Study	Population/condition	Comparison	Results RR [95% CI]	Clinically relevant
Deitcher, 2004	N=108 Adults and children with CVC dysfunction (temporary and permanent catheters), excluding hemodialysis catheters. Indication: oncological treatment	Recombinant urokinase (25000, 15000, 5000 IU/ml) vs. placebo; intraluminal dwell for 2x30 minutes	UK 25000 17/25 vs. 3/10, RR 2.27 [0.85 to 6.06] in favor of UK UK 15000 19/27 vs. 3/10, RR 2.35 [0.88 to 6.24] in favor of UK UK 5000 18/26 vs. 2/10, RR 3.46 [0.98 to 12.27] in favor of UK	Yes
Fink, 2004	N=50 Patients with CVC dysfunction (single, double, or triple lumen tunneled catheters or ports). Indication not specified	Alteplase 1mg/ml 1ml vs. 2ml volume; 2x intraluminal dwell for unreported time	1 st installation 20/27 vs. 18/23, RR 0.95 [0.69 to 1.29]; 2 nd installation 21/27 vs. 19/23, RR 0.94 [0.71 to 1.24] in favor of 2ml	Νο
Gabrail, 2010	N=97 Adults and children with CVC dysfunction (ports (62), single- lumen (7), double- lumen (25), or triple- lumen (3) CVCs), excluding hemodialysis catheters. Indication: 81 chemotherapies, 31 blood transfusion, 27 antibiotic therapy, 11 parenteral feeding (multiple indications possible).	Tenecteplase (2mg/2ml), tenecteplase, and placebo vs. placebo, tenecteplase and tenecteplase; intraluminal dwell for 2x120 minutes	Restoration of catheter function within 120 minutes after administration of the first dose: TNK 30/50 (60%) vs. placebo 11/47 (23%), RR 2.56 [1.46 to 4.51]. Cumulative rates of restored catheter function: 88% (95% Cl 79% to 97%) in the TNK arm versus 85% (95% Cl 75% to 95%) in the placebo arm 120 minutes after a second dose of Tenecteplase.	Yes
Haire, 1994	N=48 Patients with CVC dysfunction.	Urokinase 10,000 IU/2mL vs. alteplase 2mg/2mL; intraluminal	25/28 vs 13/22, RR 1.51 [1.04 to 2.19] in favor of alteplase	Yes

Table 1. Restoration of catheter patency per study

	Indication: chemotherapy or apheresis of haematopoietic stem cells.	dwell for 2x120 minutes		
Haire, 2004	N=180 Patients with CVC dysfunction (ports (80); PICCs (47); non- tunnelled CVC (33); tunnelled CVC (18); unspecified (1)), excluding hemodialysis catheters. Indication: 81 chemotherapy, 37 antibiotic therapy, 13 parenteral feeding, 9 blood sampling; 39 multiple/other.	Urokinase 5000 IU/mL vs. placebo; intraluminal dwell for 2x30 minutes	64/118 vs 18/61, RR 1.84 [1.21 to 2.8] in favor of urokinase	Yes
Ponec, 2011	N=149 Patients with permanent CVC dysfunction (PICCs, CVCs and ports), excluding hemodialysis catheters. Indication not specified.	Alteplase (2 mg/2 mL), alteplase, placebo vs. placebo, alteplase, alteplase; intraluminal dwell for 2x120 hours	51/75 vs 12/74, RR 4.19 [2.44 to 7.20] in favor of alteplase; after 2 instillations with alteplase, 90% of catheters were patent.	Yes