

# REDUCING X-RAY REPEAT / REJECT RATES USING THE GE X-RAY QUALITY APPLICATION

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## DESCRIPTION

The repeat / reject rate in X-Ray imaging is a pivotal quality indicator, emphasizing the importance of optimizing patient radiation dose, ensuring high image quality, and maintaining departmental cost-efficiency. A consistent lower rate is synonymous with enhanced patient safety and operational proficiency. At Humber River Health (HRH), the utilization of advanced analytical tools such as GE Healthcare's X-Ray Quality Application is essential for conducting nuanced repeat / reject analyses. This in-depth analysis highlighted a concerning issue: the repeat / reject rate in X-Ray was averaging 5.23% over 12 months, surpassing the institutional target of 5%. This elevation in the rate provided an opportunity to lower radiation exposure to patients, improve image quality, while also improving operational efficiency and resource utilization.

## OBJECTIVE

To reduce X-Ray repeat / reject Rates through focused data-driven strategies.

## ACTIONS TAKEN

The X-Ray Quality Assurance team initiated a structured analysis of X-Ray imaging, utilizing GE Healthcare's X-Ray Quality Application. The detailed insights and trends were shared monthly, highlighting the repeat / reject rate, predominant reasons for repeat imaging, and the top five views necessitating repeats. This approach promoted collective learning and improvement strategies, directly contributing to the refined processes, and enhanced focus on quality and precision in X-Ray imaging procedures.

## SUMMARY OF RESULTS

Baseline data collected over 12 months demonstrated 251,343 X-Ray exposures taken with 13,154 Rejected images, representing a repeat rate of 5.23%. During the 12-month intervention period, 266,400 X-Ray exposures were acquired with 13,006 rejected images, representing a repeat rate of 4.88%, which is below the institutional target of 5%. Moreover, the X-Ray department's repeat / reject rate exceeded the institutional target of 5% only once over the 12-month study period.

## LESSONS LEARNED

Continuous analysis and shared insights are pivotal for sustained improvement in imaging quality. It underscores the significance of collaborative learning in achieving and maintaining optimal repeat / reject rates, ultimately contributing to enhanced patient care and improved departmental efficiency.

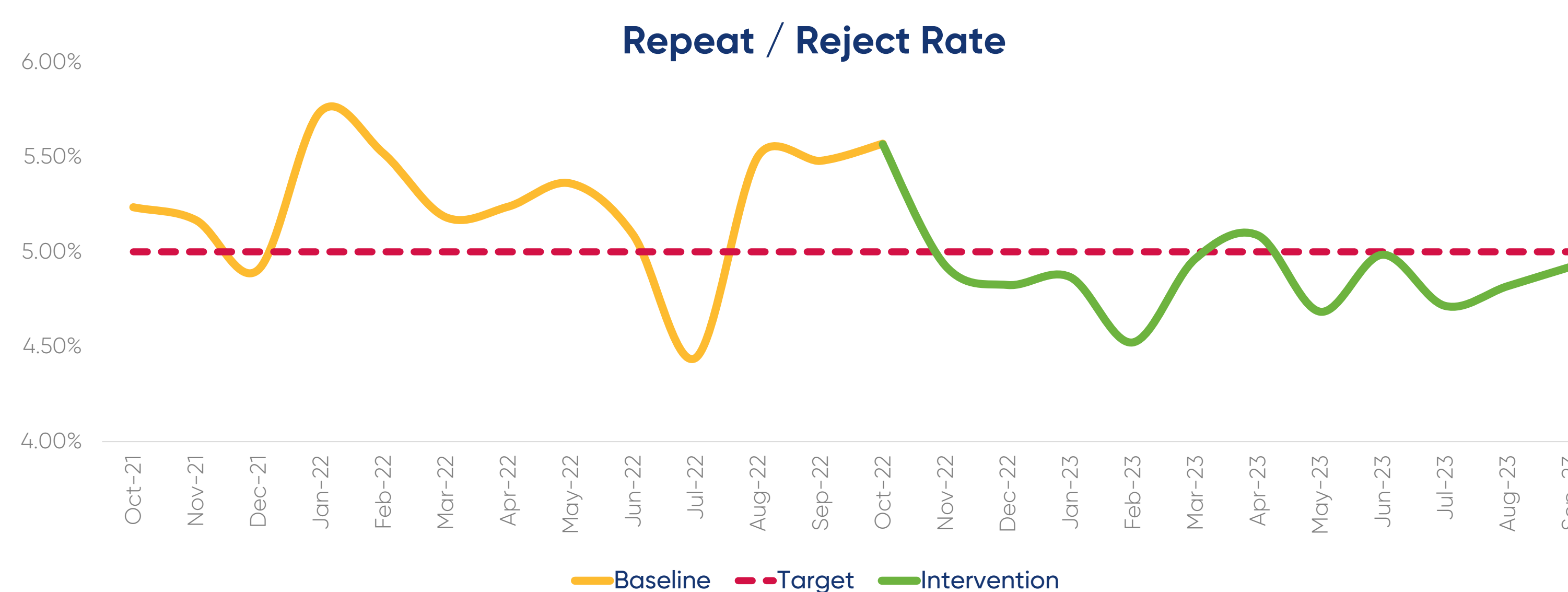


Figure 1. The X-Ray department's repeat / reject rate over 24 months.

	Baseline	Intervention
Total Exposures	251,343	266,400
Total Rejects	13,154	13,006
Repeat / Reject Rate	5.23%	4.88%

Figure 2. Table showcasing the increase in the number of exposures during the intervention period with a decrease in the total number of rejects and a subsequent decrease in the repeat / reject rate.

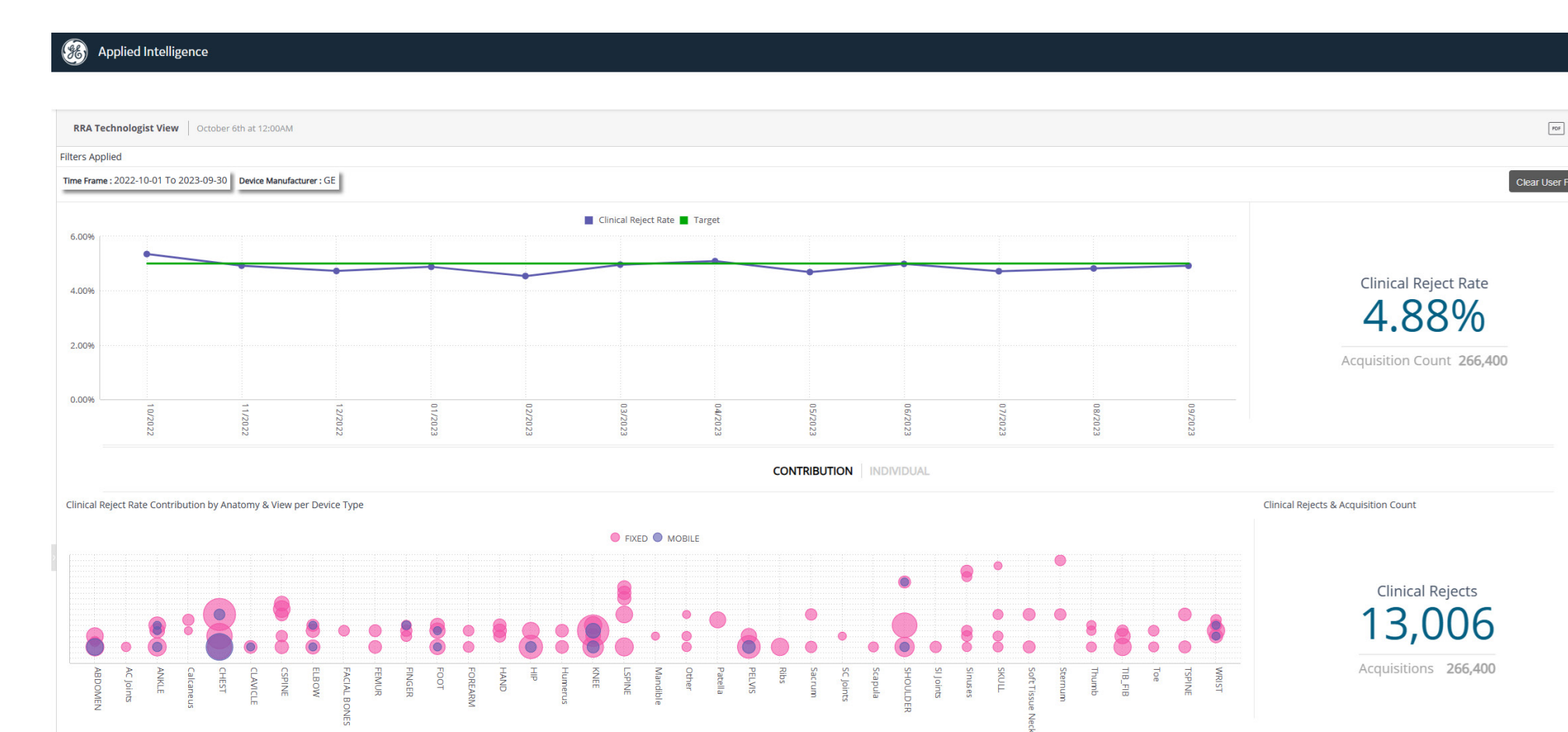
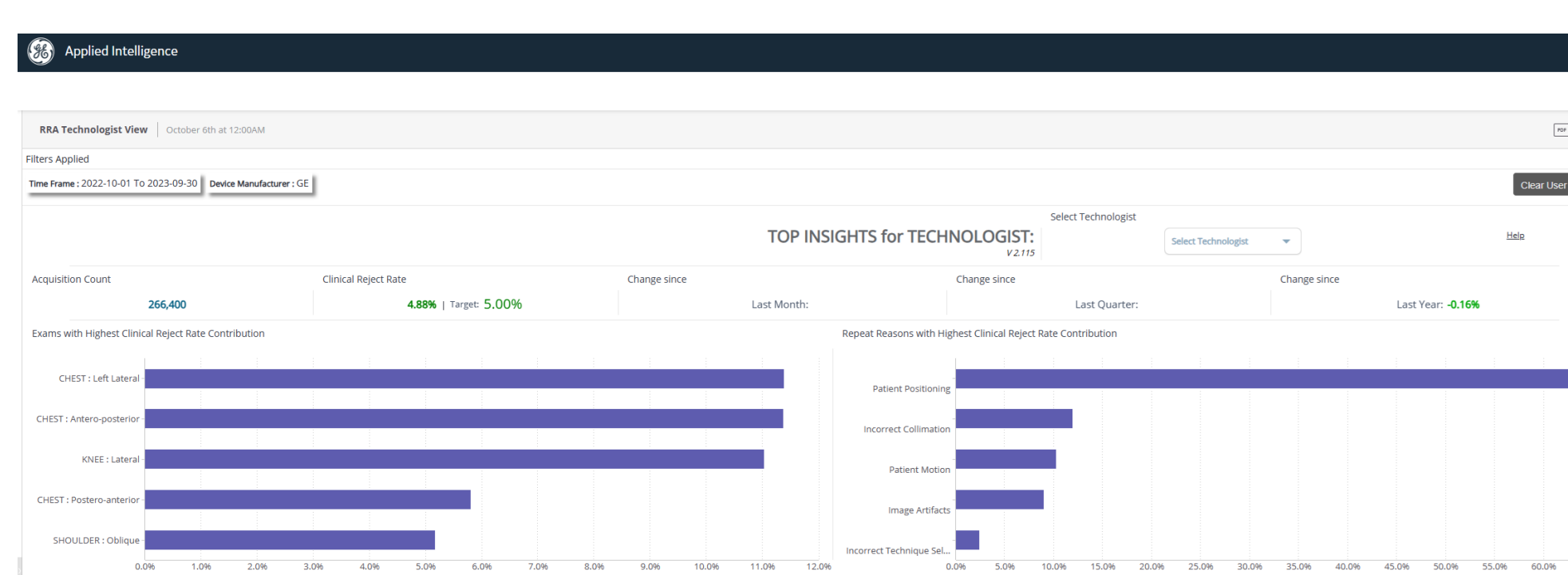


Figure 3. Screenshots from the GE XQA application demonstrating the reasons for rejected exposures, frequency of views rejected by type of equipment, and the rate of repeat / rejects over time.