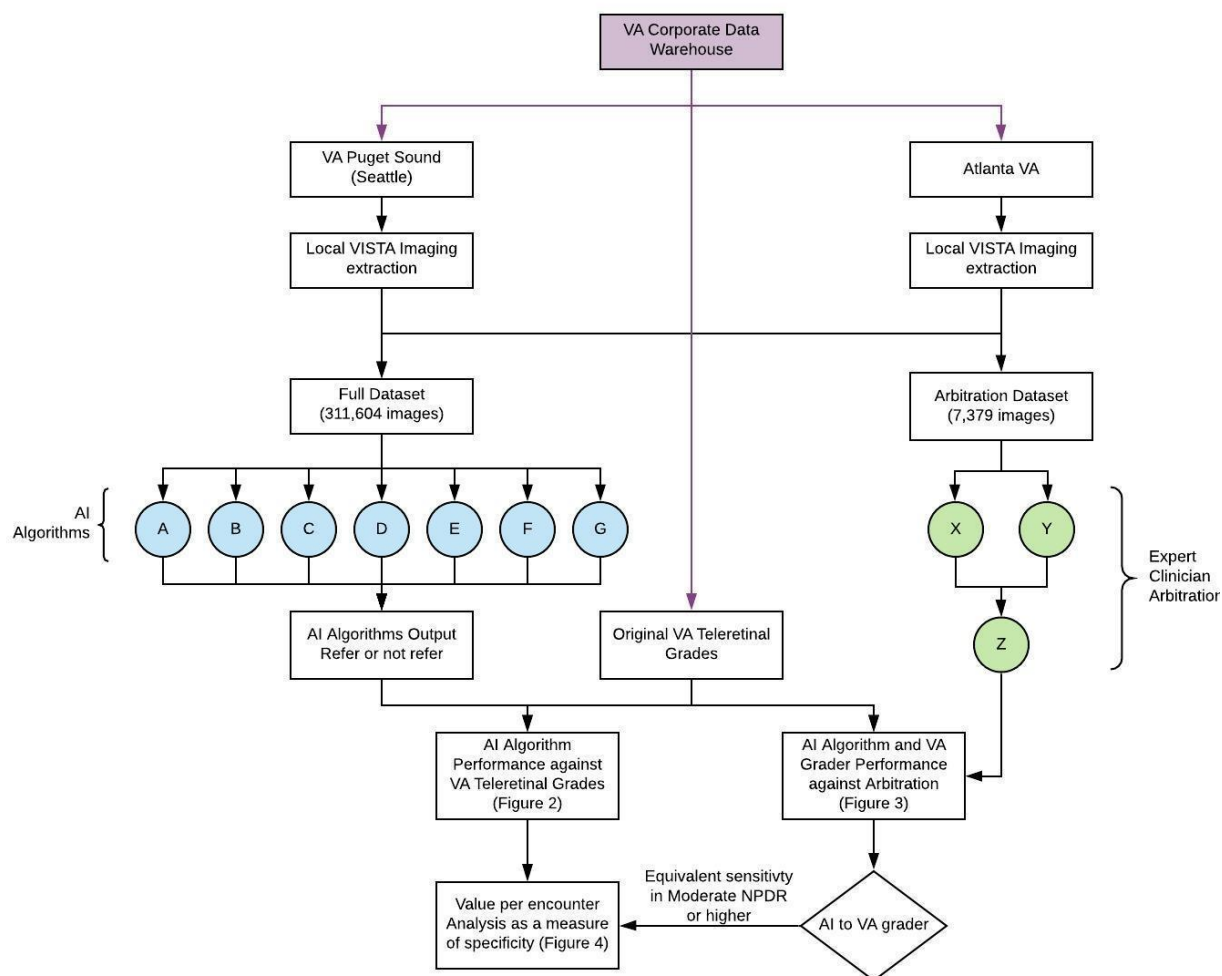


## **SUPPLEMENTARY DATA**

### **Multicenter, head-to-head, real-world validation study of seven automated artificial intelligence diabetic retinopathy screening systems**

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**Supplementary Figure. Schematic of the study design.** Clinical data were acquired from the Veterans Affairs (VA) Corporate Data Warehouse and corresponding images were extracted from the Seattle and Atlanta VA Veterans Health Information Systems and Technology Architecture (VISTA) Imaging systems to form the full dataset. Using the original VA teleretinal graders as the reference standard, the binary classification output of each AI algorithm (A-G) was compared against the original VA teleretinal grades (Figure 1). A subset of the full dataset was manually regraded by two ophthalmologists (X and Y) and disagreements were settled by a third ophthalmologist (Z) who was masked to the classification grades from X and Y. This arbitrated dataset was compared against the VA teleretinal grader and each AI algorithm (Figure 2) in screening for referable DR. Algorithms that achieved sensitivities no worse than the

VA teleretinal grader in screening for referable DR in images regraded as moderate nonproliferative DR (NPDR) or worse in the arbitrated dataset were carried forward to perform a value per encounter analysis (Figure 3).

**Supplementary Appendix**  
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