

# Diagnostic Performance of High-Resolution Anoscopy in Detecting High-Grade Anal Lesions in an Anal Cancer Screening Programme

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## INTRODUCTION

Anal cancer screening programmes targeting high-risk populations rely on high-resolution anoscopy (HRA) as the primary diagnostic tool for detecting high-grade squamous intraepithelial lesions (HSIL) and invasive carcinoma.

While HRA is widely endorsed as the reference technique, real-world data on its diagnostic performance within structured screening programmes remain limited.

Evaluating detection rates and biopsy yield in routine clinical practice is essential to optimise screening protocols.

## MATERIALS AND METHODS

A retrospective analysis of 33 consecutive HRA examinations performed within a structured anal cancer screening programme at a specialised colorectal unit was conducted.

All examinations included targeted biopsies guided by intraoperative assessment. Histopathological analysis served as the reference standard.

Diagnostic performance metrics including detection rate, biopsy positivity rate, and overall programme yield were calculated. High-grade disease was defined as HSIL or invasive squamous carcinoma.

## RESULTS

Among 33 examinations, histopathological analysis identified 3 high-grade lesions (2 HSIL, 1 invasive carcinoma), yielding an overall high-grade detection rate of 9.1%.

All 33 examinations resulted in biopsy sampling, with a high-grade biopsy positivity rate of 9.1%. Notably, all high-grade lesions were detected in examinations classified as low visual suspicion, suggesting that programme yield depends on systematic rather than selective biopsy strategies.

## CONCLUSIONS

HRA demonstrated a clinically relevant detection rate within this screening programme. These findings support the implementation of systematic biopsy protocols independent of intraoperative visual impression, with implications for standardising HRA-based screening in high-risk populations.

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### 178317 – DOES THE SCREENING PROGRAM WORK?

Focus: overall program yield



33

HRA EXAMINATIONS



3

HIGH-GRADE  
LESIONS DETECTED



9.1%

PROGRAM YIELD  
(high-grade rate)

#### HISTOPATHOLOGICAL OUTCOMES OF 33 EXAMINATIONS

30

LOW-GRADE  
(90.9%)

3

HIGH-GRADE  
(9.1%)

100% OF EXAMINATIONS INCLUDED BIOPSY

#### HIGH-GRADE LESIONS (n=3)



2 HSIL



1 INVASIVE SQUAMOUS  
CARCINOMA

9.1%

HIGH-GRADE YIELD  
(3/33)



The HRA screening program showed an overall yield of **9.1%** for high-grade lesions in this cohort.

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