**Materials and Methods**

This retrospective cohort study was conducted in a tertiary University Hospital setting (West London Cancer Centre, Imperial College NHS Trust) over 10 years by examining the records of all women at Hammersmith and St. Mary’s Hospitals diagnosed with vulvar intraepithelial neoplasia (VIN) between January 2002 and December 2011. All women diagnosed with VIN (*n* = 90) and managed within this period were included; women were suitable for inclusion irrespective of VIN type or grade of disease. A search by histological diagnosis of VIN was performed and hospital numbers obtained. St. Mary’s Hospital data were collected from the colposcopy database “Excelicare” and pathology database “Telepath”. Hammersmith Hospital data were obtained from patients’ paper medical records. Symptoms at the time of presentation (Fig. 1) were collated, together with patient age at the time of initial presentation (mean ± SD; 44.8 ± 15.1 years; range 20–86), smoking status, human papillomavirus (HPV) and human immunodeficiency virus (HIV) status, CD4+ lymphocyte count and viral load (only in the HIV+ patients), initial diagnosis, and whether the lesions present were unifocal/multifocal and unicentric/multicentric (Fig. 1). Viral load was determined using an immunoassay that simultaneously detects both antibody to HIV and HIV p24 antigen (Architect HIV Ag/Ab Combo) and confirmation was made using LIAISON® XL MUREX HIV Ab/Ag HT, whilst CD4 positivity was determined using fluorescence-activated cell sorting on a BD FACSCanto analyser (BD Biosciences, San Jose, CA, USA).

Next, the initial treatment regimen, whether the patient remained disease free or if disease recurred (until December 2017), the time from treatment to recurrence, and final patient outcome were all recorded.

Univariate analysis using permutation χ2 tests (10,000 permutations; SPSS version 24 (released 2016); IBM Corp., Armonk, NY, USA; www.ibm.com/products/spss-statistics) were used to evaluate statistical significance with respect to the effect of treatment on VIN recurrence and patient outcomes, whilst Fisher’s exact test and linear regression analysis (Prism version 7:00 for Windows, GraphPad Software, La Jolla, CA, USA; www.graphpad.com) were used to determine the influences of multifocality and multicentricity on time to disease recurrence after treatment. Demographic data were analysed with unpaired Student’s *t* test with Welch’s correction for non-uniform variances (Prism version 7), and interactions between prediction variables for disease recurrence, including treatment options, were assessed using binomial logistic regression (Minitab version 18, 2019; LLC, State College, PA, USA; www.minitab.com/en-us).