

## Supplementary data

**Supplementary Table 1. Microcatheter type and lesion characteristics of the included reports.**

<b>Characteristics</b>	<b>N=378</b>
<i>Microcatheter type</i>	
Caravel, n (%)	148 (39.2%)
Corsair, n (%)	71 (18.9%)
Corsair Pro, n (%)	11 (2.9%)
Finecross MG, n (%)	10 (2.6%)
Turnpike, n (%)	37 (9.8%)
Turnpike Gold, n (%)	1 (0.3%)
Turnpike LP, n (%)	53 (14%)
Turnpike Spiral, n (%)	47 (12.4%)
<i>Target vessel</i>	
Left main coronary artery, n (%)	5 (1.3%)
Left anterior descending artery, n (%)	93 (24.6%)
Diagonal, n (%)	4 (1.1%)
Left circumflex, n (%)	65 (17.2 %)
Right coronary artery, n (%)	104 (27.5%)
<i>Lesion type</i>	
<b>Chronic total occlusion, n (%)</b>	141 (37.3%)
<i>Retrograde approach used, n (%)</i>	
Tortuous lesion, n (%)	58 (15.3%)
Calcified lesion, n (%)	225 (59.5%)
In-stent restenosis, n (%)	9 (2.4%)

**Supplementary Table 2. Failure mechanism and clinical consequences according to microcatheter type.**

<b>n (%)</b>	<b>Caravel (n= 148)</b>	<b>Corsair (n=71)</b>	<b>Corsair Pro (n=11)</b>	<b>Finecross MG (n=10)</b>	<b>Turnpike (n=37)</b>	<b>Turnpike Gold (n=1)</b>	<b>Turnpike LP (n=53)</b>	<b>Turnpike Spiral (n=47)</b>
<i>Mechanism of failure</i>								
<b>Tip fracture</b>	146 (98.6%)	45 (63.4%)	6 (54.4%)	7 (70%)	32 (86.5%)	0 (0%)	35 (66%)	34 (72.3%)
<b>Due to over-torquing</b>	53	26	4	2	11	0	25	20
<b>Due to forceful pulling</b>	71	4	0	2	0	0	3	1
<b>Tip was retrieved</b>	55	11	3	2	13	0	15	10
<b>Tip stuck in the lesion</b>	92 (62.2%)	18 (25.4%)	3 (27.3%)	1 (10%)	5 (13.5%)	0 (0%)	4 (7.5%)	4 (8.5%)
<b>Guidewire stuck in the microcatheter</b>	6 (4.1%)	23 (32.4%)	4 (36.4%)	3 (30%)	1 (2.7%)	0 (0%)	1 (1.9%)	1 (2.1%)
<b>Proximal shaft and hub separation</b>	0 (0%)	0 (0%)	0 (0%)	0 (0%)	3 (2.7%)	1 (100%)	15 (28.3%)	1 (2.1%)
<b>Shaft fracture and twisting</b>	0 (0%)	2 (2.8%)	0 (0%)	2 (20%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

<b>Outer coil or polymer dislodgement</b>	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (1.9%)	7 (14.9%)
<i>Clinical consequences</i>								
<b>Perforation</b>	1 (0.7%)	4 (5.6%)	1 (9.1%)	0 (0%)	0 (0%)	0 (0%)	1 (1.9%)	0 (0%)
<b>Dissection</b>	1 (0.7%)	1 (1.4%)	0 (0%)	1 (10%)	0 (0%)	0 (0%)	0 (0%)	2 (4.3%)
<b>Death</b>	0 (0%)	1 (1.4%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (1.9%)	1 (2.1%)
<b>Emergency surgery</b>	7 (4.7%)	5 (7%)	2 (18.2%)	1 (10%)	4 (10.8%)	0 (0%)	3 (5.7%)	5 (10.6%)
<b>Aborted PCI</b>	17 (11.5%)	7 (9.9%)	7 (63.6%)	4 (40%)	6 (16.2%)	0 (0%)	6 (11.3%)	8 (17%)
<b>Myocardial infarction</b>	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	3 (5.7%)	0 (0%)

PCI: percutaneous coronary intervention