

## Study Title

Serological Testing for Cold Agglutinins: A Systematic Review and Potential Study

## Study Description

The diagnostic approach of detecting clinically significant cold agglutinins (CAG) is varied, given there is no consensus in the literature. The BEST literature review that occurred for warm-reactive autoantibodies (WAA) helped to harmonize practice for transfusion labs, where transfusion medicine expertise is further needed to help interpret the literature for CAG. Thus, we wish to perform a literature review to: 1) determine what serological techniques are described to detect CAG, 2) to determine the optimal serological techniques and cutoffs to detect CAG that are clinically significant for cold autoimmune hemolytic anemia, and 3) to assess the current serological testing practices that currently exist in clinical transfusion medicine services for CAG.

A search strategy adapted from the BEST WAA literature review was created with the help of a librarian and input from BEST members, to search the databases MEDLINE, EMBASE, and CENTRAL to January 1, 2020. Inclusion criteria includes: 1) all cohort/case-control studies assessing transfusion medicine laboratory methods of detecting cold agglutinins and determining the clinical significance of cold agglutinins and 2) review articles that cover transfusion medicine laboratory methods of detecting cold agglutinins and determining the clinical significance of cold agglutinins will refer to the original studies wherever possible. Exclusion criteria includes: 1) grey literature, 2) single patient case studies or small case series (up to 5 patients), and 3) literature/studies that only discuss clinical and/or treatment outcomes of patients with CAG. Two authors will perform screening independently with a third reviewer resolving any disagreements independently. BEST members will help with data abstraction from full-text review and most importantly assist with interpretation of the literature base to develop recommendations. Quality assessment will be done with the Newcastle Ottawa Scale for observational studies.

After the literature review and development of recommendations, the BEST members involved in this project will either answer a survey or perform case reviews to assess/analyze the practice of CAG workups in their respective centers. BEST members have agreed thus far that the course of the project will be determined based on the findings of the literature review.

## Study Status

Completed

Publication Number

166

Teams

CTS

Study Leaders

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