

Treatment of anal intraepithelial neoplasia and prevention of anal carcinoma

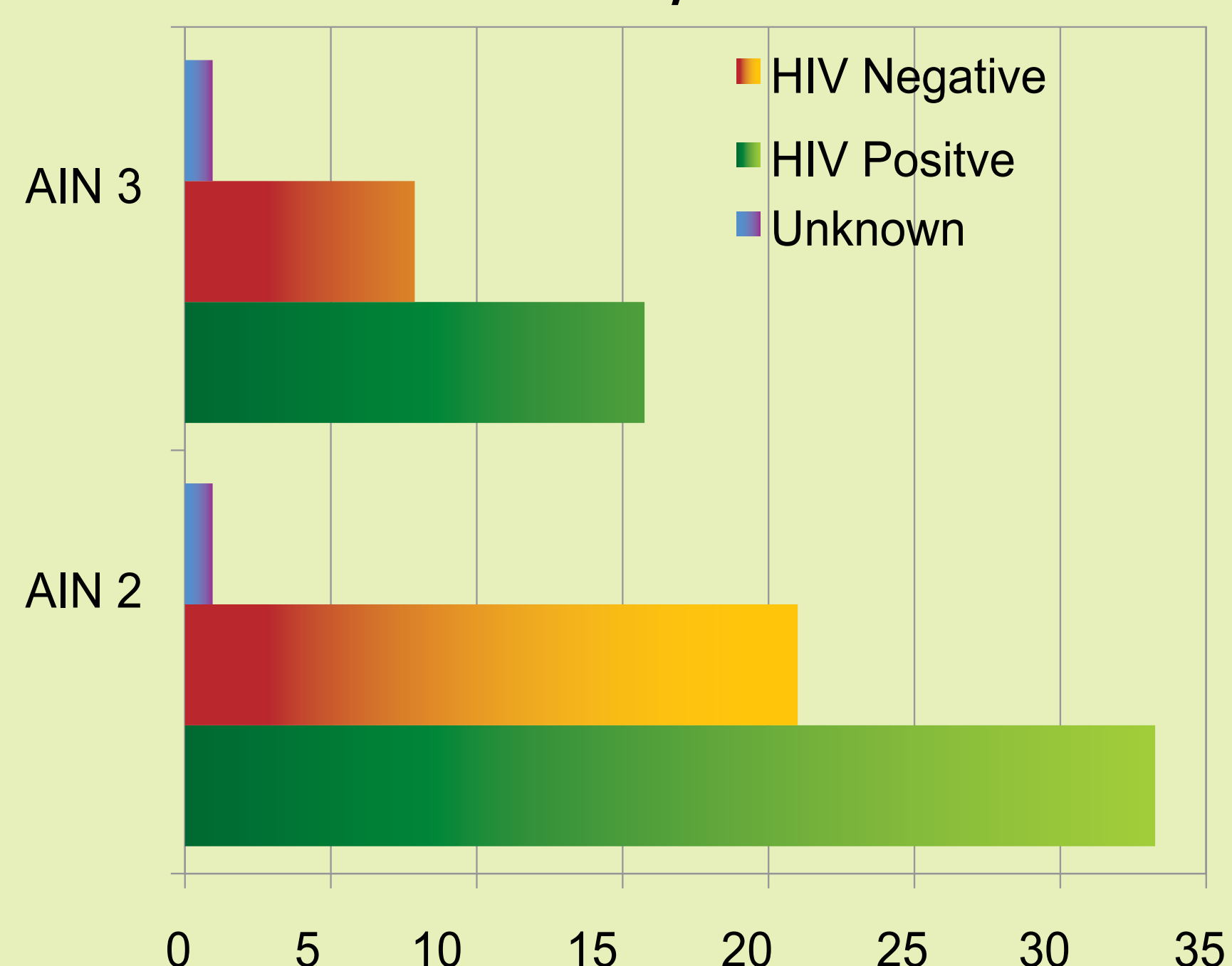
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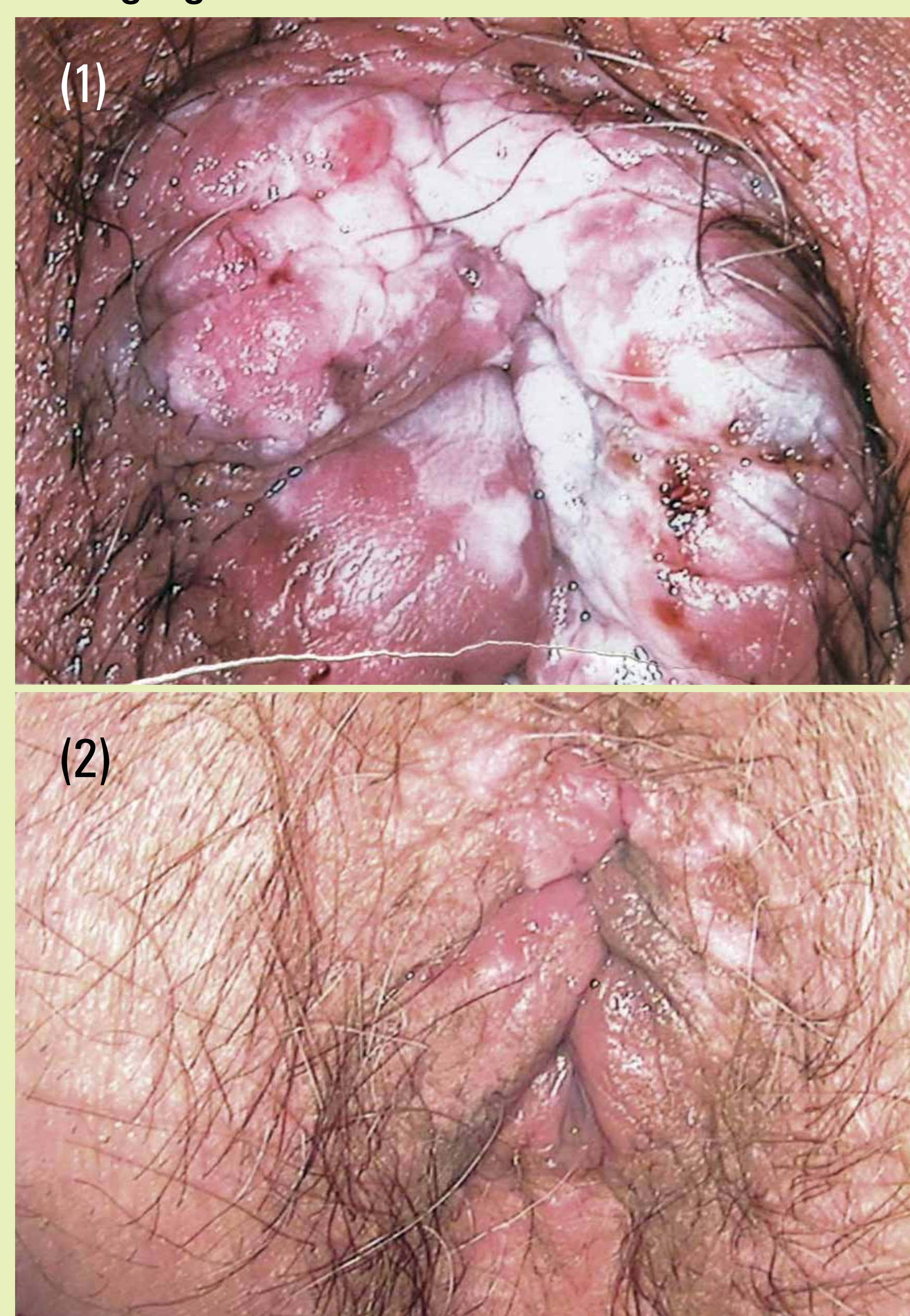
Demographics

Cohort characteristics	No of Patients (%)
AIN 2	56 (61.5%)
AIN3	35 (38.5%)
HIV +	56 (61.5%)
HIV -	33 (36.2%)
Male	82 (90.1%)
MSM	80 (87.9%)
Nadir CD4 <200	37 (66%)
Mean age	36.6

Grade of AIN disease by HIV status



Pre-(1) and post-(2) laser treatment for high grade AIN disease



Homerton University Hospital **NHS**
NHS Foundation Trust

Barts Health **NHS**
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Background:

The rates of anal carcinoma (cancer) have increased over recent decades in Europe and the US^{1,2,3}. The anal cancer rates are much higher in HIV positive men and have increased over time⁴. Moreover, compared to HIV negative people, local clearance rate of anal cancer is much reduced in HIV positive people (87% v 38% at 5 years), after chemoradiotherapy⁵. Progression to anal cancer from high-grade anal intraepithelial neoplasia (AIN 2/3) has been noted in a number of small observational studies at a rate of 8.6% to 14.3% over 5 years^{6,7,8,9}. An opportunity may exist to prevent anal cancer through treatment of AIN 2/3. We present retrospective data on AIN 2/3 cases that underwent laser ablative treatment.

Methods:

Data on patients who had a minimum of 3 year follow-up after AIN 2/3 diagnosis and who underwent ablative treatment for AIN 2/3 was reviewed.

Results:

A total of 91 patients (35 AIN 3; 56 AIN 2) were identified. Fifty six (61.5%) were HIV positive.

Median follow-up for the cohort was 69 months (mean 69.9; range 36 – 180 months). None of the patients in this cohort developed anal cancer. Twenty five cases (45%) had been HIV + for 15 years or more.

Markov model-based analyses suggest that treatment may have prevented lesion progression in a proportion of patients.

One patient who did not meet the criteria of 3 years of follow-up and was thus excluded from the analysis went on to develop anal cancer. This 49 year old man was HIV + for 21 years with a CD4 nadir of 8. He had 3 quadrant AIN 3 disease.

Interpretation:

- In our cohort of 91 patients with high grade AIN disease, no one developed anal cancer after a median of 69 months of follow up (minimum 3 years). All patients received laser ablative treatment for AIN 2/3.
- Although no large natural history studies exist, available data suggests that AIN 2/3 in some instances can progress to anal cancer. Previously we established 36 months as an adequate period to assess outcome of treatment¹⁰.
- Though no one in this cohort developed cancer, there was a case of cancer in a treated patient (follow up <3 years). It is likely this represents a late presentation, where treatment had no impact in reversing the process of malignancy.
- We now need prospective data on treatments employed to prevent anal cancer.

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