Haemoview Diagnostics
Redefining coagulation

CUSTOMER INFORMATION BRIEF

ClotPro® -Guided Personalised Thrombolysis for Acute Pulmonary Embolism in ICU

Summary of a single-centre randomised feasibility trial, Intensive Care Medicine Experimental, 2026

Why this matters

Systemic thrombolysis is recommended for high-risk pulmonary embolism (PE), but carries substantial bleeding risk in part due to thrombolysis-induced coagulopathy. In intermediate-high-risk PE the bleeding–benefit balance is even more finely poised, and many ICU patients are excluded from standard fixed-dose protocols because of perceived bleeding risk. A personalised, coagulation-guided approach has been proposed as a way to deliver effective reperfusion while preserving haemostatic reserve.

Study at a glance

Study design	Single-centre randomised controlled interventional feasibility trial
Setting	ICU; patients with high- and intermediate-high-risk acute pulmonary embolism (PE)
Enrolment	33 enrolled; 19 included in analysis
Groups	Control (CG) n=7: standard 100 mg rtPA over 2 h. Viscoelastometry-guided (VGG) n=12: personalised prolonged low-dose rtPA guided by ClotPro® viscoelastometry and repeated echocardiography.
Primary aim	Feasibility of a VET-guided, low-dose, prolonged systemic thrombolysis protocol; exploratory safety and efficacy.
Source	Intensive Care Medicine Experimental, 2026 Apr 29;14(1):57.

What the ClotPro® assays contributed

- **ECA-test** – in this study, used as a sensitive viscoelastometric signal for tPA-related fibrinolytic activity, helping the team identify excessive or residual fibrinolysis in real time.
- **TPA-test** – used to assess responsiveness of the patient's clotting system to tPA and to help exclude fibrinolysis resistance prior to and during therapy.
- Together with repeated echocardiography, ClotPro® results informed individualised infusion rate, duration, and targeted fibrinogen supplementation.

Key findings

- Median rtPA dose in the VET-guided group was 32.00 mg (IQR 20.95–42.75) versus the standard 100 mg in controls, despite a longer median infusion of 8.5 h (IQR 6.6–10.0).
- Right ventricular dysfunction persisted in 2 of 7 control patients but resolved in all viscoelastometry-guided patients.
- Major bleeding occurred in 2 control and 1 VET-guided patient (small sample; not powered for outcome comparison).
- Protocol adherence for viscoelastic testing was reported at 95%, supporting operational feasibility in an ICU workflow.
- Severe thrombolysis-induced coagulopathy appeared reduced; fibrinogen supplementation could be targeted; coagulation recovery after stopping thrombolysis appeared faster than with standard dosing.

Dosing and outcomes

Outcome	Control (CG, n=7) Standard 100 mg rtPA over 2 h	VET-guided (VGG, n=12) Personalised low-dose prolonged rtPA
Median rtPA dose	100 mg (per protocol)	32.00 mg (IQR 20.95–42.75)
Median infusion duration	2 h	8.5 h (IQR 6.6–10.0)
Persisting RV dysfunction	2 patients	Resolved in all patients
Major bleeding	2 events	1 event
Protocol adherence (VET sampling)	—	95%

Source: feasibility trial, Intensive Care Medicine Experimental 2026. Small analysed sample (n=19); not powered for clinical outcomes.

Practical implications for ICU and PE response teams

- Supports effective reperfusion while preserving haemostatic reserve in selected high- and intermediate-high-risk PE patients.
- Demonstrates that a ClotPro® -guided, prolonged low-dose rtPA protocol is feasible at the bedside, with high adherence to viscoelastic sampling.
- May be relevant where conventional 100 mg/2 h dosing is difficult to justify due to bleeding risk, provided governance and expertise are in place.

Important clinical considerations

- Feasibility trial, single-centre, with a small analysed sample (n=19); not powered for clinical efficacy or safety endpoints.
- Findings are exploratory; broader effectiveness, dosing windows, and patient selection require confirmation in larger multicentre trials.
- Implementation depends on local protocols, governance, trained operators, and multidisciplinary decision-making (ICU, haematology, PE response team).
- Echocardiography and viscoelastic testing must be available 24/7 for repeated monitoring; assay interpretation should follow device and assay IFU, with local validation of any thresholds.

Suggested customer conversation points

- Which patients in your service might benefit from a coagulation-guided thrombolysis approach rather than a fixed 100 mg/2 h regimen?
- How is your PE response team structured, and where could real-time viscoelastic data add value to decision-making?
- What governance, training, and validation would your service require before piloting a VET-guided protocol?

Source

Personalised viscoelastometry-guided systemic thrombolysis for high- and intermediate-high-risk acute pulmonary embolism in the ICU: a single-centre randomised controlled interventional feasibility trial. Intensive Care Medicine Experimental. 2026 Apr 29;14(1):57.

Article: https://link.springer.com/article/10.1186/s40635-026-00903-7 | **DOI:** https://doi.org/10.1186/s40635-026-00903-7 | **PubMed:** https://pubmed.ncbi.nlm.nih.gov/42053874/

Visual summary

At-a-glance summary of ClotPro®-guided personalised systemic thrombolysis for acute pulmonary embolism in the ICU, reproduced from the source publication and Haemoview educational materials.

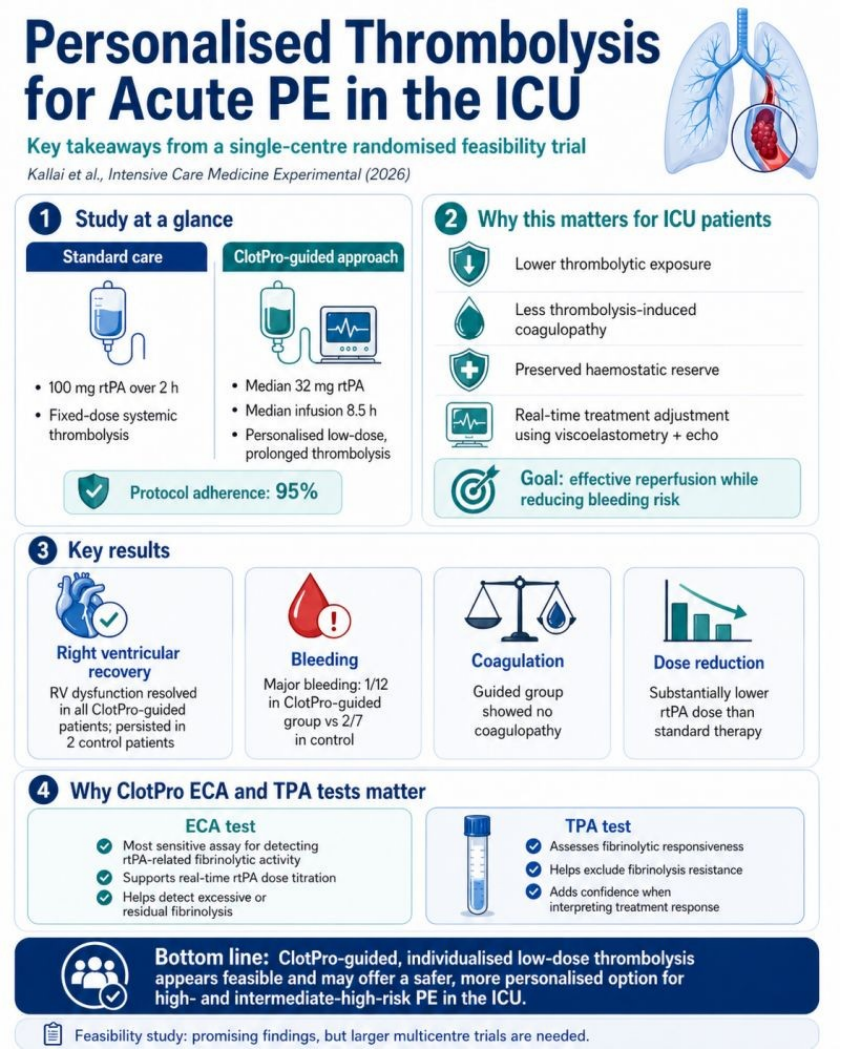

Figure: Educational visual summary. Adapted from materials accompanying the source publication.

Source and disclaimer

Intensive Care Medicine Experimental 2026;14(1):57. **Article:** https://link.springer.com/article/10.1186/s40635-026-00903-7 | **DOI:** https://doi.org/10.1186/s40635-026-00903-7 | **PubMed:** https://pubmed.ncbi.nlm.nih.gov/42053874/