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When none of the results display an overall probability, it's likely that all outcomes are labeled as "inexplicable." You can identify this by comparing the total number of results with the count of inexplicable donors/CBUs.



In such instances, it indicates that the patient's HLA makeup cannot be adequately explained by the combination of two haplotypes in the applied haplotype frequency (HF) set. If no specific "Pool Country Code" is designated, the global HF set is utilized. However, if a pool is specified, the corresponding HF set for the given country code is employed.

### **Resolving the Issue**

To render the patient's HLA profile explicable, there are two potential solutions:

#### Option 1:

Adjust the "Pool Country Code" of the patient to "No Value." This ensures the application of the global HF set, which is more likely to encompass a combination of haplotypes explaining the patient's typing. If this doesn't suffice, setting the "Pool Country Code" to the patient's country of genetic background may be beneficial in some cases.

### Option 2:

Retype the patient at high resolution to eliminate any ambiguity in the HLA typing. With all uncertainties removed from the patient's side, the matching engine can calculate matching probabilities.

Upon implementation, the results may display:

- Low and intermediate resolution donors with an overall match probability of 0%. This occurs because there isn't a combination of two haplotypes in the donor's HF set matching the patient's genotype. Note that despite the 0% probability, some of these donors might still be viable matches, particularly if they share the same genetic background as the patient. In the ATLAS matching engine, such donors may not be returned.
- A high-resolution typed donor with a 100% match, although this is improbable considering the patient's highly unique genotype, it remains a possibility.