**Supplement.** Flowcharts of Steps to Generate the Analysis Datasets (A) and to Construct and Evaluate the Optimized Triage Algorithm (B)\*

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Abbreviations: CART, classification and regression tree analysis; CASI, computer-assisted self-interview

\*Corresponding shading indicate which datasets in panel A were used for which analytic steps in panel B.

†For patients with multiple new problem visits with a CASI, one visit was randomly selected for inclusion in the analysis.

‡Patients with key symptoms all require standard visits due to their symptoms. Key symptoms include anogenital symptoms, abdominal pain (for women), body rash, or symptoms concerning to the patient for acute HIV infection.