

O Other: please specify:.....

If femoral was used (nyíljon le)

Use of 45 cm long sheath(s):

yes/no

Distribution of coronary lesions

Mark the target vessel coronary lesion (multiple choice) LAD/ RCA/ LM/ LCX/ Other, if

yes please specify:.....

Select dominance coronary system*:

Left dominance/ Right dominance

Guide support techniques:

Guideliner/ Side branch anchor/ Distal anchor/

Other:.....

Guide extension catheter size:

5/6/7/8

Guide extension catheter type:.....

Antegrade wiring type used (többszörös választás, legördülő)

AL 0.75

AL 1.0

AL 1.5

AL 2.0

EBU 3.5

EBU 3.75

EBU 4.0

EBU 4.5

JR4

MP

MP1

MP2

XB 3.0

XB 3.5

XB 4.0

XB 4.5

Other:.....(többszörösen legördülő)

Retrograde wiring type used: (többszörös választás, legördülő)

AL 0.75

AL 1.0

AL 1.5

AL 2.0

EBU 3.5

EBU 3.75

EBU 4.0

EBU 4.5

JR4

MP

MP1

MP2

XB 3.0

XB 3.5

XB 4.0

XB 4.5

Other:.....

Ipsilateral guiding catheter: yes/no

If, yes type:.....(többszörös választás)

Balloon OTW

Corsair

CrossBoss

Finecross

Gopher

Minnie

Prowler
Quick-Cross
Tornus
Transit
Venture
Other
Multicross
CenterCross
Micro 14
TurnPike
Twin-Pass
Caravel
TurnPike Spiral
TurnPike Gold
TurnPike LP
SuperCross
Corsair Pro
SuperCross 45°
SuperCross 90°
SuperCross 120°
Mamba Flex
Mamba
Odyssey
Teleport
Twin Pass Torque

Contralateral guiding catheter: yes/no (többszörös választás)

If, yes type:.....

Balloon OTW
Corsair
CrossBoss
Finecross
Gopher
Minnie
Prowler
Quick-Cross
Tornus
Transit

Venture
 Other
 Multicross
 CenterCross
 Micro 14
 TurnPike
 Twin-Pass
 Caravel
 TurnPike Spiral
 TurnPike Gold
 TurnPike LP
 SuperCross
 Corsair Pro
 SuperCross 45°
 SuperCross 90°
 SuperCross 120°
 Mamba Flex
 Mamba
 Odyssey
 Teleport
 Twin Pass Torque

CTO Crossing

Crossing strategies used

Antegrade wiring: yes/no

Antegrade dissection and re-entry: yes/no

Retrograde: yes/no

First crossing strategy: Antegrade wiring/ Antegrade dissection and re-entry/
 Retrograde (**egyszeres választás**)

Second crossing strategy: Antegrade wiring/ Antegrade dissection and re-entry/
 Retrograde/ None (**egyszeres választás**)

Third crossing strategy: Antegrade wiring/ Antegrade dissection and re-entry/
 Retrograde/ None (**egyszeres választás**)

Fourth crossing strategy: Antegrade wiring/ Antegrade dissection and re-entry/
 Retrograde/ None (**egyszeres választás**)

Fifth crossing strategy: Antegrade wiring/ Antegrade dissection and re-entry/
Retrograde/ None (**egyszeres választás**)

Successful crossing strategy: Antegrade wiring/ Antegrade dissection and re-entry/
Retrograde/ None (**egyszeres választás**)

Antegrade wire escalation (AWE)

Antegrade wiring technique: (**egyszeres választás**) Single wire/ Parallel 2 Wires / “See-saw”
technique / “Open Sesame” technique/ “Side Branch technique” /Other, please
specify:.....

Microcatheter(s) used for AWE (multiple choice)

If yes, select the catheter that successfully crossed: (single choice)

(**többszörös választás, külön meg lehessen jelölni az összeset, amit használtak és kiválasztani
ezek közül, ami sikeresen átment**)

Balloon OTW

Corsair

CrossBoss

Finecross

Gopher

Minnie

Prowler

Quick-Cross

Tornus

Transit

Venture

Other

Multicross

CenterCross

Micro 14

TurnPike

Twin-Pass

Caravel

TurnPike Spiral

TurnPike Gold

TurnPike LP

SuperCross

Corsair Pro
SuperCross 45°
SuperCross 90°
SuperCross 120°
Mamba Flex
Mamba
Odyssey
Teleport
Twin Pass Torque
Other(s), specify:.....

Wire(s) used for AWE (multiple choice)

If yes, select the wire that successfully crossed: (single choice)

(többszörös választás, külön meg lehessen jelölni az összeset, amit használtak és kiválasztani ezek közül, ami sikeresen átment)

BMW
Choice PT Floppy
Confianza 9
Confianza Pro 9
Confianza Pro 12
Cougar
Cross-it 100XT
Crosswire NT
Fielder
Fielder FC
Fielder XT
Miracle 3
Miracle 4.5
Miracle 6
Miracle 9
Miracle 12
Persuader 3 - hydrophilic
Persuader 3 - hydrophobic
Persuader 6 - hydrophilic
Persuader 6 - hydrophobic
Persuader 9 - hydrophilic
Persuader 9 - hydrophobic
Pilot 50

Pilot 150

Pilot 200

Progress 40

Progress 80

Progress 120

Progress 140T

Progress 200T

Provia 3 - hydrophilic

Provia 3 - hydrophobic

Provia 6 - hydrophilic

Provia 6 - hydrophobic

Provia 9 - hydrophilic

Provia 9 - hydrophobic

Provia 12 - hydrophilic

Provia 12 - hydrophobic

PT Graphic Intermediate

PT2 Moderate Support

RG3

Rotawire Extra Support

Rotawire Floppy

Runthrough

Runthrough NS Tapered

Shinobi

Shinobi Plus

Sion

Viper 335

Whisper ES

Whisper LS

Whisper MS

Ultimate Bros 3

R350

Crossboss (TRUE TO TRUE)

Multicross

Gaia 1st

Gaia 2nd

Gaia 3rd

Sion Blue

RG3

Runthrough NS-hypercoat

Runthrough NS Intermediate
Prowater
Sentai Marvel
Sentai Samurai
Sentai Samurai RC
Sentai Fighter
Sentai Hornet
Sentai Hornet 10
Sentai Hornet 14
Gladius
Halberd
Fielder XT-A
Fielder XT-R
Sion Black
Suoh 03
Astato 20
Astato 40
Mongo
Bandit
Raider
Warrior
Judo 1
Judo 2
Judo 3
Other (s), specify:.....(többszörösen legördülő)

Antegrade dissection/ Re-entry wiring

Dissection crossing technique (multiple choice): “Knuckle Wire” technique/ “CrossBoss” technique/ “Carlino” technique/ “Scratch and go” technique/ “Balloon assisted subintimal entry” (BASE) technique/ Other, specify:.....

Re-entry strategy used: yes/no

If yes, type of re-entry t: Stingray balloon/ wire re-entry/Other:.....

If Stingray balloon was used, which re-entry method was applied (multiple choice):

“Stick-and-Swap” technique/ “Bobsled” technique/ “Double-Blind Stick-and-Swap” technique/ “Stick-and-drive” technique

“Subintimal Transcatheter Withdrawal (STRAW)” technique used: yes/no

Successful re-entry: yes/no

If yes, select the wire that successfully crossed: (single choice)

(többszörös választás, külön meg lehessen jelölni az összeset, amit használtak és kiválasztani ezek közül, ami sikeresen átment)

BMW

Choice PT Floppy

Confianza 9

Confianza Pro 9

Confianza Pro 12

Cougar

Cross-it 100XT

Crosswire NT

Fielder

Fielder FC

Fielder XT

Miracle 3

Miracle 4.5

Miracle 6

Miracle 9

Miracle 12

Persuader 3 - hydrophilic

Persuader 3 - hydrophobic

Persuader 6 - hydrophilic

Persuader 6 - hydrophobic

Persuader 9 - hydrophilic

Persuader 9 - hydrophobic

Pilot 50

Pilot 150

Pilot 200

Progress 40

Progress 80

Progress 120

Progress 140T

Progress 200T

Provia 3 - hydrophilic

Provia 3 - hydrophobic

Provia 6 - hydrophilic
Provia 6 - hydrophobic
Provia 9 - hydrophilic
Provia 9 - hydrophobic
Provia 12 - hydrophilic
Provia 12 - hydrophobic
PT Graphic Intermediate
PT2 Moderate Support
RG3
Rotawire Extra Support
Rotawire Floppy
Runthrough
Runthrough NS Tapered
Shinobi
Shinobi Plus
Sion
Viper 335
Whisper ES
Whisper LS
Whisper MS
Ultimate Bros 3
R350
Crossboss (TRUE TO TRUE)
Multicross
Gaia 1st
Gaia 2nd
Gaia 3rd
Sion Blue
RG3
Runthrough NS-hypercoat
Runthrough NS Intermediate
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Sentai Fighter
Sentai Hornet
Sentai Hornet 10
Sentai Hornet 14

Gladius
Halberd
Fielder XT-A
Fielder XT-R
Sion Black
Suoh 03
Atrato 20
Atrato 40
Mongo
Bandit
Raider
Warrior
Judo 1
Judo 2
Judo 3
Other (s), specify:.....(többszörösen legördülő)

Successful re-entry: yes/no

Successful re-entry technique: “Subintimal Tracking And Reentry (STAR)” technique/
“Limited Antegrade Subintimal Tracking (LAST)” technique/ Other, if yes please
specify.....:

Retrograde wiring

Indication for retrograde wiring (multiple choice): Ostial Occlusion/ Significant Side Branch at Proximal Cap (>2mm)/ Long Occlusion/ Tortuosity/ Poor Target Vessel at Distal Cap/ Bifurcation at Distal Cap 'Last remaining conduit' /Proximal cap ambiguity

Which retrograde techniques were used (multiple choice): “Marker wire” technique/
Retrograde wiring/ “Controlled Antegrade And Retrograde Tracking (CART)” technique/
Limited reverse “CART” technique/ Guideliner reverse “CART” technique / reverse CART/
Extended reverse CART /Cutting balloon assisted reverse “CART” technique/ “E-CART”
technique/” DRAFT” technique

Select the used microcatheter(s) (multiple choice)

If yes, select the catheter that successfully crossed: (single choice)

(többszörös választás, külön meg lehessen jelölni az összeset, amit használtak és kiválasztani ezek közül, ami sikeresen átment)

Balloon OTW

Corsair

CrossBoss

Finecross

Gopher

Minnie

Prowler

Quick-Cross

Tornus

Transit

Venture

Other

Multicross

CenterCross

Micro 14

TurnPike

Twin-Pass

Caravel

TurnPike Spiral

TurnPike Gold

TurnPike LP

SuperCross

Corsair Pro

SuperCross 45°

SuperCross 90°

SuperCross 120°

Mamba Flex

Mamba

Odyssey

Teleport

Twin Pass Torque

Other(s), specify:.....

Select the used wire(s) (többszörös választás)

Select the wire that successfully crossed: (single choice)

(többszörös választás, külön meg lehessen jelölni az összeset, amit használtak és kiválasztani ezek közül, ami sikeresen átment)

BMW

Choice PT Floppy

Confianza 9

Confianza Pro 9

Confianza Pro 12

Cougar

Cross-it 100XT

Crosswire NT

Felder

Felder FC

Felder XT

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Miracle 4.5

Miracle 6

Miracle 9

Miracle 12

Persuader 3 - hydrophilic

Persuader 3 - hydrophobic

Persuader 6 - hydrophilic

Persuader 6 - hydrophobic

Persuader 9 - hydrophilic

Persuader 9 - hydrophobic

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Pilot 200

Progress 40

Progress 80

Progress 120

Progress 140T

Progress 200T

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Rotawire Extra Support
Rotawire Floppy
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Runthrough NS Tapered
Shinobi
Shinobi Plus
Sion
Viper 335
Whisper ES
Whisper LS
Whisper MS
Ultimate Bros 3
R350
Crossboss (TRUE TO TRUE)
Multicross
Gaia 1st
Gaia 2nd
Gaia 3rd
Sion Blue
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Runthrough NS Intermediate
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Sentai Samurai
Sentai Samurai RC
Sentai Fighter
Sentai Hornet
Sentai Hornet 10
Sentai Hornet 14
Gladius
Halberd
Fielder XT-A

Fielder XT-R

Sion Black

Suoh 03

Astato 20

Astato 40

Mongo

Bandit

Raider

Warrior

Judo 1

Judo 2

Judo 3

Other (s), specify:.....(többszörösen legördülő)

Retrograde lesion crossing

Retrograde wire externalization: yes/no

Way of externalization: Retrograde wiring/ “Snare” technique/ “Tip-in”
technique/“Rendez- vous” technique/ Other:.....

Select the externalization wire(s): (többszörös)

BMW

Choice PT Floppy

Confianza 9

Confianza Pro 9

Confianza Pro 12

Cougar

Cross-it 100XT

Crosswire NT

Fielder

Fielder FC

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Gladius

Halberd

Fielder XT-A

Fielder XT-R

Sion Black

Suoh 03

Astato 20

Astato 40

Mongo

Bandit

Raider

Warrior

Judo 1

Judo 2

Judo 3

Other:.....(többszörös)

Collateral(s) used (multiple): Septal/ Contralateral epicardial/ Ipsilateral epicardial/

/Bypass SVG/ Bypass LIMA/ Other:.....(multiple)

Total number of collaterals used: 1/2/3/4/5

Successful collateral wiring: yes/no

If yes, (lenyílik egy ablak, hogy hányadik 1-5, egyszeres választás; és melyik)

“Septal/ Contralateral epicardial/ Ipsilateral epicardial/ /Bypass SVG/ Bypass LIMA/

Other:.....(multiple)”

If no, reason of unsuccessful collateral wiring:(kifejtős)

Select the used microcatheter(s) (multiple choice)

If yes, select the catheter that successfully crossed: (single choice)

(többszörös választás, külön meg lehessen jelölni az összeset, amit használtak és kiválasztani ezek közül, ami sikeresen átment)

Balloon OTW

Corsair

CrossBoss

Finecross

Gopher

Minnie

Prowler

Quick-Cross

Tornus

Transit

Venture

Other

Multicross

CenterCross

Micro 14

TurnPike

Twin-Pass

Caravel

TurnPike Spiral

TurnPike Gold

TurnPike LP

SuperCross

Corsair Pro

SuperCross 45°

SuperCross 90°

SuperCross 120°

Mamba Flex

Mamba

Odyssey

Teleport

Twin Pass Torque

Other(s), specify:.....

Select the used wire(s) (többszörös választás)

Select the wire that successfully crossed: (single choice)

(többszörös választás, külön meg lehessen jelölni az összeset, amit használtak és kiválasztani ezek közül, ami sikeresen átment)

BMW

Choice PT Floppy

Confianza 9

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Miracle 3

Miracle 4.5

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Miracle 12

Persuader 3 - hydrophilic

Persuader 3 - hydrophobic

Persuader 6 - hydrophilic

Persuader 6 - hydrophobic

Persuader 9 - hydrophilic

Persuader 9 - hydrophobic

Pilot 50

Pilot 150

Pilot 200

Progress 40

Progress 80

Progress 120

Progress 140T

Progress 200T

Provia 3 - hydrophilic

Provia 3 - hydrophobic
Provia 6 - hydrophilic
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Provia 9 - hydrophilic
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Sentai Samurai RC
Sentai Fighter
Sentai Hornet
Sentai Hornet 10

- Sentai Hornet 14
- Gladius
- Halberd
- Fielder XT-A
- Fielder XT-R
- Sion Black
- Suoh 03
- Astato 20
- Astato 40
- Mongo
- Bandit
- Raider
- Warrior
- Judo 1
- Judo 2
- Judo 3
- Other (s), specify:.....(többszörösén legördülő)

Lesion preparation

Balloon angioplasty yes/no

If yes, **Balloon uncrossable" CTO treatment (single choice):** Guide catheter extensions/ Guide anchoring techniques/ Tornus catheter/ Laser catheter/ Rotablator/ Threader balloon/ Glider balloon/ Orbital atherectomy/ "Scratch and go" technique/ "Balloon Assisted Subintimal Entry (BASE)" technique/ Small profile balloon (≤ 1.0 mm ballon)/ Other:.....

If no, "Balloon uncrossable" CTO lesion : yes/no

If yes, "Balloon undilatable" CTO lesion: yes/no

*If yes, select **Balloon undilatable" CTO treatment (single choice):** Laser technique/ Rotablator/ "Cutting" balloon/ Orbital atherectomy/ "OPN" balloon/ "Shockwave" balloon/ Other, if yes please specify:.....*

Intravascular imaging: yes/no

If yes, type of intravascular imaging IVUS/OCT

If yes, please specify reason for application (**multiple choice**): antegrade puncture/ “ADR” assisted crossing/ retrograde crossing/ Stent size and optimization/ Other, if yes please specify:.....

Number of stents used: 0/1/2/3/4/5/6/7/8

Ha nem 0, többször nyíljon le ahány szám van

Stent length:.....(mm) (**tizedesjegyet is lehessen berakni pl. 3,5**)

Stent diameter:.....(mm) (**tizedesjegyet is lehessen berakni pl. 3,5**)

Ha több stent van, stents overlapping : yes/no

Number of covered stents used: 0/1/2/3/4/5/6/7/8

Number of drug coated balloons (DCB) used: 0/1/2/3

Procedural Outcomes:

Non-CTO lesion(s) treated during the same procedure: yes/no

Non CTO lesion target vessel(s) (multiple choice): LAD/ RCA/ CX/ graft/ Other, if yes please specify:.....(**többszörösen legördülő**)

Technical Success*: yes/no

(Technical success is defined as successful CTO recanalization by any method ((either retrograde and/or antegrade)), with achievement of < 30% residual stenosis and TIMI 3 flow)

Baseline diameter stenosis (%):.....

Baseline TIMI flow: 0/1/2/3

Final diameter stenosis (%):.....

Final TIMI flow: 0/1/2/3

Reason for failure: Unable to cross with wire/ Unable to dilate/ Unable to deliver stents/ Unable to cross collateral/Procedural complication/ Prolonged intervention/ Other, if yes please specify:.....

Investment Procedure*: yes/ no

(Any lesion modification done to facilitate future CTO PCI attempts (e.g. balloon angioplasty without stenting))

ID of the next planned CTO intervention:.....(number)

LV assist device (LVAD) used: yes/no

If yes, type: ECMO/ Impella 2.5/ Impella 5.0/ Impella CP/ IABP/ Other:.....

LV assist device planned: prophylactic/ urgent

If yes, Indication for prophylactic LVAD: reduced LVEF/

Hypotension/ Last remaining vessel/ Other, if yes please specify:.....

X- Ray machine type: Philips Alura/ Philips Clarity/ GE/ Innova/ Siemens/ Toshiba / Siemens Q.zen/ Siemens Artis

Contrast Fluoroscopy for diagnostic or PCI: yes/no

If yes, : diagnostic and PCI / PCI only

Contrast Volume (mL):.....

Type of contrast used: Visipaque (Iodixanol)/ Omnipaque (Iohexol)/ Isovue (Iopamidol)/ Hexabrix (Ioxaglate)/ Oxilan (Ioxilan) / Ultravist (Iopromide)

Procedure time (min):.....

Fluoroscopy Time (min):.....

Dose area product: (mGray x cm²):.....

Air Kerma fluoroscopy dose (Gray):.....

CTO description (single choice)

Bypassed CTO target vessel: yes/no

If yes, CTO location to graft anastomosis: proximal/ distal at the anastomosis

CTO Lesion length (mm):.....

Proximal CTO vessel diameter (mm):.....

CTO at bifurcation: proximal bifurcation/ distal bifurcation/ bifurcation within CTO segment

Presence of Stump: Tapered Stump/ Blunt Stump/No Stump

Distal Opacification: Good (As Proximal)/ Faint (Less than Proximal)/ Not Visible

Distal Vessel Quality (2.0 mm or larger in diameter, no diffuse disease): Yes/No

Collateral Filling Type: None/ Ipsilateral/ Contralateral/ Ipsilateral and Contralateral

Degree of Calcification : None/ Mild (spots)/ Moderate (< =50% Reference Lesion Diameter)/ Severe (>50% Reference Lesion Diameter)

Degree of Proximal Tortuosity: Straight (< 70 degrees, 1 Bend)/ Slight (>70 degrees, 1 Bend)/ Moderate (2 Bends >70 degrees or 1 Bend >90 degrees)/ Severe (2 Bends >90 degrees or 1 Bend >120 degrees)

Werner collateral connection (CC) grade: 0/1/2/

(CC 0: no continuous connection between donor and recipient artery; CC 1: continuous, threadlike connection; CC 2: continuous, small side ranch- like size of the collateral throughout its course.)

Rentrop collateral filling grade: 0/1/2/3

(Grade 0: No visible filling of any collateral channels; Grade 1: Collateral filling of branches of the vessel to be dilated without any dye reaching an epicardial segment of that vessel; Grade 2: Partial collateral filling of the epicardial segment of the vessel being dilated; Grade 3: Complete collateral filling of the vessel being dilated)

In-Stent Occlusion (IRCTO): yes/no

Previous attempt to open CTO: yes/no

Previous procedure was an investment procedure: yes/no

(Any lesion modification done to facilitate future CTO PCI attempts (e.g. balloon angioplasty))

If yes, date of investment procedure: _____

If yes, “investment procedure” patient ID:.....

3. Scores

A) J-CTO score (calculation from data below) (points):.....

- Proximal cap entry shape tapered: yes (0) / no (1)
- Significant calcification presence: absence (0) / presence (1)
- Degree of calcification: absence (0) / mild (1)
- Intra-lesion bending >45° presence : absence (0) / presence (1)

Occlusion length: < 20mm (0) / ≥ 20mm (1)

Re-try lesion: yes (1) /no (0)

Total points - number, calculate from previous numbers, and show:

If (0), then “Easy”

If (1), then “Intermediate”

If (2), then “Difficult”

If (≥3), then “Very difficult”

B) PROGRESS-CTO score

Proximal cap ambiguity: No (0) / Yes (1)

Moderate or severe tortuosity (2 bends >70° or 1 bend >90°): No (0) / Yes (1)

Absence of “interventional” collateral: No (0) / Yes (1)

Circumflex CTO: No (0) / Yes (1)

Technical success (%) - number, calculate from previous numbers, and show:

If (0), then “98,2”

If (1), then “97,5”

If (2), then “91,6”

If (≥3), then “76,7”

C) PROGRESS Complications score

Patient age <65 years : yes (0) /no (3)

CTO length <23 mm: yes (0) / no (2)

Use of the retrograde approach: no (0) / yes (1)

Risk of complication (%) - number, calculate from previous numbers, and show:.....

If (0-2), then “0,2”

If (3-4), then “2,0”

If (≥5), then “6,6”

D) Syntax score I and II (calculation with the help of the link) * optional:

<http://www.syntaxscore.com/calculator/start.htm>

Syntax score I: points

Syntax score II:..... points

4. Complications

N-terminal pro-brain natriuretic peptide (NT-proBNP) after CTO:.....pmol/l

4.1. Major Adverse Cardiovascular Events in-hospital: yes/ no

(Includes death, myocardial infarction, urgent repeat target vessel revascularization with PCI or coronary artery bypass graft surgery (CABG), tamponade requiring either pericardiocentesis or surgery and stroke.)

If yes, please specify:

Death yes/no

If yes, Cardiovascular (CV) death yes/no

Myocardial infarction (MI) yes/no

if yes, please specify:

MI associated troponin (ng/l):.....

MI associated CK-MB (UI/l):.....

Type IV MI* yes/no

Criteria for PCI-Related MI ≤48 Hours After the Index Procedure (Type 4a MI)

Coronary intervention–related MI is arbitrarily defined by an **elevation of cTn values >5 times the 99th percentile URL** in patients with normal baseline values.

In patients with elevated preprocedure cTn in whom the cTn level are stable (≤20% variation) or falling, the postprocedure cTn must rise by >20%.

However, the absolute postprocedural value must still be at least 5 times the 99th percentile URL.

In addition, 1 of the following elements is required:

- **New ischemic ECG changes;**
- **Development of new pathological Q waves*;**
- **Imaging evidence of new loss of viable myocardium or new regional wall motion abnormality in a pattern consistent with an ischemic etiology;**
- **Angiographic findings consistent with a procedural flow-limiting complication such as coronary dissection, occlusion of a major epicardial artery or a side branch occlusion/thrombus, disruption of collateral flow, or distal embolization.**

† *Isolated development of new pathological Q waves meets the type 4a MI criteria if cTn values are elevated and rising but <5 times the 99th percentile URL. †Postmortem demonstration of a procedure-related thrombus in the culprit artery, or a macroscopically large circumscribed area of necrosis with or without intra-myocardial hemorrhage meets the type 4a MI criteria.

(fontos, hogy a definíció szerepeljen hint- ben!!!)

Urgent target vessel revascularization: yes/no

If yes, urgent target vessel PCI/ urgent CABG/ pericardial tamponade requiring intervention

If urgent CABG, **Urgent CABG reason:** _____

4.2. Complication related to vascular access

(többszörös választás)

Bleeding: yes/no

If yes, **Type of bleeding (többszörös választás):** Bleeding at access site / Retroperitoneal bleeding/ Gastrointestinal /Genitourinar

Other:.....

If yes, indicate:

Need for surgical intervention: yes/no

Need for blood transfusion: yes/no

If yes, indicate::

pre-CTO Hb:T/l

post-CTO Hb :.....T/l

Hematoma: yes/no

If yes, please indicate max. diameter:.....cm²

need for surgical intervention yes/no

- Pericardiocentesis
- Equipment Loss
- Dissection of Donor Artery
- Thrombus of Donor Artery
- Aortocoronary dissection
- Radiation skin injury
- Pericardial tamponade
- Perforation

If yes, **Perforation Location (multiple choice):** CTO Target Vessel/ Septal/ Collateral/ Epicardial Collateral

Technique leading to perforation (single choice): AWE/ ADR/ Retrograde

Perforation Type Ellis Class* (single choice): 1 /2/ 3/3- Cavity Spilling

Mechanism of perforation (multiple choice): Wire/ Rotablator/ Microcatheter/ Balloon/ Stent/ Other, if yes please specify:.....

Perforation treatment (multiple choice): Anticoagulation cessation/ Prolonged Balloon Inflation/ Covered Stent/ Coil/ Thrombin embolization/Autologous fat embolization/ Pericardiocentesis/ Emergency Surgery/ Other embolization/No treatment necessary/ Other

If other, please specify : _____

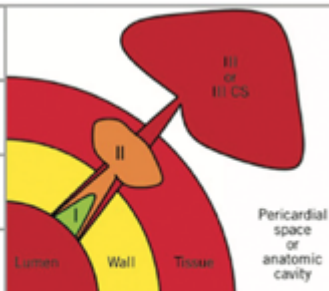
Access site complication yes/no

If yes, **access site complication (többszörös választás):**

Arteriovenous fistula/ Pseudoaneurysm/ Acute arterial obstruction/
Artery rupture/ Artery dissection

O Other, specify:.....(többszörösen legördülő)

*Ellis Class

Type I	Extraluminal crater without extravasation	
Type II	Pericardial or myocardial blush without contrast jet extravasation	
Type III	Extravasation through frank (≥ 1 mm) perforation	
*Type III cavity spilling (CS)	Perforation into an anatomic cavity, chamber, coronary sinus, etc.	

*Sometimes referred to as Type IV

Figure 5. Ellis types of coronary perforations. Modified from Ellis et al. *Circulation*. 1994; 90: 2725-2730.

4.3. Other complications

Stroke yes/no

If yes, **type:** Ischemic/ Hemorrhagic/ Unknown /Other, specify:.....

pre PCI eGFR:.....

post PCI eGFR:.....

pre PCI creatinine:.....

post PCI creatinine:.....

Contrast material-induced nephropathy*: yes/no

(*CIN is defined as an increase of $\geq 25\%$ or 44 $\mu\text{mol/l}$ or ≥ 0.5 mg/dl in pre-PCI serum creatinine at 48 h after PCI,

other pathogenic factors can be ruled out in the background of deterioration of renal function)

If yes, please indicate:

Need for hemodialysis: yes/no

4.4. Bleeding

BARC Definitions

Type 0	No bleeding	
Type 1	Bleeding that is not actionable and does not cause the patient to seek treatment	
Type 2	Any clinically overt sign of hemorrhage that “is actionable” and requires diagnostic studies, hospitalization, or treatment by a healthcare professional	
Type 3	a. Overt bleeding plus hemoglobin drop of 3 to < 5 g/dL (provided hemoglobin drop is related to bleed); transfusion with overt bleeding	
	b. Overt bleeding plus hemoglobin drop < 5 g/dL (provided hemoglobin drop is related to bleed); cardiac tamponade; bleeding requiring surgical intervention for control; bleeding requiring IV vasoactive agents	
	c. Intracranial hemorrhage confirmed by autopsy, imaging, or lumbar puncture; intraocular bleed compromising vision	
Type 4	CABG-related bleeding within 48 hours	
Type 5	a. Probable fatal bleeding	
	b. Definite fatal bleeding (overt or autopsy or imaging confirmation)	

Bleeding according to TIMI (single choice): 1. major 2. minor 3. minimal

Non-CABG Related Bleeding:

Major	<ul style="list-style-type: none"> - Any intracranial bleeding (excluding microhemorrhages <10 mm evident only on gradient-echo MRI) - Clinically overt signs of hemorrhage associated with a drop in hemoglobin of ≥ 5 g/dL or a $\geq 15\%$ absolute decrease in haematocrit - Fatal bleeding (bleeding that directly results in death within 7 days)
Minor	<p>Clinically overt (including imaging), resulting in hemoglobin drop of 3 to <5 g/dL or $\geq 10\%$ decrease in haematocrit</p> <ul style="list-style-type: none"> - No observed blood loss: ≥ 4 g/dL decrease in the haemoglobin concentration or $\geq 12\%$ decrease in haematocrit. - Any overt sign of hemorrhage that meets one of the following criteria and does not meet criteria for a major or minor bleeding event, as defined above. - Requiring intervention (medical practitioner-guided medical or surgical treatment to stop or treat bleeding, including temporarily or permanently discontinuing or changing the dose of a medication or study drug) - Leading to or prolonging hospitalization. - Prompting evaluation (leading to an unscheduled visit to a healthcare professional and diagnostic testing, either laboratory or imaging).
Minimal	<p>Any overt bleeding event that does not meet the criteria above.</p> <ul style="list-style-type: none"> - Any clinically overt sign of haemorrhage (including imaging) associated with a <3 g/dL decrease in haemoglobin concentration or <9% decrease in

		haematocrit.
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Bleeding in the Setting of CABG (single choice):

- Fatal bleeding (bleeding that directly results in death)
- Perioperative **intracranial bleeding**
- Reoperation after closure of the sternotomy incision for the purpose of controlling bleeding
- Transfusion of ≥ 5 U PRBCs or whole blood within a 48-h period; cell saver transfusion will not be counted in calculations of blood products.
- Chest tube output >2 L within a 24-h period

5. Outcome

1 death yes/no

2 cardiovascular death yes/no

3. CABG at target vessel yes/no

4. CABG at non target vessel yes/no

5. Re-PCI at target vessel yes/no

6. Re-PCI at non target vessel yes/no

7. successful CTO yes/no
If yes, length of hospital stay:.....day(s)

8. Admitted to hospital yes/no
if yes, a) admitted to cardiology unit b) admitted to intensive care unit c) admitted to non cardiology unit

If yes, length of hospital stay:.....day(s)