



Figure 3. *Diagnostic approach to eosinophilia. A stepwise approach for evaluating cases of eosinophilia is provided. Benign, reactive etiologies should be ruled out first. Asterisks indicate diagnostic tests appropriate only when indicated by clinical suspicion. A, Once reactive causes have been excluded, the next diagnostic step is a standard hematologic-malignancy evaluation, consisting of bone marrow biopsy, flow cytometry, and karyotyping. B, If the diagnosis remains elusive, proceed to CHIC2 fluorescence in situ hybridization testing (FISH). If not identified by routine karyotyping, at this step, PDGFRB and FGFR1 translocations can also be evaluated by FISH and polymerase chain reaction. C, Chronic eosinophilic leukemia not otherwise specified (CEL NOS), lymphocytic variant hypereosinophilic syndrome (HES) paraneoplastic syndromes associated with occult tumors, and idiopathic HES should only be considered if the previous studies do not explain the observed eosinophilia. Abbreviations: AML, acute myeloid leukemia; ANCA, antineutrophil cytoplasmic antibody; CML, chronic myeloid leukemia; CMML, chronic myelomonocytic leukemia; HES, hypereosinophilic syndrome; Ig, immunoglobulin; IL-5, interleukin 5; RAST, radioallergosorbent test; TCR, T-cell receptor.*