

# Predictive Value of Visual Assessment During High-Resolution Anoscopy in Anal Cancer Screening

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## INTRODUCTION

Anal cancer screening programmes aim to detect high-grade squamous intraepithelial lesions (HSIL) before progression to invasive carcinoma. High-resolution anoscopy (HRA) is widely considered the reference technique for evaluating suspected anal dysplasia in high-risk populations. During the procedure, targeted biopsy decisions are often guided by the surgeon's intraoperative visual impression of the mucosa. However, the reliability and predictive accuracy of visual assessment alone remains uncertain.

## MATERIALS AND METHODS

A retrospective episode-based analysis was performed including 33 HRA examinations carried out in a specialised colorectal unit.

Visual suspicion documented in operative reports was categorised as high or low suspicion according to the surgeon's intraoperative assessment of the anal mucosa.

Histopathological analysis of all biopsy specimens served as the reference standard. High-grade disease was defined as HSIL or invasive carcinoma.

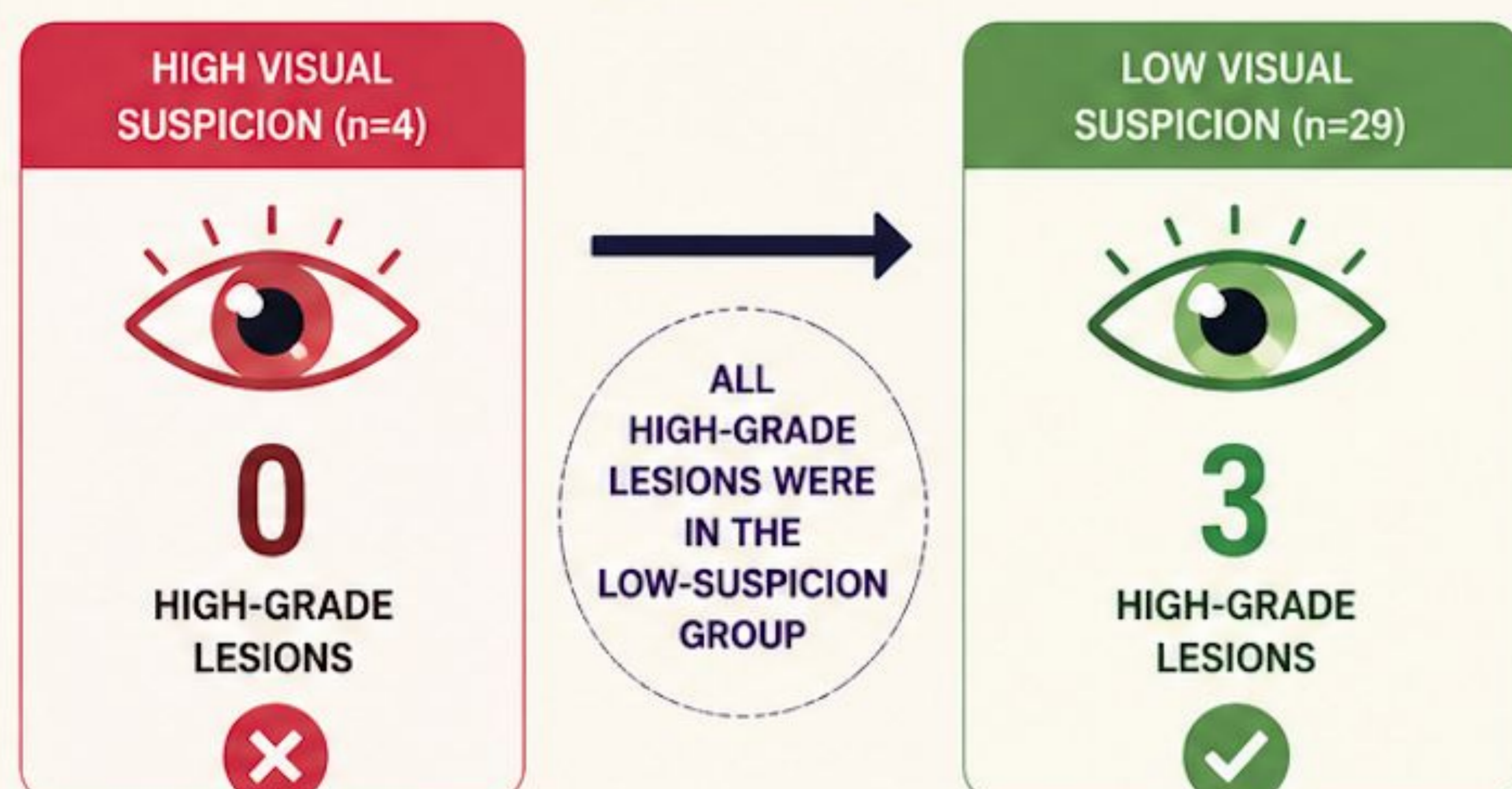
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## 178332 – IS THE SURGEON'S EYE RELIABLE?

Focus: visual suspicion as a predictor of high-grade lesions

### DISTRIBUTION OF VISUAL SUSPICION AND HIGH-GRADE FINDINGS

(n=33 examinations)



100% OF HIGH-GRADE LESIONS WERE INITIALLY CLASSIFIED AS LOW VISUAL SUSPICION

### DIAGNOSTIC PERFORMANCE OF VISUAL SUSPICION FOR HIGH-GRADE LESIONS



Visual suspicion alone failed to anticipate any high-grade lesion. **Systematic biopsy** is recommended in all examinations.

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## RESULTS

Among the 33 analysed episodes, visual suspicion was classified as high in 4 examinations and low in 29.

Histopathological evaluation identified 3 high-grade lesions (2 HSIL, 1 invasive carcinoma), all occurring in examinations initially categorised as low suspicion. Visual assessment demonstrated a sensitivity of 0%, specificity of 86.7%, positive predictive value of 0%, and negative predictive value of 89.7%.

## CONCLUSIONS

Visual assessment alone during HRA demonstrated no predictive value for high-grade anal lesions in this cohort. The failure to identify any high-grade lesion within the high-suspicion group highlights a significant diagnostic limitation. These findings support the routine implementation of systematic biopsy protocols within anal cancer screening programmes.