

## ANNEXE 2 CRF FORM

JetCTO: a retrospective, multi-center registry for the evaluation of the clinical outcome after coronary perforation during CTO procedures

CRF v.1.1 (29/06/2021)

**Demographics/Eligibility Criteria**

Center ID: \_\_\_\_\_  
MLCTO-Academy ID \_\_\_\_\_  
Patient ID: \_\_\_\_\_  
Patient Initials: \_\_\_\_\_

**Demographics**

▪ **Year of Birth** \_\_\_\_\_

**Inclusion Criteria**

- Chronic total occlusion lesion
- Objective perforation during CTO procedure
- Covered stent implantation
- Angiographic follow-up procedure

**Exclusion Criteria**

*(Tick all that apply)*

- Patient <18 years old
- Pregnant female
- Contraindication to dual antiplatelet therapy
- Thrombocytopenia <100 000

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**Risk Factors**

Center ID: \_\_\_\_\_  
 MLCTO-Academy ID \_\_\_\_\_  
 Patient ID: \_\_\_\_\_  
 Patient Initials: \_\_\_\_\_

- **Height** \_\_\_\_\_ cm
- **Weight** \_\_\_\_\_ kg
- **Smoking status**       Never       Previous       Current
- **Dyslipidemia**       Yes       No
- **Hypertension**       Yes       No
- **Family history of heart disease**       Yes       No
- **Peripheral vascular disease**       Yes       No
- **Congestive heart failure**       Yes       No
- **Previous PTCA**       Yes       No
  - CTO Artery       Yes       No
- **Previous CABG**       Yes       No
  - CTO Artery       Yes       No
- **Renal Impairment**       Yes       No
 

*Defined as eGFR<30 mL/min*

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CTO Characteristics

Center ID: \_\_\_\_\_  
 MLCTO-Academy ID \_\_\_\_\_  
 Patient ID: \_\_\_\_\_  
 Patient Initials: \_\_\_\_\_

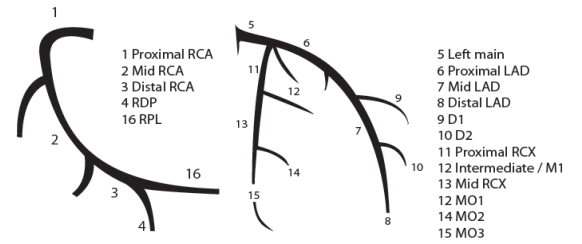
- CTO Procedure date \_\_\_\_\_ (YYYY/MM/DD)
- Proximal cap  Clear  Ambiguous
- Entry shape  Tapered  Blunt  No stump
- Calcifications  Absent  Present
- Bending >45°  Absent  Present
- Occlusion length  <20 mm  >20 mm
- Re-try lesion  Yes  No
- J-CTO score  0  1  2  ≥3
- PROGRESS-CTO score  0  1  2  3  4
- CTO on bypassed artery?  Yes  No
- In-stent CTO?  Yes  No
- Ostial CTO lesion  Yes  No

Please select target vessel of CTO details below

Lesion location

**CTO Characteristics**

Center ID: \_\_\_\_\_  
MLCTO-Academy ID \_\_\_\_\_  
Patient ID: \_\_\_\_\_  
Patient Initials: \_\_\_\_\_



- Visual CTO diameter before the procedure  
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mm

**Perforation Characteristics**

Center ID: \_\_\_\_\_  
 MLCTO-Academy ID \_\_\_\_\_  
 Patient ID: \_\_\_\_\_  
 Patient Initials: \_\_\_\_\_

▪ **Used strategy**

*(Tick all that apply)*

- Antegrade wire escalation
- Antegrade dissection and re-entry (ADR)
- Retrograde wire escalation
- Retrograde dissection and re-entry (reverse CART)

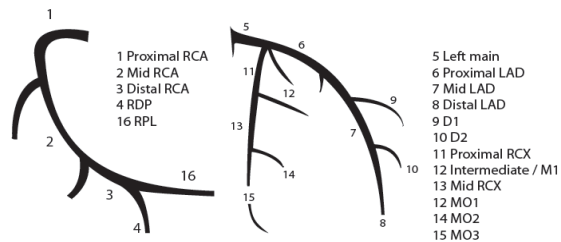
▪ **Successfully used strategy**

- Antegrade wire escalation
- Antegrade dissection and re-entry (ADR)
- Retrograde wire escalation
- Retrograde dissection and re-entry (reverse CART)

▪ **Which strategy was used before the perforation was noted?**

- Antegrade wire escalation
- Antegrade dissection and re-entry (ADR)
- Retrograde wire escalation
- Retrograde dissection and re-entry (reverse CART)

▪ **Location of perforation**



**Perforation location**

- Target vessel
- Epicardial collateral
- Septal collateral

▪ **Was the segment**

- Straight
- Bent

▪ **Segment calcifications present?**

- Yes
- No

▪ **Was a snare used?**

- Yes
- No

**Perforation Characteristics**

Center ID: \_\_\_\_\_  
MLCTO-Academy ID \_\_\_\_\_  
Patient ID: \_\_\_\_\_  
Patient Initials: \_\_\_\_\_

- **Do you believe the perforation was due to a guidewire?**  Yes  No
  
- **Which guidewire do you believe is responsible for the perforation?**
  
- **Perforation believed to be due to**
  - Antegrade wiring
  - Antegrade knuckling
  - Retrograde wiring
  - Retrograde knuckling
  - Reverse CART
  - Ballooning
  - Stenting
  
- **When was perforation seen?**
  - During guidewire manipulation
  - Post guidewire crossing
  - Post device crossing (Stringray, Crossboss,...)
  - Post imaging
  - Post atherectomy
  - Post IVL (Shockwave)
  - Post SC balloon predilatation
  - Post stenting
  - Post postdilatation

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Perforation Characteristics

Center ID: \_\_\_\_\_  
 MLCTO-Academy ID \_\_\_\_\_  
 Patient ID: \_\_\_\_\_  
 Patient Initials: \_\_\_\_\_

When was perforation seen?

- During guidewire manipulation (Specify)
- Post guidewire crossing (Specify)
- Post device crossing (Stingray, Crossboss, ...) (Specify)
- Post imaging
- Post atherectomy
- Post IVL
- Post SC balloon predilation
- Post NC balloon predilation
- Post stenting
- Post postdilation

Did the perforation lead to clinical instability?

- Yes  No
- Hypotension  Yes  No
- Tamponade  Yes  No
- If Yes*
- Was the tamponade drained?  Yes  No

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**Perforation Characteristics**

Center ID: \_\_\_\_\_  
 MLCTO-Academy ID \_\_\_\_\_  
 Patient ID: \_\_\_\_\_  
 Patient Initials: \_\_\_\_\_

- Perforation classification\***

Type I       Type II       Type III       Type IV

\*Ellis Classification

Type I: A crater extending outside the lumen only in the absence of linear staining angiographically suggestive of dissection

Type II: Pericardial or myocardial blush without a  $\geq 1$ -mm exit hole

Type III: Frank streaming of contrast through a  $\geq 1$ -mm exit hole

Type IV: Perforation into an anatomic cavity chamber

- Number of covered stents implanted**

- Covered stent(s) brand(s) used**

<b>Stent 1</b>	
Diameter	mm
Length	mm
<b>Stent 2</b>	
Diameter	mm
Length	mm
<b>Stent 3</b>	
Diameter	mm
Length	mm

*In case of multiple stents implanted, was there any overlapping?*

Yes       No

- Was the covered stent implanted**

Was the perforation at the site of  Main Vessel       Side Branch

At the perforation site       In front of a perforated branch

- Was it**

Via donor artery       Via occluded artery

- Was an additional DES associated with the covered stent?**

Yes       No

*If Yes*

Was the DES implanted  Before the covered stent       After the covered stent       Above the covered stent

Implanted DES diameter mm

- Final TIMI flow**

1       2       3

**Perforation Characteristics**

Center ID: \_\_\_\_\_  
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Patient ID: \_\_\_\_\_  
Patient Initials: \_\_\_\_\_

▪ **Were coils used in conjunction with the covered stent?**  Yes  No

▪ **Number of coils used**  
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Angiographic follow-up

Center ID: \_\_\_\_\_  
 MLCTO-Academy ID \_\_\_\_\_  
 Patient ID: \_\_\_\_\_  
 Patient Initials: \_\_\_\_\_

▪ **Date of Follow-Up obtained** \_\_\_\_/\_\_\_\_/\_\_\_\_ (YYYY/MM/DD)

▪ **Date difference between procedure and follow-up** \_\_\_\_\_ days

▪ **Was patient still on DAPT**  Yes  No  
*If no*

Why was DAPT interrupted?  Bleeding  Intolerance  Triple therapy  Duration  
 Other

▪ **Angiographic follow-up result**  
 Patent stent(s)  
 In-stent restenosis  
 Occluded covered

*In case of restenosis*

*Restenosis location*  In-stent restenosis (covered stent) *Specify*

In-stent restenosis (DES) *Specify*

*In case of occlusion*

Covered stent occlusion *Specify*

DES occlusion *Specify*

▪ **How was it treated**  
 Was not treated  
 DES  
 DEB  
 Balloon angioplasty

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