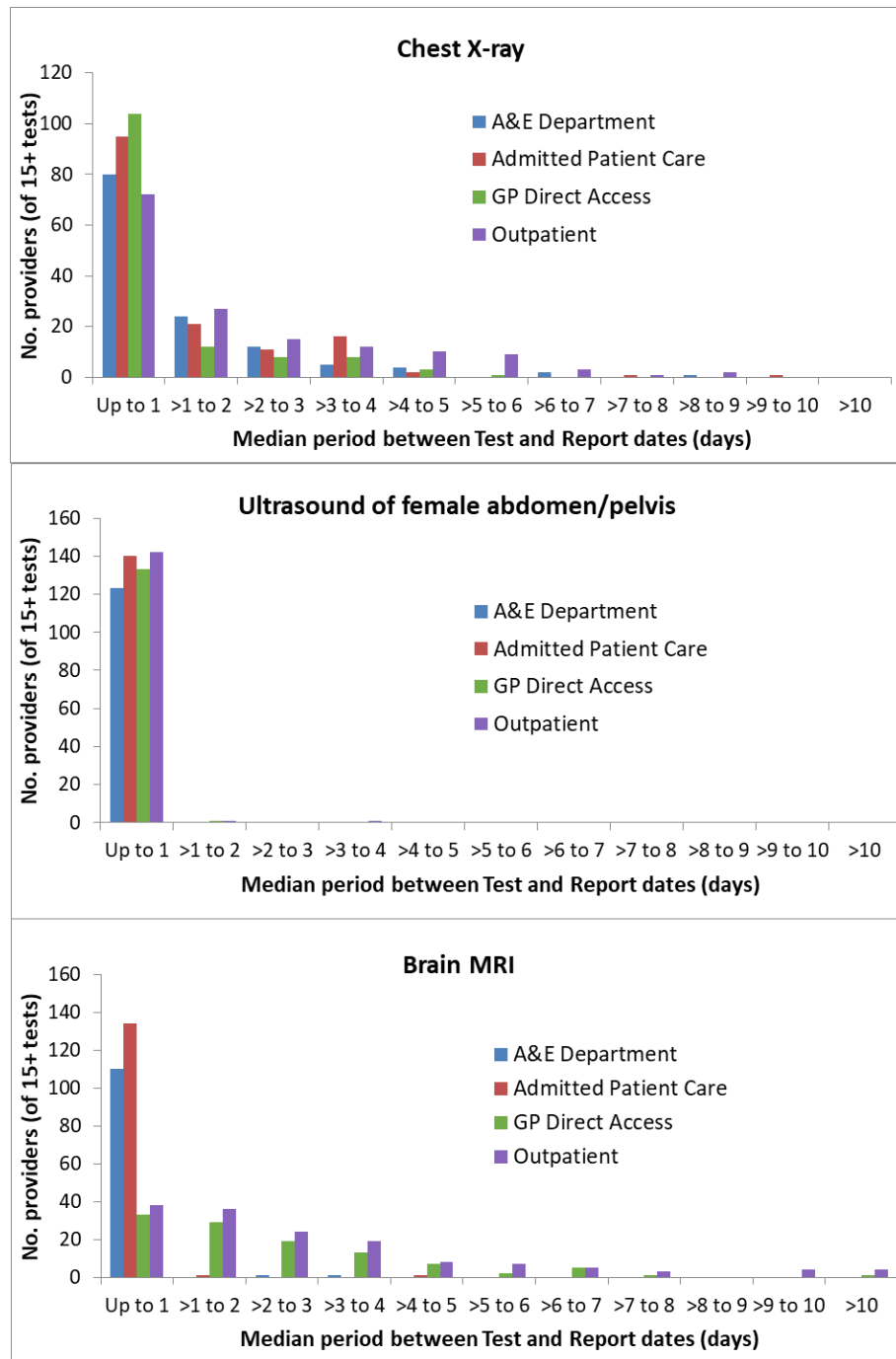
**Graph 6.1 Variation by provider of median period from date of test request to date of test for procedures suitable for diagnosing cancer, by referral source, 2020/21**



Note: Median period from 'date of test request' or, where missing, 'date of test request received' to 'date of test'.

5.3.7. The median period between the test and report dates varies by provider for Chest X-ray and Brain MRI, but not for Ultrasound of the female abdomen and/or pelvis, see Graph 6.2. Of these, only Chest X-ray shows much variation by provider for A&E and admitted patients, but Brain MRI also shows variation in the provider medians for GP direct access and outpatient referrals of several days. No significant correlation was observed between the median request to test period and the median test to report period at provider level, neither were the provider means for either period related to the volume of imaging tests performed for these three diagnostics.

**Graph 6.2 Variation by provider of median period from date of test to date test report issued for procedures suitable for diagnosing cancer, by referral source, 2020/21**



## 6 Annex

### 6.1 Data Quality Statement

- 6.1.1. Although data from Radiology Information Systems (RISs) were not originally intended for statistical purposes and have some inconsistencies, they do provide a rich resource with great potential for wider analysis. This data collection aligns with the code of practice for official statistics in making better use of administrative data and evaluating existing data sources to limit the burden on respondents.
- 6.1.2. There are a number of validations built into the DID upload system, verifying that the data provided by organisations makes sense. Whilst validations and other checks have been made to ensure that the data are complete and accurately reflect activity, data issues may affect activity for some providers.
- 6.1.3. Final data for each month are extracted from the DID data warehouse around the 28th of the sixth month after the period. Data coverage and quality has continued to improve in 2020/21, with all providers having data for each month. However, within this, some data submissions may be incomplete. Known problems are:
- Chelsea and Westminster Hospital NHS Foundation Trust (RQM) did not report activity for its West Middlesex University Hospital site (RQM91) in June 2020, resulting in an estimated shortfall of 11-15,000 records.
  - East Suffolk and North Essex NHS Foundation Trust (RDE) did not report activity for its Colchester General Hospital (RDEE4) site (and possibly others) in December 2020, resulting in an estimated shortfall of 13-17,000 records.
  - University Hospitals of Derby and Burton NHS Foundation Trust (RTG) mislabelled patient source setting for 124,000 records throughout 2020/21 as 'Other Health Care Provider' in place of 'Accident and Emergency department' and some 'Other'.
  - University Hospitals Dorset NHS Foundation Trust (R0D), and its predecessor up to October 2020 The Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust (RDZ), reported 71,000 scans from 'Other' patient source setting in 2020/21 that appear to be from A&E or GP and other sources.
  - Whittington Health NHS Trust (RKE) submitted no Test request dates or Test report issued dates during 2020/21.
- 6.1.4. Other providers were missing certain data fields for all or part of the year, including a valid GP Practice, Patient postcode, Age (date of birth), Sex, Date of request or report and Patient source setting. The Technical Report gives more information on data completeness and quality in Section 4.
- 6.1.5. Reported times from test request to test should not be compared to diagnostic test waiting time statistics, as these are collected using different definitions. Unlike these statistics, the DM01 diagnostic test waiting times statistics exclude records where, for example:

- The patient is waiting for a planned (or surveillance) diagnostic test/procedure, that is a procedure or series of procedures as part of a treatment plan which is required for clinical reasons to be carried out at a specific interval or repeated at a specific frequency, such as 6-month check cystoscopy;
- The patient is currently admitted to a hospital bed and is waiting for a diagnostic test/procedure as part of their inpatient treatment.

6.1.6. For the data published here, 92.4% of tests had a date of test request included (up from 92.0% in 2019/20) and, of those that didn't, many had a date of test request received instead. This latter date is used where date of test request was missing, increasing to 97.1% the proportion of cases included in tables showing the request to test period. In addition, 95.7% of tests had a date of test report issue included (up from 93.8% in 2019/20).

6.1.7. Some patient records have no known commissioner as this is derived from patient registered GP practice which is not a mandatory field. In 2020/21, where this was missing, CCG was derived from Lower Super Output Area (LSOA) based on patient postcode instead. Data shortfalls by provider also affect their commissioner data.

6.1.8. Details of coverage, completeness, comparability with other data sources and a discussion on the types of data quality issues encountered are provided in the Technical Report which is available on the [NHS England DID website](#).

## 6.2 Revisions

In the provisional publications, several Trusts did not provide data on time and their figures were shown as blank. Most of these subsequently submitted data, with the exceptions listed above. Further revisions will only be made in exceptional circumstances, see the Technical Report.

## 6.3 Glossary

### Computerised Axial Tomography (CT Scan)

Computed tomography (CT), sometimes called CAT scan, uses special X-ray equipment to obtain image data from different angles around the body, then uses computer processing of the information to show a cross-section of body tissues and organs. In the DID this means all codes mentioning CAT or computed tomography except those also mentioning PET.

### Diagnostic Ultrasonography (Ultrasound)

The use of ultrasonic waves for diagnostic or therapeutic purposes, specifically to image an internal body structure, monitor a developing foetus or generate localised deep heat to the tissues. In the DID this means any code relating to ultrasound.

### Fluoroscopy

Fluoroscopy is an imaging technique commonly used by physicians to obtain real-time images of the internal structures of a patient through the use of a fluoroscope. In its simplest form, a fluoroscope consists of an X-ray source and fluorescent

screen between which a patient is placed. In the DID this is a collection of codes mentioning fluoroscopy or using fluoroscopic guidance, Barium enema or swallow. Interventional procedures are classified under imaging modalities which provide guidance. Almost all interventional procedures are under fluoroscopy procedure. A very small number of interventional procedures are under CT or MRI procedures.

### **Magnetic Resonance Imaging (MRI)**

Magnetic resonance imaging (MRI) is a method of producing extremely detailed pictures of body tissues and organs without the need for X-rays. The electromagnetic energy that is released when exposing a patient to radio waves in a strong magnetic field is measured and analysed by a computer, which forms two- or three-dimensional images that may be viewed on a TV monitor. In the DID this means all codes mentioning MRI.

### **Plain Radiography (X-ray)**

A Radiograph is an image produced on a radiosensitive surface, such as a detector, by radiation other than visible light, especially by X-rays passed through an object or by photographing a fluoroscopic image. In the DID this means any code referring to radiography or X-ray.

### **Medical Photography**

A Photograph is an image recorded on sensitised material by energy from the light spectrum, which is then processed to create a print that can be viewed clearly. Medical Photography is used in order to document a variety of different medical conditions and their treatment.

### **Nuclear Medicine**

Nuclear medicine (NM) is a branch of medicine and medical imaging that uses unsealed radioactive substances in diagnosis and therapy. These substances consist of radionuclides, or pharmaceuticals that have been labelled with radionuclides (radiopharmaceuticals). In diagnosis, radioactive substances are administered to patients and the radiation emitted is measured.

Nuclear medicine imaging tests differ from most other imaging modalities in that the tests primarily show the physiological function of the system being investigated, as opposed to the anatomy. It has both diagnostic and therapeutic uses, such as planning cancer treatments and evaluating how well a patient has responded to a treatment. It can be used with other diagnostic methods, including CT scans and MRI, where the images are superimposed to produce complex cross-sectional, three-dimensional scans.

### **Position Emission Tomography – Computer Tomography (PET-CT Scans)**

Position Emission Tomography - Computed Tomography (PET-CT Scan) is an imaging technique used in the diagnosis and treatment of cancer which combines PET with CT. PET uses gamma-type cameras to produce crude three-dimensional images highlighting radionuclide concentration in the body. CT allows precise localisation of the radionuclide concentration. PET-CT scans can be used to show how far a cancer has spread and can determine if a patient is responding positively to a treatment. In the DID this means all codes mentioning PET, whether or not they also mention CT.

### **Single Photon Emission Computerised Tomography (SPECT scans)**

Single Photon Emission Computerised Tomography (SPECT scans) is an imaging method that allows for analysis of internal organs. Gamma photon-emitting radionuclides are administered to a patient prior to being exposed to gamma cameras that rotate around a patient to produce cross-sectional slices that can then be reformatted into a true three-dimensional image of the patient.

### **Median**

The median is the preferred measure of the average time between pairs of dates within records as it is less susceptible to extreme values than the mean. The median number of days between pairs of dates is calculated by ordering the values obtained by subtracting the dates for each record and selecting the middle value when all records are ranked by these numbers of days.

### **Modality**

The broad procedure or method used for examination, for example MRI. This may include procedures assisted by the method, e.g. biopsy or injection. In the DID the modality of the examination is derived from SNOMED CT (Systematised Nomenclature of Medicine – Clinical Terms) or NICIP (National Interim Clinical Imaging Procedure) codes.

### **Patient source setting**

This is a categorisation of the department or organisation making the referral for the imaging activity. It includes categories for admitted patient care, outpatients, GP Direct Access, A&E and health care providers other than the organisation providing the imaging activity.

## **6.4 Contact Us**

### **6.4.1. Feedback**

We welcome feedback on this publication. Please contact us at [england.did@nhs.net](mailto:england.did@nhs.net).

### **6.4.2. iView**

NHS Digital allow health sector colleagues to access DID information through their web-based reporting tool, iView. Registered users may access anonymised data at an aggregate level in a consistent and flexible format:

- **Access Information** – choose from a variety of data areas.
- **Build Reports** – select data to suit your needs.
- **Generate Charts** – customise report tables and graphs.
- **Export Data** – copy to Excel and manipulate data your way.
- **Save Reports** – store your favourite views for future use.

For more information, please visit the iView website [iView website](#). If you would like to register to use iView for DID, please email [enquiries@nhsdigital.nhs.uk](mailto:enquiries@nhsdigital.nhs.uk) (subject: DID iView Access).

### **6.4.3. Websites**

NHS Digital collects the DID on behalf of NHS England. Further information about the dataset can be found on [NHS Digital DID website](#).

## OFFICIAL

Those who submit data to DID do so via a secure submission portal. Further information about submissions can be found on the [submission website](#).

The DID Additional Tables and Technical Report can be found on [NHS England DID website](#).

### 6.4.4. Additional Information

For press enquiries contact the NHS England and NHS Improvement Media team on 0113 825 0958 or 0113 825 0959. Email enquiries should be directed to [nhsengland.media@nhs.net](mailto:nhsengland.media@nhs.net)

The Government Statistical Service (GSS) statistician responsible for producing these data is:

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