

Clinical Accuracy: Dataset 1 - White Blood Cell

In clinical validations, the Athelas device has achieved 100% Clinical Range accuracy for White Blood Cell Counts.

The trial was conducted across patients in a clinical setting at FEMAP Hospital. For usage - a drop of blood is taken from a patient's fingertip and placed on the small test strip. The strip is inserted into the low-cost, portable device, and a few moments later a White Blood Cell is produced on the app, on screen, or via email.

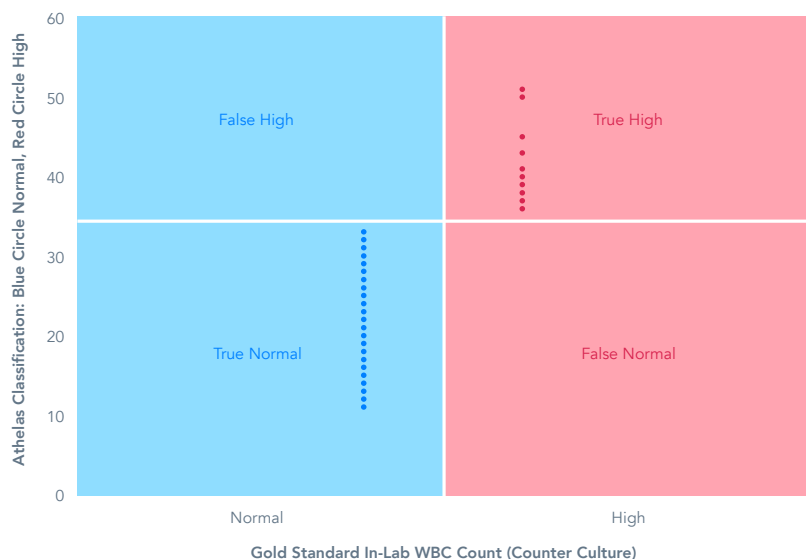


The graph on the right shows the 100 patient sample set showcasing the WBC ranges correctly classified by Athelas in comparison to existing gold standards (in-lab machines) in the following segments:

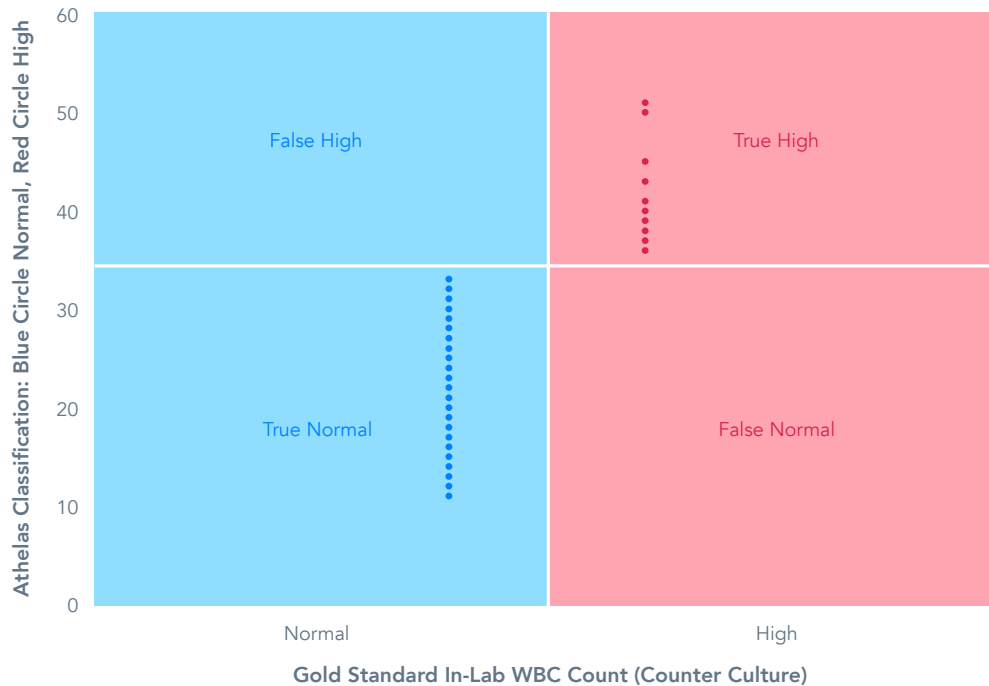
Normal (4.5-10k WBC/uL),
High (10k+ WBC/uL)

(Expanded graph view on next page)

Athelas White Blood Cell Count Range Classification



Athelas White Blood Cell Count Range Classification

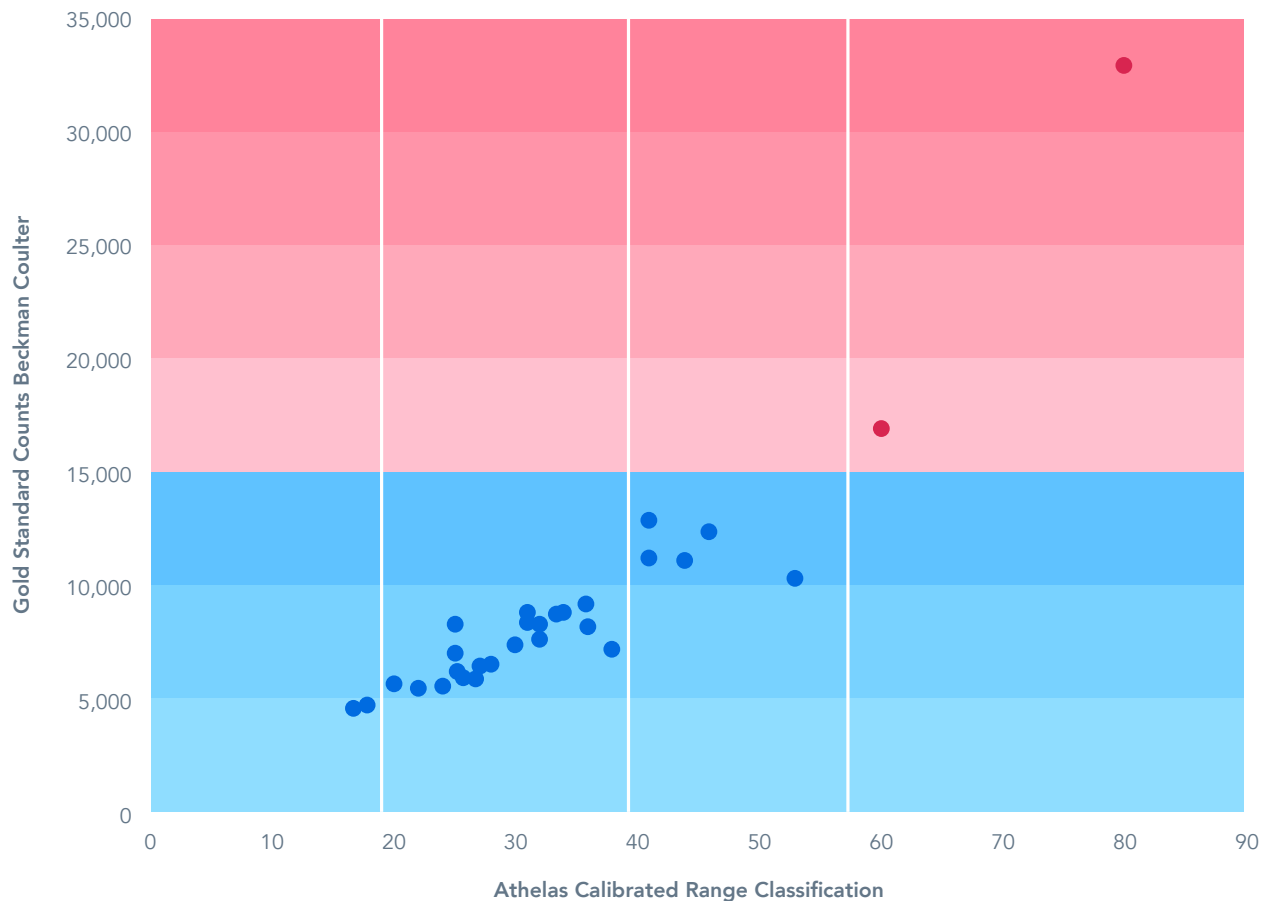


Each point above represents a single clinical patient, the x-axis showcases the split between **Normal** WBC counts and **High** as recorded by the in-lab, gold standard counter (Blue Region and Red Region). The y-axis shows the Athelas split: red circles mean the device has registered as High, while blue indicates Normal range – the dividing line is the Athelas boundary (10k/ uL WBC) for the two classes. **As indicated by the class boundary, the system successfully captures 100% of the ranges accurately with a 0% false positive/negative error rate in the normal vs. high clinical WBC classification.**

In the given clinical study, no patients were found in the Low WBC range (less than 4.5k WBC/uL), but in bench studies, the device has been capable of correctly classifying this range as well while maintaining the same degree of accuracy. Very high counts (greater than 15k WBC/uL) are also separately flagged by the system as potential presence of malignancies and Leukemia (as a sub-group of the High category).

The generated WBC Counts from Athelas are used to identify and flag infection, inflammation, allergic reactions, or viral conditions within seconds at Point of Care. Current deployments of the device are aimed to be placed in waiting rooms, doctor's offices, and Urgent Care facilities to quickly flag conditions needing immediate response.

Athelas White Blood Cell 4-Range Split



Above is the 4-class split range classification by the Athelas system across the same dataset.

The Athelas device also generates Red Blood Cell Counts, White Blood Cell Differentials, and Hematocrit values, along with Urinary Tract Infection (UTI) or Pyuria diagnostics from a drop of urine fluid - which will all be rolled out to users in the coming months.

Furthermore, precision studies, environmental studies, aging studies, and re-concentration studies were conducted at various edge-cases (especially in the lower concentration ranges, of which our clinical study had fewer data points) to indicate the system's performance. The next few pages is a summary of those tests (range 1: lower than 4500, range 2: between 4500 and 10000, range 3: greater than 10000).



www.getathelas.com



(408) 603 1954



275 Moffett Blvd, Mountain View, CA 94043



founders@getathelas.com