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From RIFT Audit to RIFT Turkey: Reassessing Appendicitis Risk Models for Global Applicability

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The Right Iliac Fossa Treatment (RIFT) Audit has made a substantial contribution to optimizing appendicitis management by systematically evaluating risk prediction models across different healthcare settings. Conducted in the UK, Italy, Portugal, Ireland, and Spain, this prospective study analysed data from 5,345 patients across 154 hospitals to assess the utility of various risk models in identifying patients at low risk for appendicitis. The audit revealed significant diagnostic challenges, especially in women, who exhibited higher rates of normal appendectomy (NAR) than men, with considerable variability between countries. Among the 15 evaluated models, the Adult Appendicitis Score (AAS) and the Appendicitis Inflammatory Response Score (AIRS) were identified as the most effective tools for men and women, respectively, underscoring the potential of risk scores to guide clinical decisions, reduce unnecessary surgeries, and reduce healthcare costs[1,2].

Building on these findings, the RIFT Turkey study extended the scope of the original audit to a new healthcare setting, collecting data from 84 hospitals and 3,358 patients across Turkey. This study aimed to adapt and validate the RIFT model for Turkey, where patient demographics, healthcare policies, and imaging practices differ significantly from the original high-income study settings. RIFT Turkey's similar study design allows for direct comparative assessment of risk model performance, providing valuable insights for policymakers on the challenges posed by healthcare disparities, clinical approaches, and unique population characteristics. These findings equip policymakers with data-driven tools to improve diagnostic practices and patient outcomes in contexts distinct from those observed in the initial RIFT study[3].

RIFT Turkey's findings provide an expanded view of appendicitis care, complementing the original RIFT Audit's insights regarding high NAR and diagnostic variability across Europe. In Turkey, the overall NAR was lower compared to the UK; however, Turkish women experienced nearly three times the rate of unnecessary surgeries compared to men, despite lower overall rates of surgical intervention. This gender-specific discrepancy emphasizes the importance of tailoring risk scoring and imaging practices to patient demographics. Similar to the original RIFT Audit findings, these data suggest that women with suspected appendicitis may be at higher risk for unnecessary surgical intervention, highlighting the need for balanced and informed diagnostic decision-making[4,5].

Additionally, RIFT Turkey observed high reliance on computed tomography (CT) imaging, with 75.2% of patients receiving CT scans—a significant increase compared to imaging rates in the European cohort. This reliance on imaging introduces cost implications, underscoring the importance of efficient diagnostic strategies. Among the evaluated risk-scoring systems, the RIPASA and AAS models demonstrated superior predictive accuracy within the Turkish cohort, outperforming other widely used scores such as the Alvarado and AIR scores. The study's primary analyses focused on high-surgical-candidate patients to replicate real-world scenarios, but findings remained consistent across broader analyses. Furthermore, disparities in outcomes among immigrant patients reveal the importance of adapting risk models to support healthcare equity across diverse populations[6].

The global implications of the RIFT initiative are substantial, offering a valuable contribution to healthcare equity by refining diagnostic models

applicable to both resource-limited and high-resource settings. By reappraising and extending risk models across various clinical contexts, RIFT has established a robust evidence base to inform clinical guidelines and policy. This evidence is especially valuable for clinicians working in varied healthcare environments, enabling informed, data-driven decision-making for appendicitis care that aligns with available resources and standardizes care while respecting local constraints[4].

In conclusion, the progression from the original RIFT Audit to RIFT Turkey exemplifies the value of international collaboration in developing adaptable, validated diagnostic tools. Future directions for RIFT may include expanding studies to additional regions and conducting further analyses to refine and validate risk models across varied populations. Through continued efforts, RIFT aims to enhance diagnostic accuracy, reduce unnecessary surgeries, and optimize healthcare resources globally, benefiting patients, healthcare providers, and policymakers alike.

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