



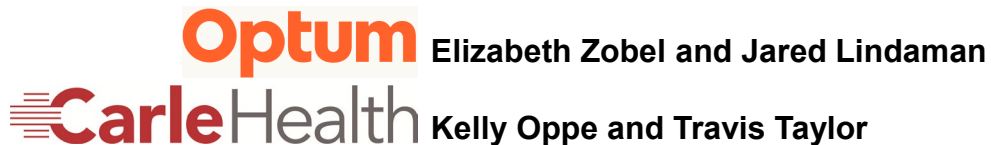
Referral Guidelines for Imaging

A Descriptive Comparison of Two National Radiology Societies' Guidelines Development and Dissemination Activities With Data Analysis

David Kurth, American College of Radiology

Amanda Wells, Royal College of Radiologists

SPECIAL ACKNOWLEDGEMENT for DATA and GRAPHS



Issues Faced in Clinical Radiology

Healthcare systems globally are challenged by rising healthcare delivery costs, imaging growth, quality metrics and limited access to resources.

- **Unnecessary Care** : Even with rising costs and increased spending, at least 10% (and up to 30%) of healthcare resources are wasted each year on unnecessary or ineffective care
- **Rise in Demand** : Rapid rise in the use of advanced diagnostic imaging (MR, CT), which is expensive, and even a small reduction in use could decrease wait times and reduce cost
- **Rise in Resource Pressures** : Increasing demand has resulted in increased vetting time for radiologists and reporting backlogs, taking time away from clinical care and reporting. According to RCR, 60% of imaging requests were not filled in 2023, leaving 1.962 radiologists unfilled for



- Increase in use of imaging with ionising radiation has doubled per capita radiation exposure
- GPs experiencing significant time pressures and inequitable direct access to radiology tests

Web pages and Additional Resources

Web Pages



AUC Programs Ensure Patients Receive the Right Imaging at the Right Time (ACR)



RCR iRefer Main Page



ACR Appropriateness Criteria® Main Page

Webinars



MRI appropriateness | Placing the right order at the right time
Smetherman, Taylor (17:34), Zobel (25:30)
July 2024 39:42

CarleHealth Optum



ACR Appropriateness Criteria and Clinical Decision Support: Good for patients, providers and healthcare facilities
Lockhart, Matsumoto (2:39), Gaskin (8:18), Buckwalter (21:40)
Kazerooni (31:30), Summary (40:10), Q&A (44:53)
March 2024 1:12:56

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CareSelect®



850+ Provider customers
50+ Academic Healthcare orgs



~36m Imaging orders evaluated for clinical appropriateness in 2023



Best in Class Content

Exclusivity partnership with the American College of Radiology



7+ Integration system partners

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CareSelect Imaging | Inappropriate Imaging Orders

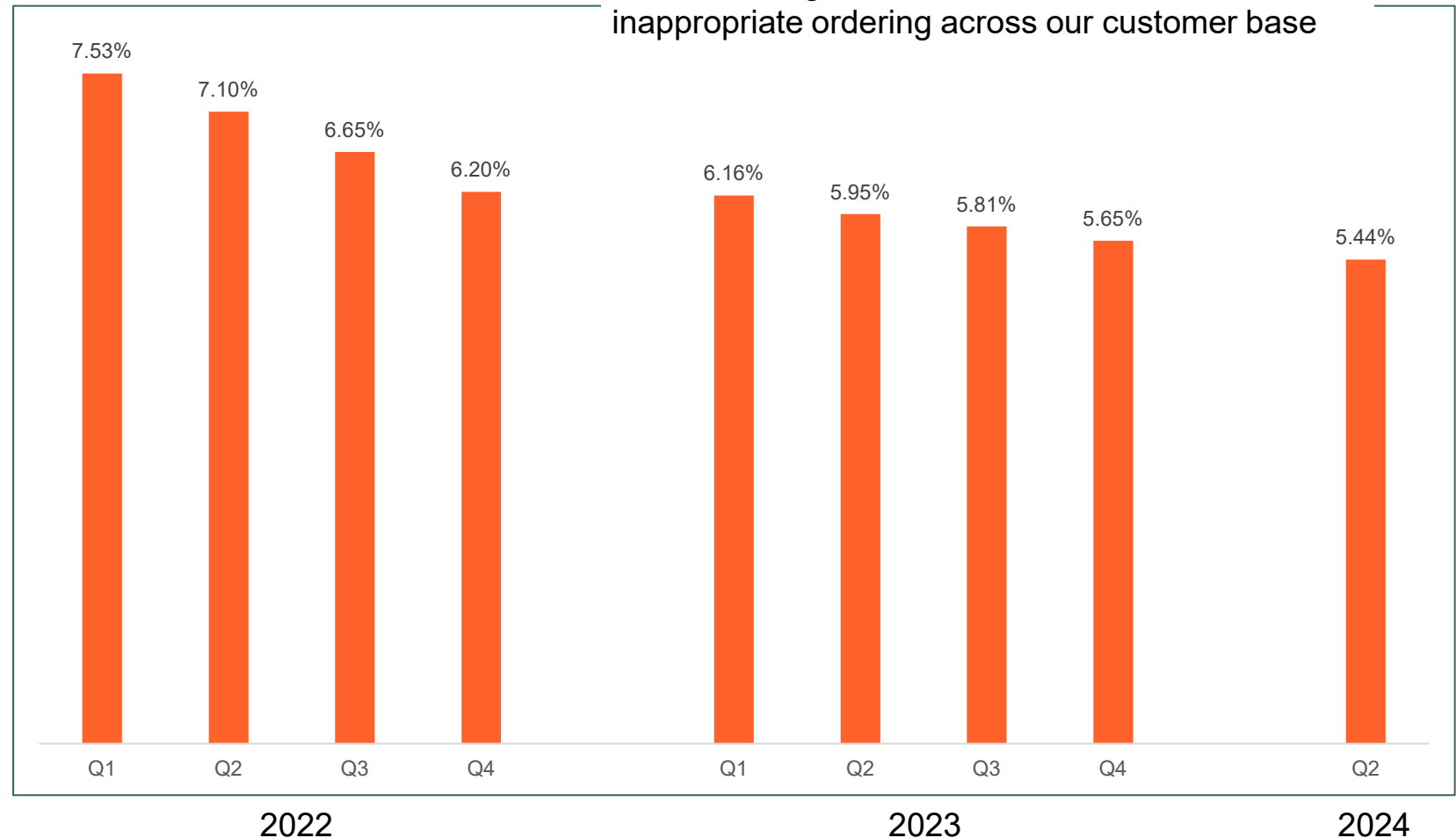


Success in REDUCING Inappropriate Imaging

20% to 50% of advanced imaging tests do not provide information that improves patient care

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Benchmarking continues to show decrease in inappropriate ordering across our customer base



Carle Foundation improved inpatient (MSK) MRI order appropriateness

Carle Foundation

1,437-bed level I trauma center in the Midwest
Bed shortage created by COVID-19 Pandemic

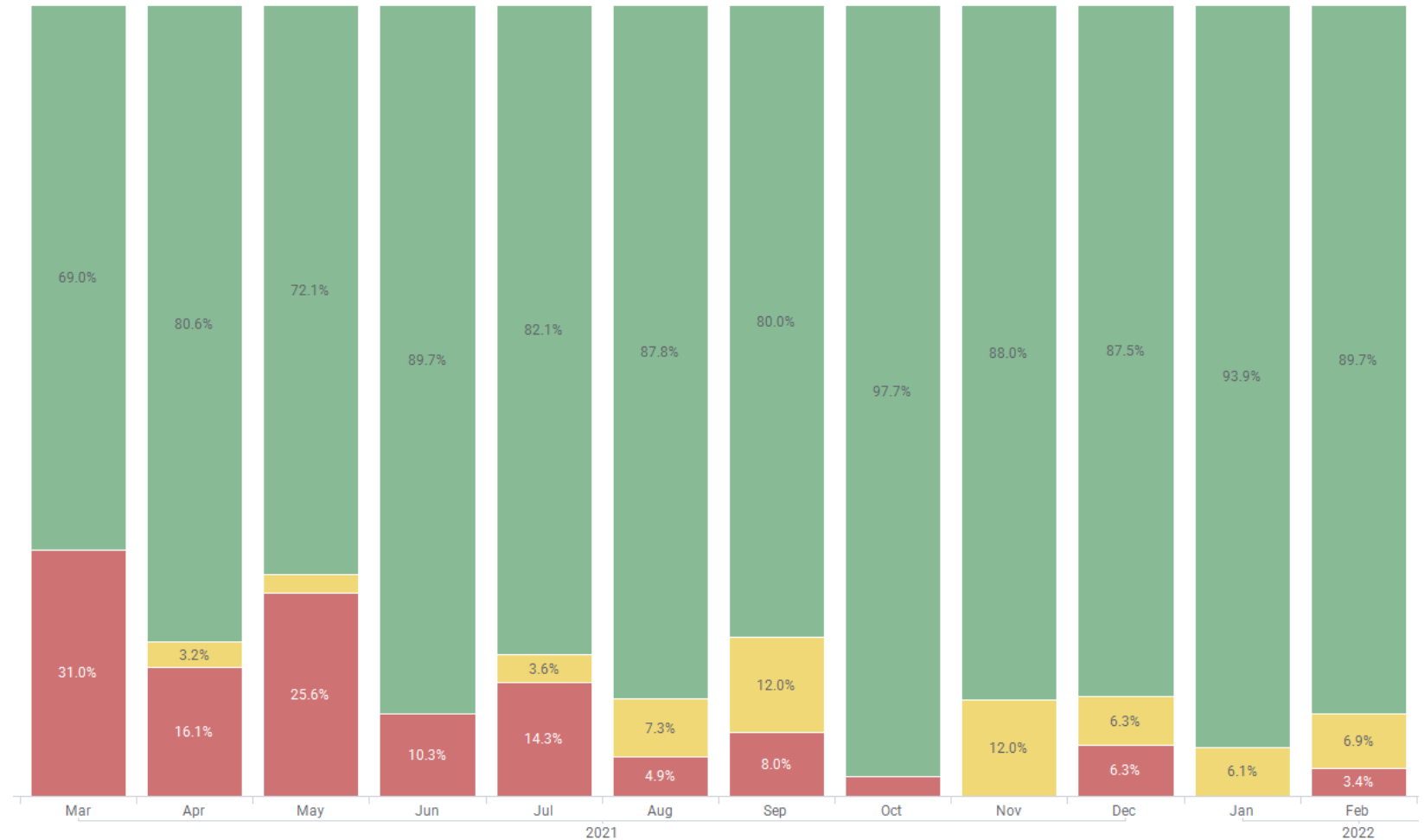
CareSelect® Imaging analytics

- Filters applied:
 - Exam – Selected MSK MRIs
 - Score grouping – Selected all receiving a score
- Similarly, instead of filtering to specific MRIs you could use the modality filter to include all MRIs (only)
- Create a bookmark so you can easily track overtime without having to recreate your filters.

Inpatient (MSK) MRI order appropriateness improved by 17%*

* Mar-June 2021 to Nov 2021-Feb 2022

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Case study CONE HEALTH®

Cone Health, a Healthcare organization located in North Carolina with ~1,200 licensed beds across 5 hospitals and more than 1,800 physician partners, has shown consistent decrease in inappropriate ordering over 4 years using CareSelect® Imaging

Goals

- Comply with federal requirement to consult decision support
- Reduce inappropriate imaging orders

Solution

- Use CareSelect Imaging to provide decision support to ordering providers when placing high tech imaging orders

Results



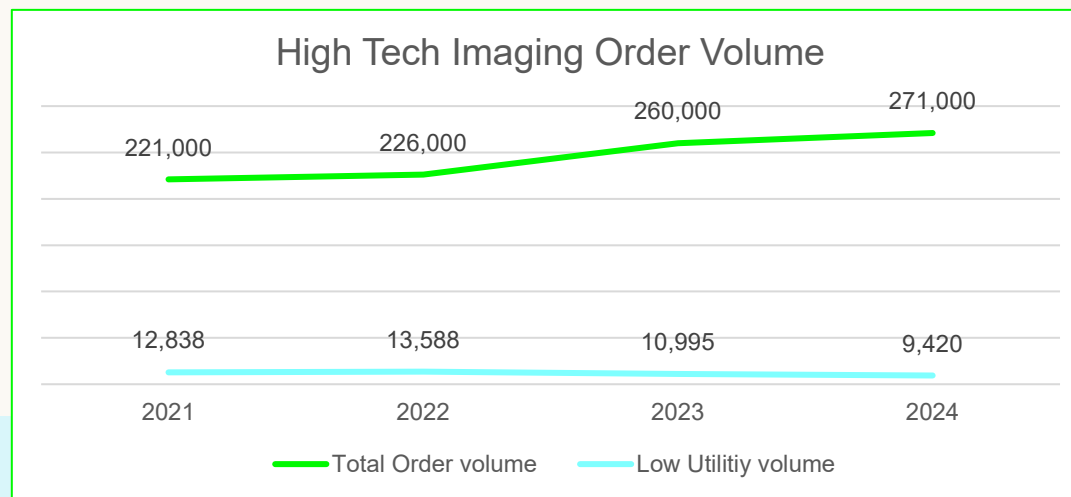
4.6% decrease

In inappropriate ordering since 2021



26% volume decrease

in inappropriate orders during same time that total ordering volumes increased 23%



Between 2021- 2024, the organization saw an overall increase in imaging orders while **volume** of inappropriate orders dropped

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**Appropriate % and volumes are based on scored sessions*

***2024 final volumes are an est based on year to date*



iRefer CDS

Powered by MedCurrent

- **60+** NHS Trusts as customers with 35+ actively using iRefer CDS
- **>200k** imaging requests processed monthly in the NHS by iRefer CDS
- **>20k** unique clinical users of iRefer CDS in the NHS (past 12 months)

Impact Snapshot

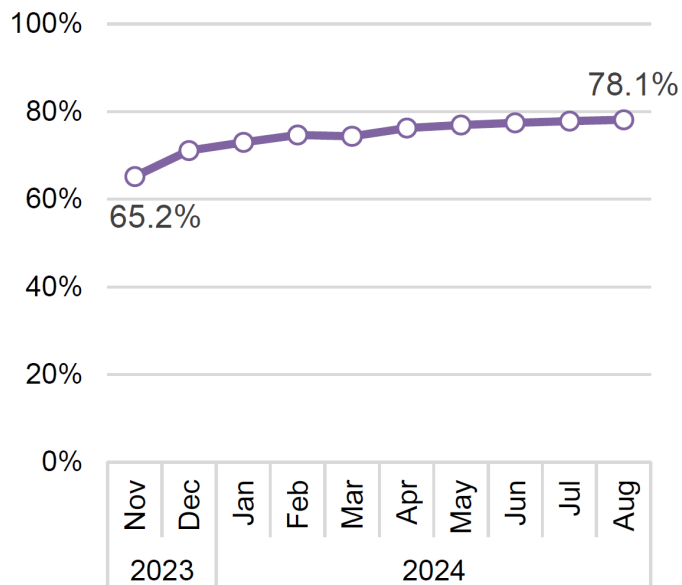
Site	Period	Changed referrals	Cancelled referrals	Appropriateness	Annual cost avoidance**
Princess Alexandra Hospital	November 2022 - November 2023	6.6%	3.4%	76.8%	£344,510
NHS Sussex Primary Care*	April 2023 - January 2024	5.4%	5.4%	85.6%	£231,774
Sandwell and West Birmingham Hospitals NHS Trust	November 2023 - July 2024	3.5%	2.1%	85.7%	£197,733
East and North Hertfordshire NHS Trust	November 2023 - August 2024	7.6%	2.7%	75.3%	£200,821
Average		5.8%	3.4%	80.9%	

*NHS Sussex case study includes East Sussex Healthcare, Royal Sussex County Hospital, Worthing Hospital and Queen Victoria Hospital

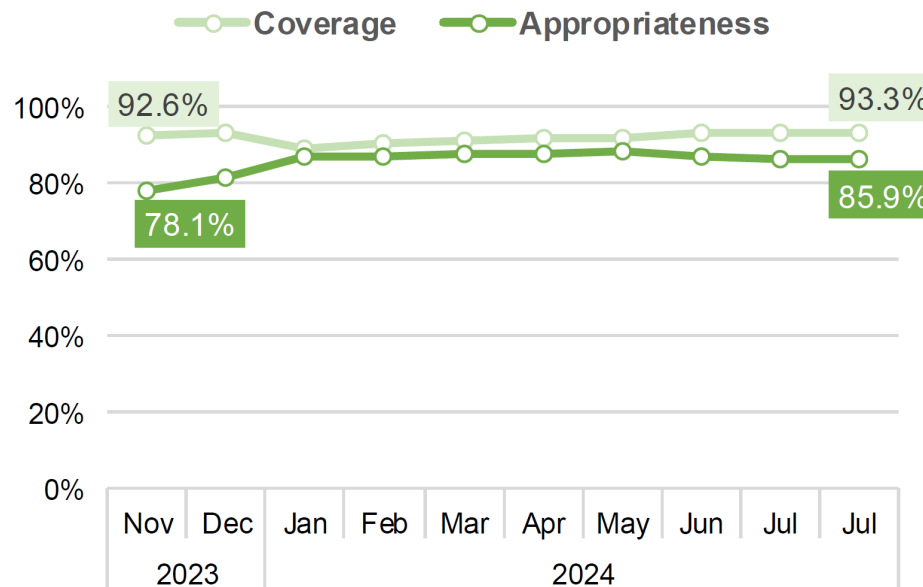
** Actual or projected

Consistent improvement in referral appropriateness over time

In the below sites, on introduction of CDS, appropriateness was on average 70.4% increasing to an average of 82.4% at the latest measurement, an improvement of 12%

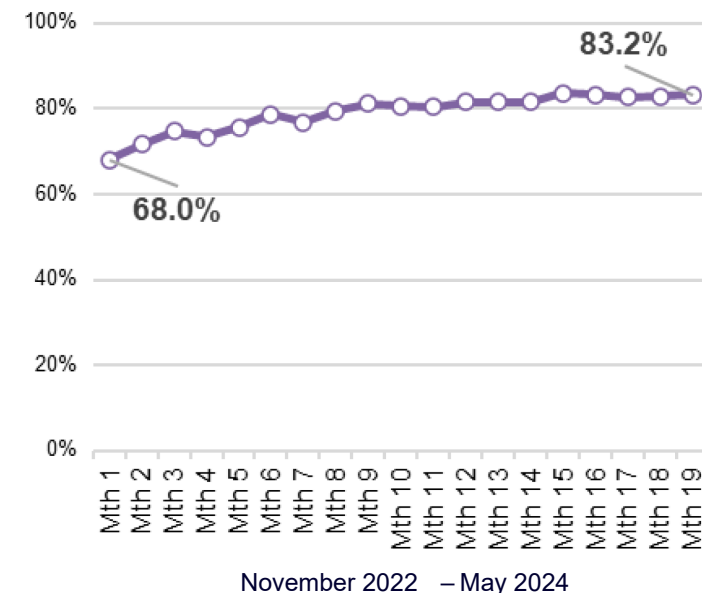


East and North Hertfordshire NHS Trust



Sandwell and West Birmingham Hospitals NHS Trust (Secondary Care)

est measurement, an improvement of 12%



Princess Alexandra Hospital NHS Trust



iRefer CDS*

Powered by MedCurrent

Theoretical cost avoidance during a year at Princess Alexandra Hospital NHS Trust

£ 344,510

3.4%

(8,672) cancelled referrals

25.8%

Cancel adherence

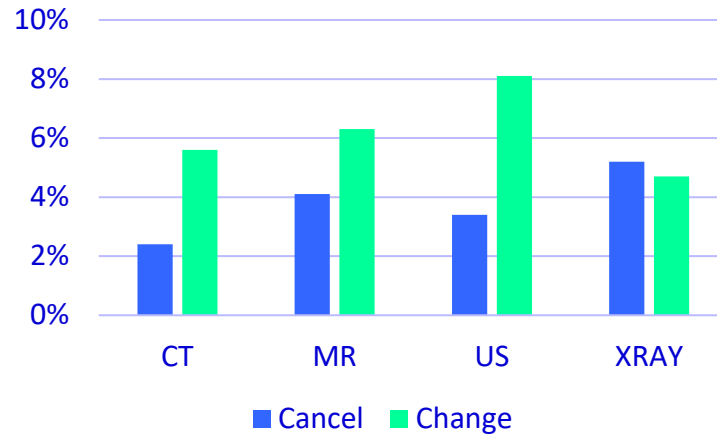
6.6%

(16,642) changed referrals

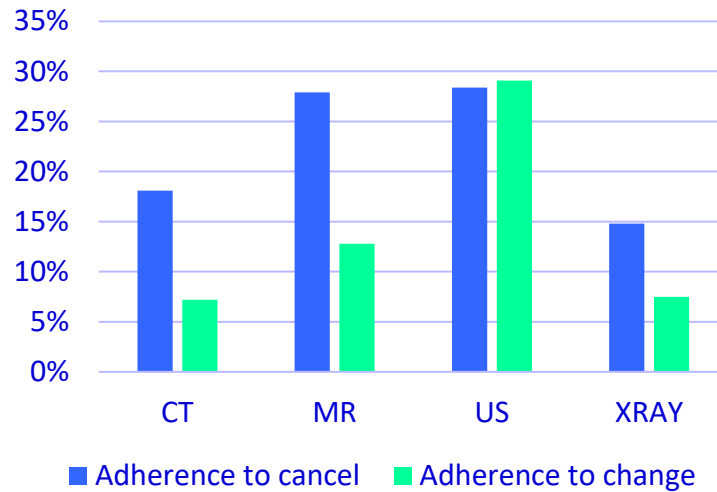
13.4%

Change adherence

Cancel/Change by Modality



Cancel/Change Adherence by Modality



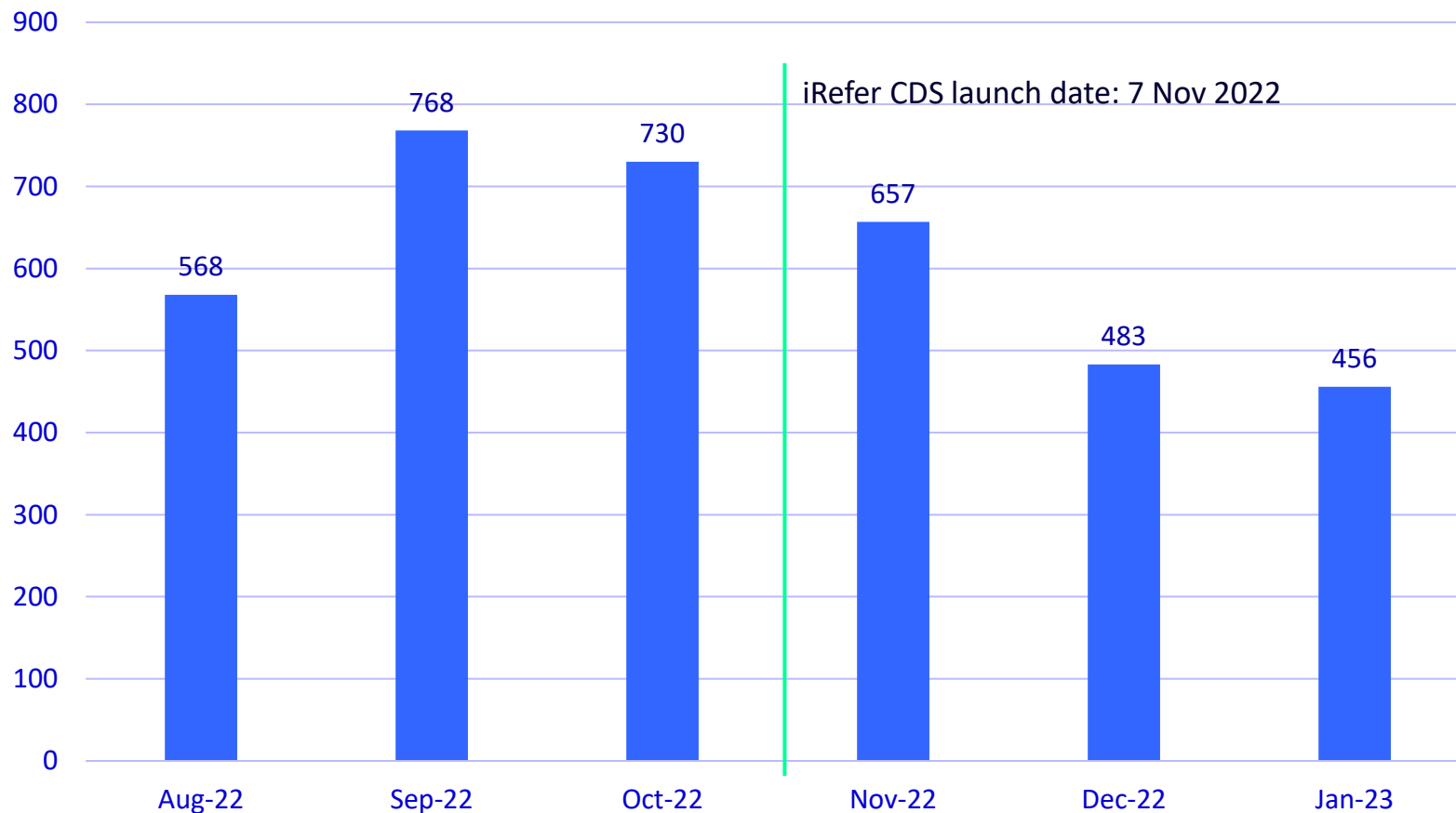
Cancelled Referral Cost Avoidance

Modality	Cancelled Referrals	Cost avoidance (£)
CT	1,035	90,041
MR	956	117,073
US	2,331	95,948
XR	1,035	25,875
Other	42	4,150
TOTAL	5,399	333,087

Changed Referral Cost Avoidance

Modality	Changed Referrals	Cost avoidance (£)
CT	3,386	26,033
MR	1,495	38,909
US	5,524	(13,578)
XR	1,067	(40,502)
Other	46	561
TOTAL	11,518	11,423

Rejections per month



Impact on Vetting

30% reduction
(700 per month to 470 per month) in **rejected requests** in the first few months after launch at Princess Alexandra Hospital NHS Trust