

Platelet Function Analysis

Platelet Function Analysis (PFA) is a useful initial screening test for investigating platelet dysfunction.

A whole blood sample is passed under high shear stress through a small aperture in a biochemically active cartridge.

There are two test cartridges currently available:

- collagen/epinephrine (COL/EPI) and
- collagen/adenosine (COL/ADP).

As happens with a cut in the skin, platelets adhere and aggregate across the aperture, eventually closing it and stopping the flow of blood.

The PFA test measures this closure time (CT) in seconds.

The CT can be interpreted as normal or prolonged.

Interpretation of PFA results

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COL/EPI CT: Normal; COL/ADP CT: Normal

Normal, severe disease excluded

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COL/EPI CT: Prolonged; COL/ADP CT: Normal

Mild von Willebrand disease

Mild platelet dysfunction

Drug-induced platelet dysfunction: Aspirin and NSAIDs

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COL/EPI CT: Prolonged; COL/ADP CT: Prolonged

Severe von Willebrand disease

Severe platelet dysfunction

Drug-induced platelet dysfunction

Limitations

The PFA is useful only as an initial screening test—the results are not specific enough for definitive diagnosis.

Abnormal results will require follow-up diagnostic testing (e.g. von Willebrand disease assays).