

5TH AZERBAIJAN INTERVENTIONAL CARDIOLOGY MEETING

12-14 October 2023

Badamdar Hotel
Former Pullman Hotel Baku

MÖVZU

Coronary perforation and management

Koronar perforasiya və idarə olunması







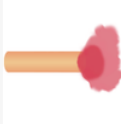
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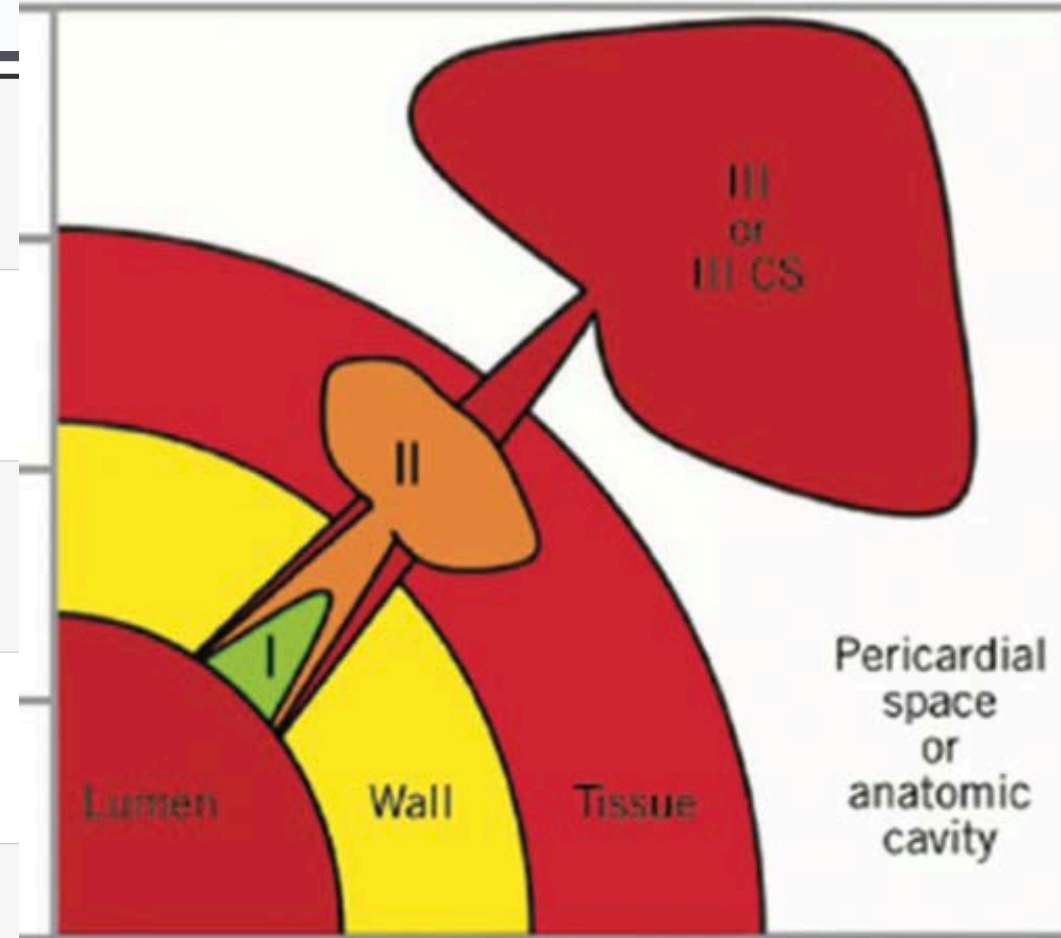
Koronar perforasiya



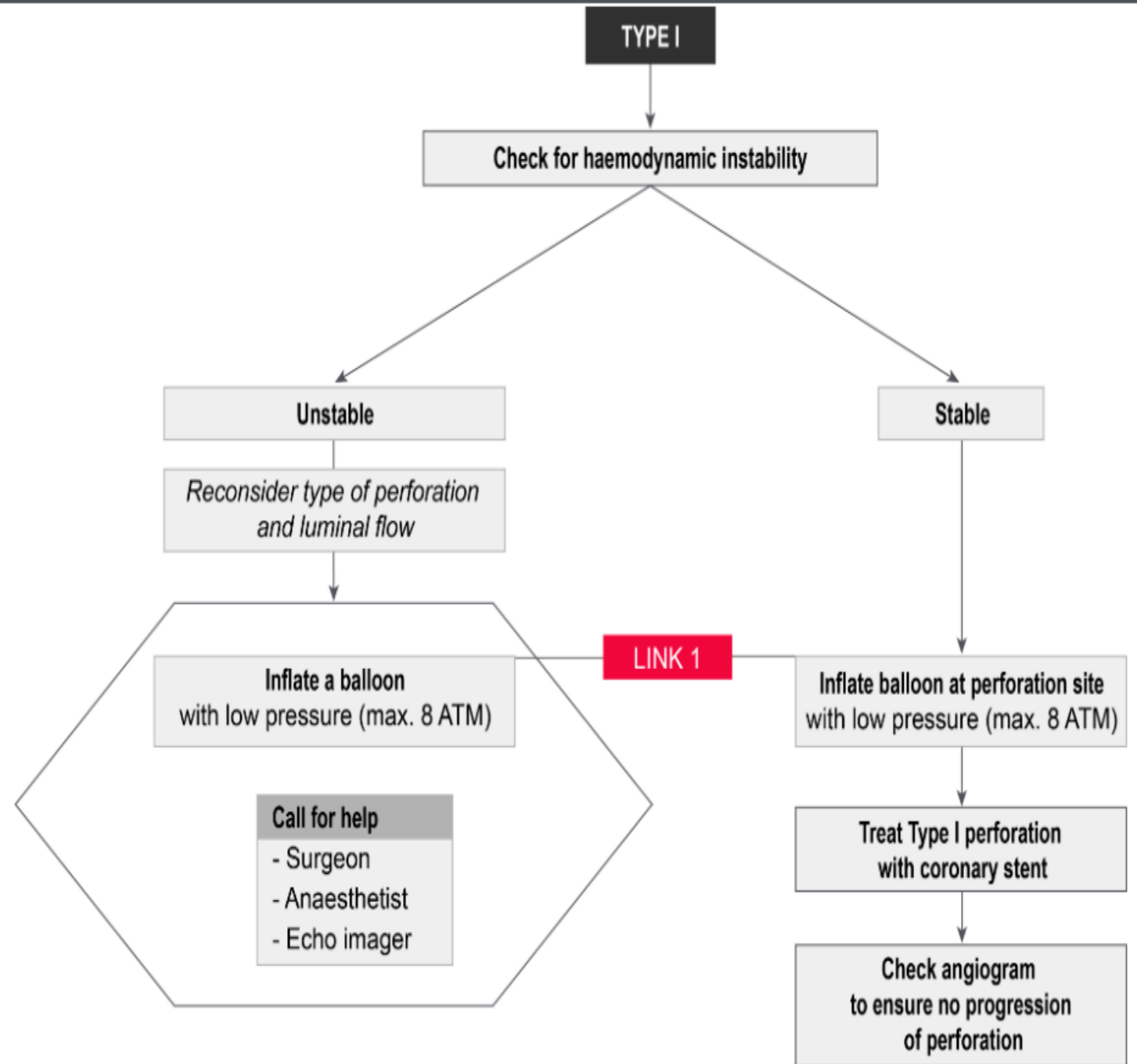
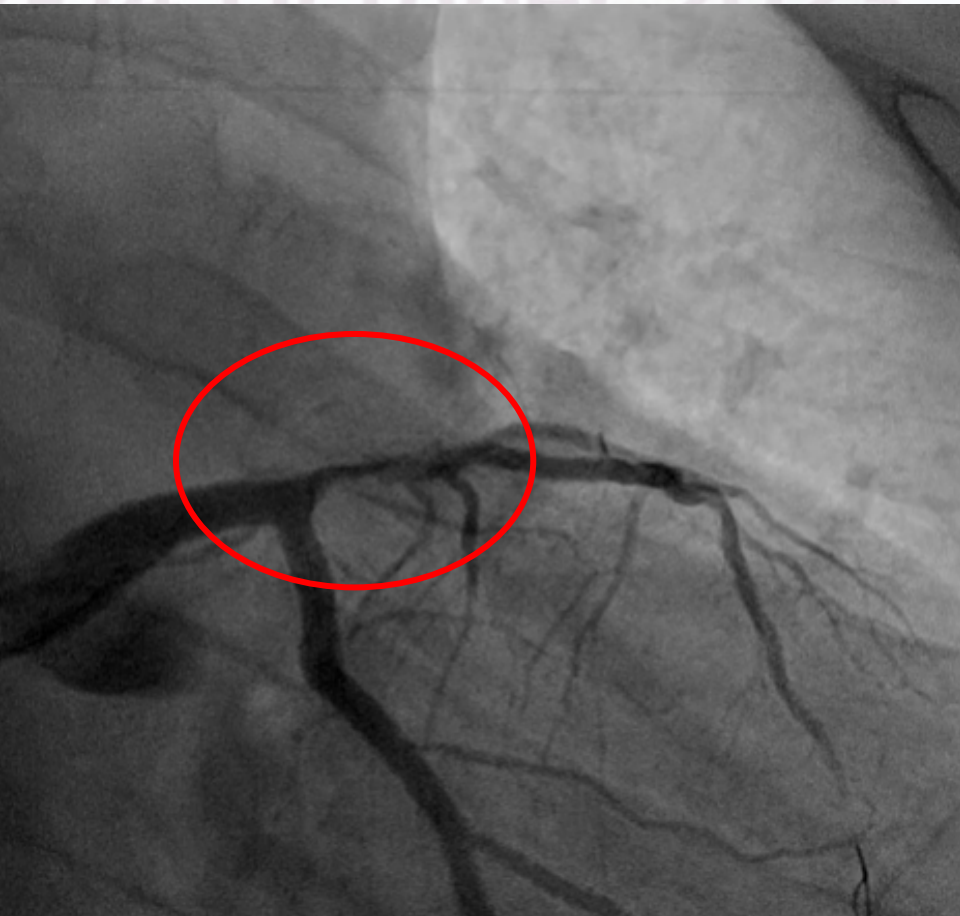
- Koronar perforasiya -disseksiya və ya intimal yırtıq arteriya divarına tam nüfuz etdikdə baş verir.
- Damarın yırtılması nəticəsində angiografik olaraq damar xaricində minimal boya ləkəsi və ya boyanın perikardial boşluğa sürətli ekstravazasiyası müşahidə olunur.

Perforasiyaların Ellis klassifikasiyası

TYPE I	Extraluminal crater without jet extravasation	TYPE I ▶	
	Sadəcə <u>krater</u> -axın yoxdu		
TYPE II	Pericardial or myocardial blushing without jet extravasation	TYPE II ▶	
	Perikard /miokard <u>boyanır</u> –axın yoxdur.		
TYPE III	Active jet extravasation exit jet > 1mm	TYPE III ▶	
	Diametr 1 mm çox olan <u>aktiv axın</u> .		
TYPE IV	Leaking into another cardiovascular cavity	TYPE IV ▶	
	Kardiak boşluğa açılan.		
TYPE V	Distal perforation	TYPE V ▶	
	Distal perforasiya .		



Tip-1 perforasiya



Balon şişirmə qaydası

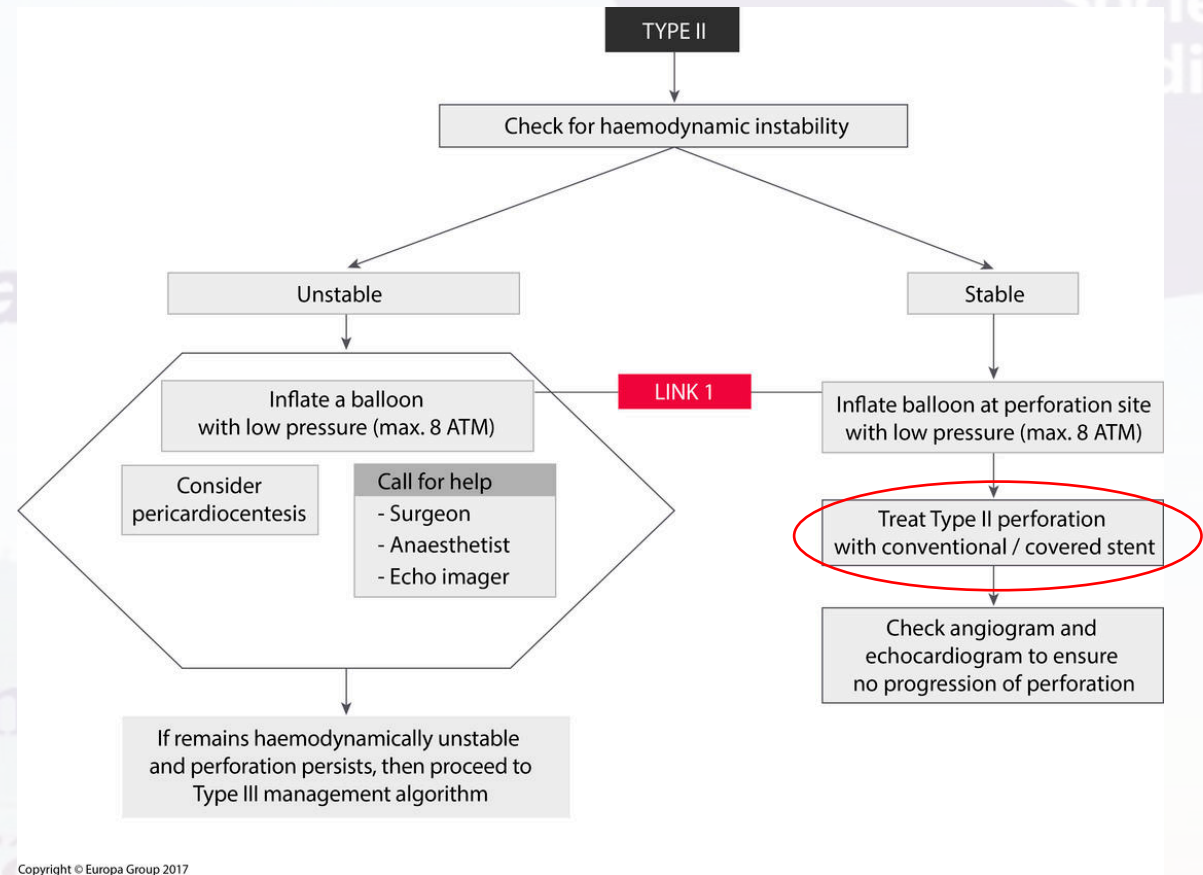
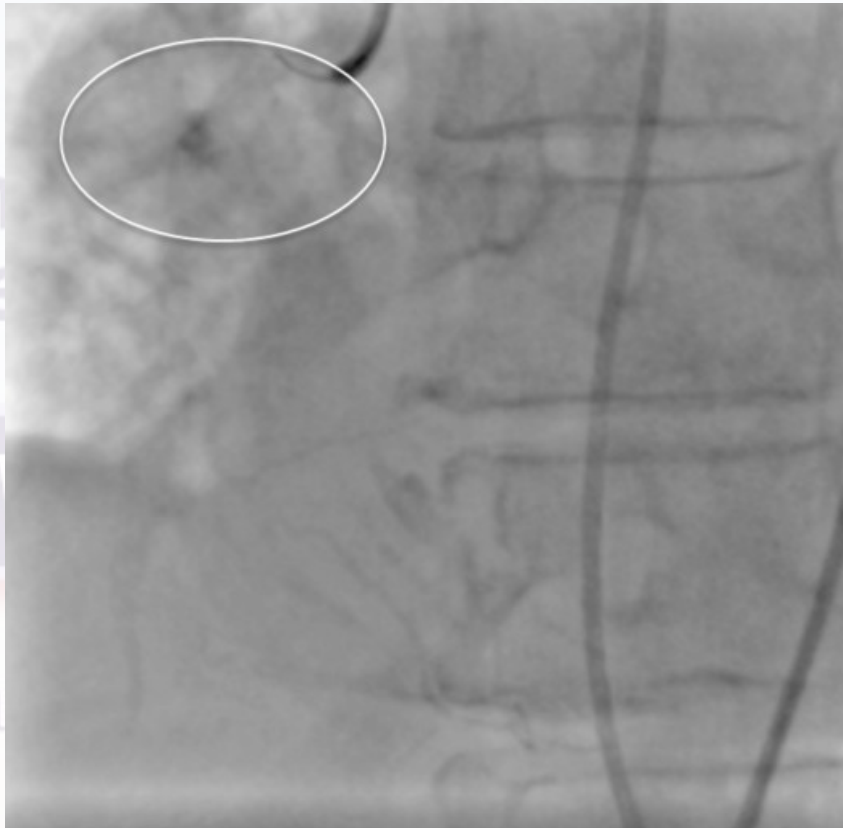
LMCA

- Örtüklü (covered) stentlər istifadə olunmalıdır
- Stent implantasiyasından sonra CTO telləri ilə LAD və Cx təkrar keçilməsinə hazır olmalısınız
- Cərrahi müdaxilə düşünülə bilər

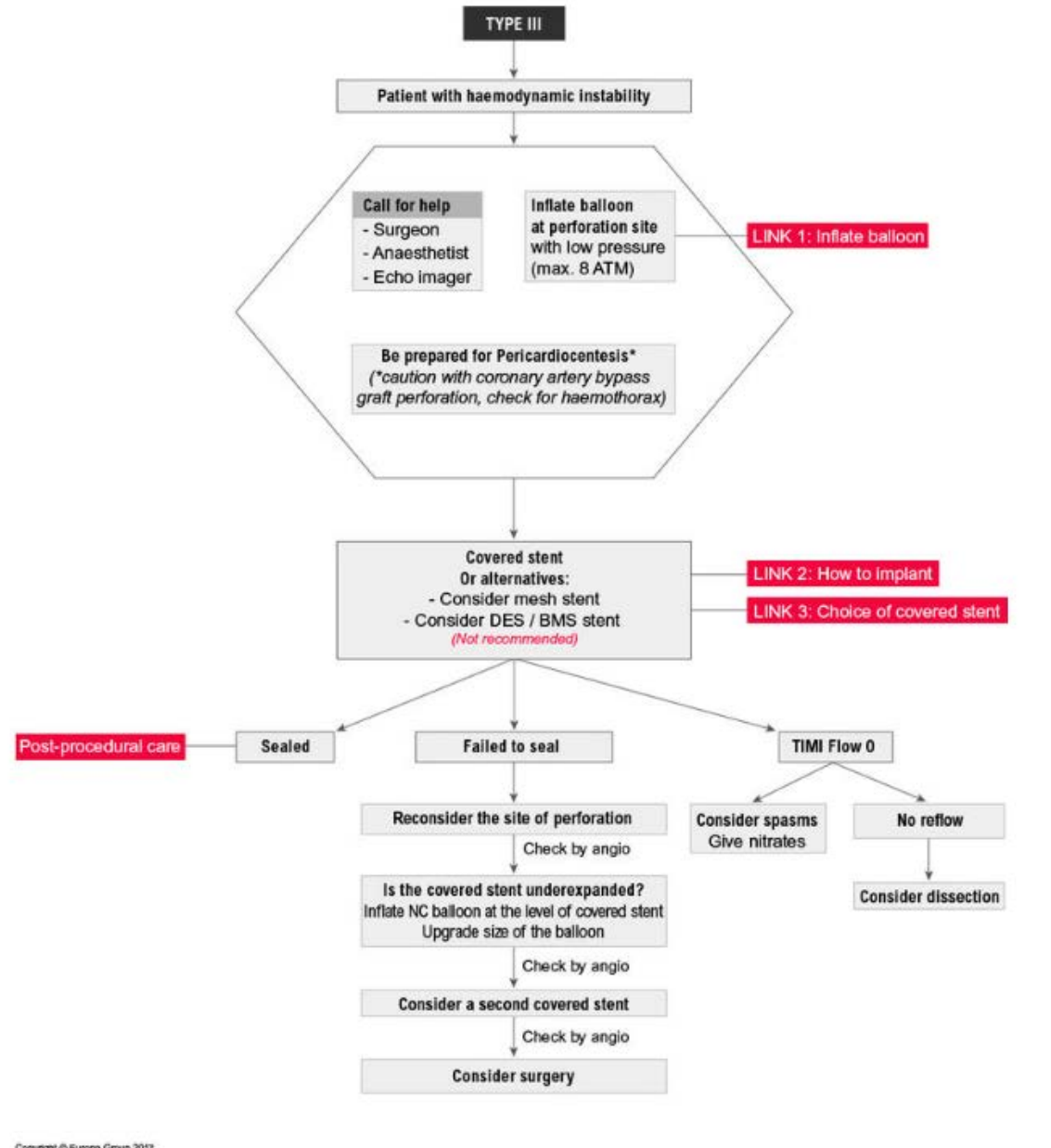
Proksimal perforasiyalar

- Balonla şişirmə vaxtı işemik durumdan asılıdır
- Balon/ arteriya ölçü nisbəti 1:1
- Stabil hemodinamika varsa balon 5 deq olmaqla 4-5 dəfəyə qədər şişirdilə bilər

Tip-2 perforasiya



Tip -3 perforasiya



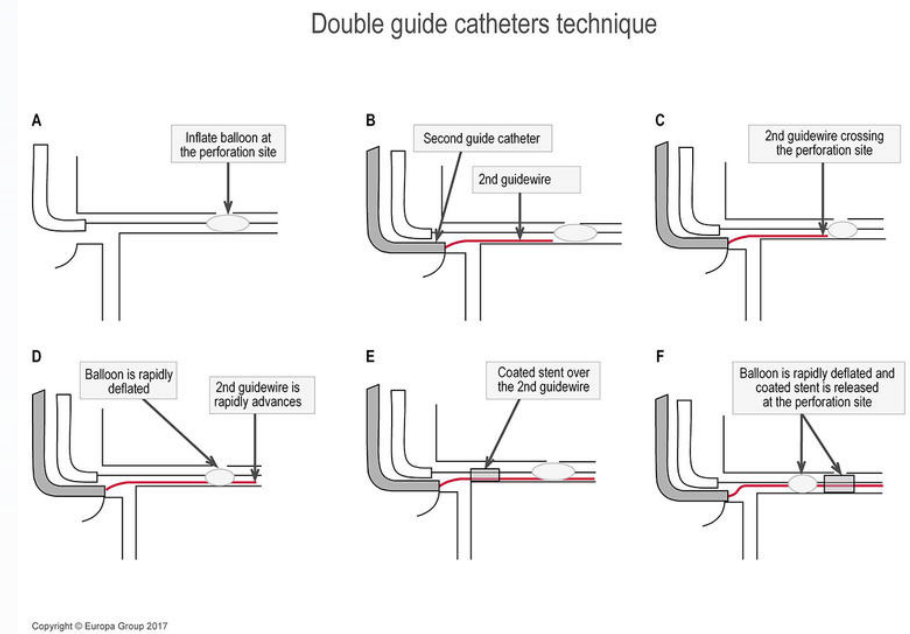
Örtüklü (covered)stent implantasiya qaydası

6Fr guiding kateterlə:

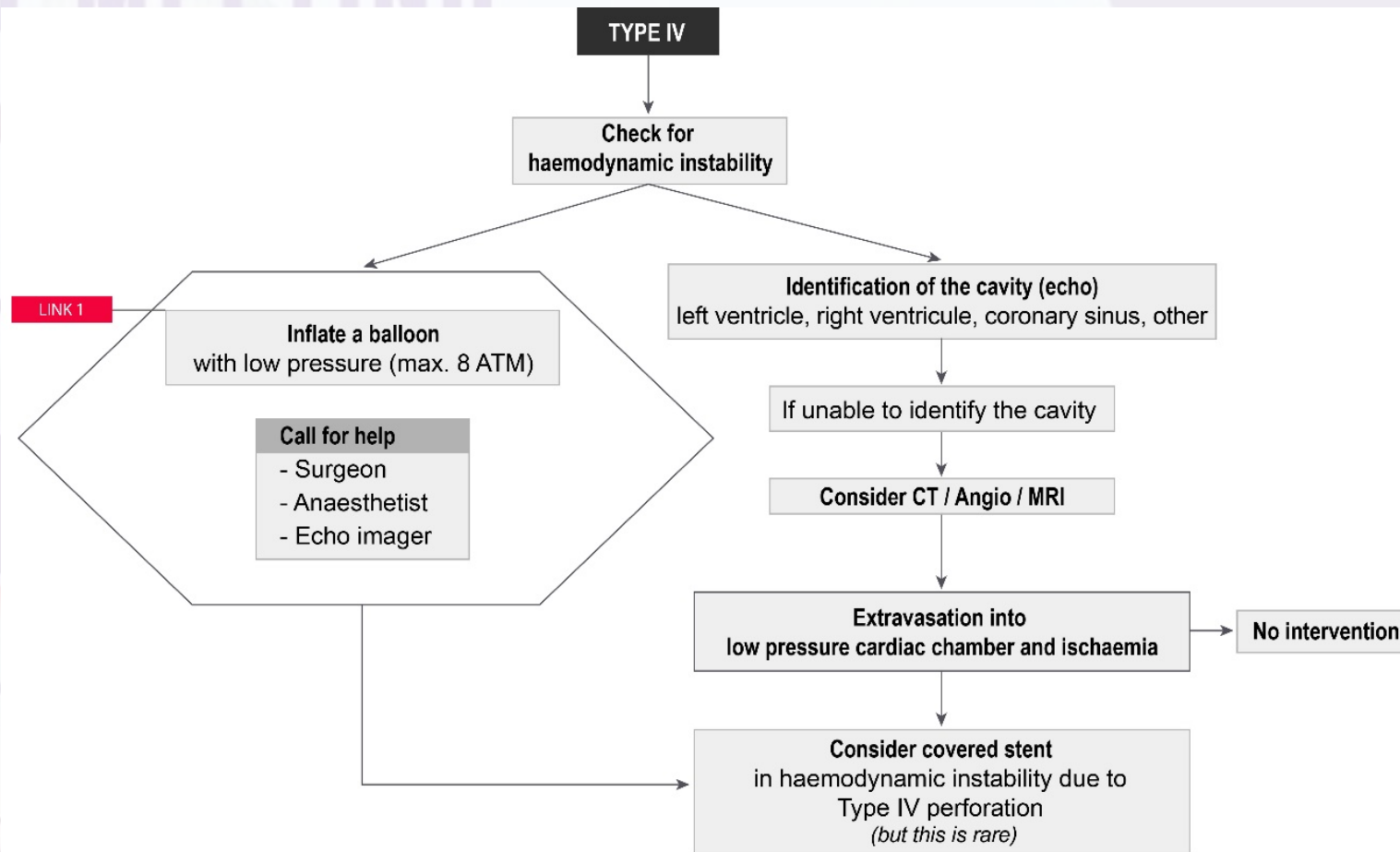
- Əgər perforasiya yerində balon şişirilibsə:
 - İkinci arterial giriş yolu (femoral \geq 7Fr daha uyğundur),
 - Paralel guide kateter yerləşdirin
 - İkinci guiding kateterdən örtüklü stenti perforasiya sahəsinə yerləşdirin

7Fr / 8Fr guiding kateterlə:

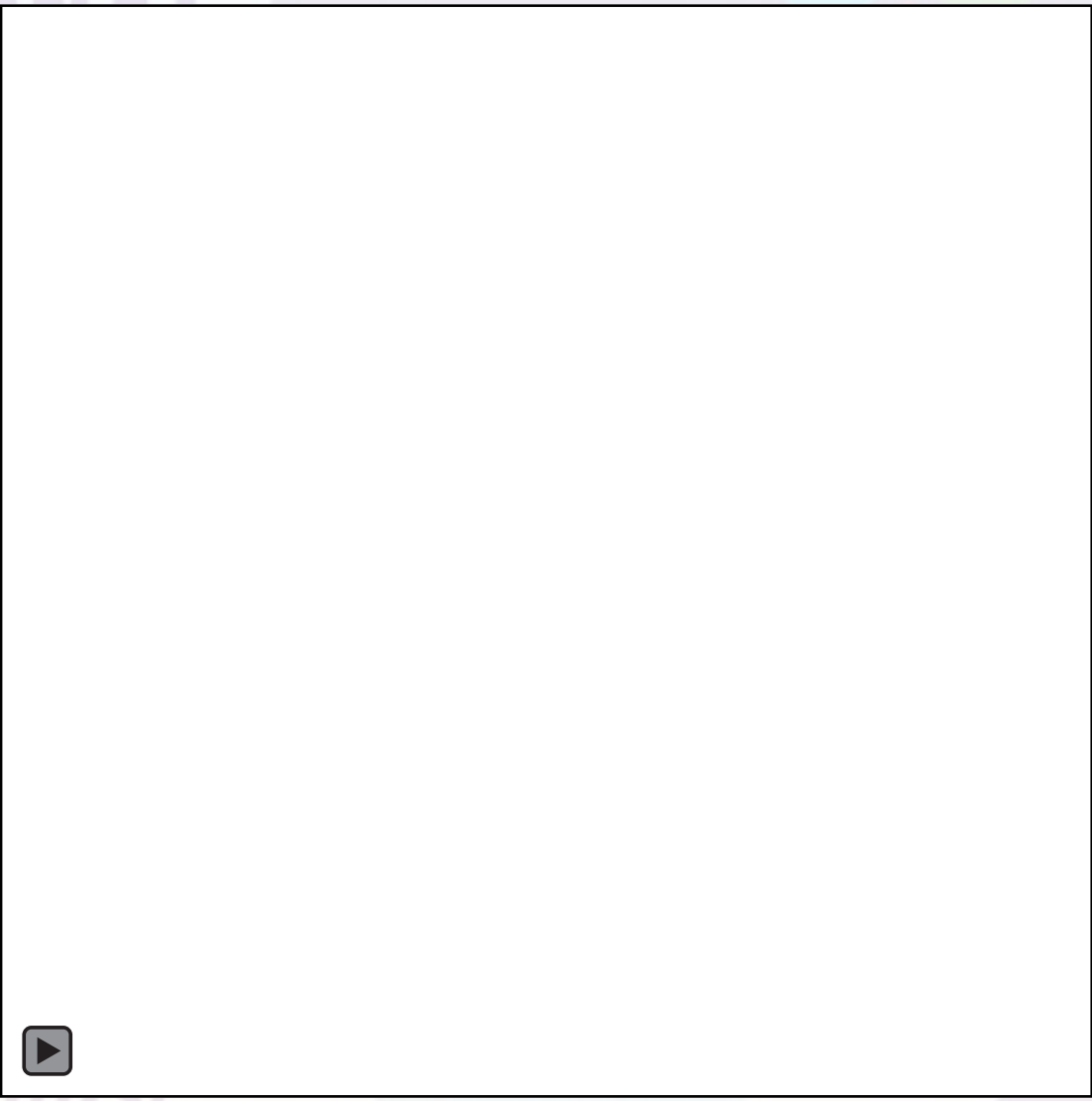
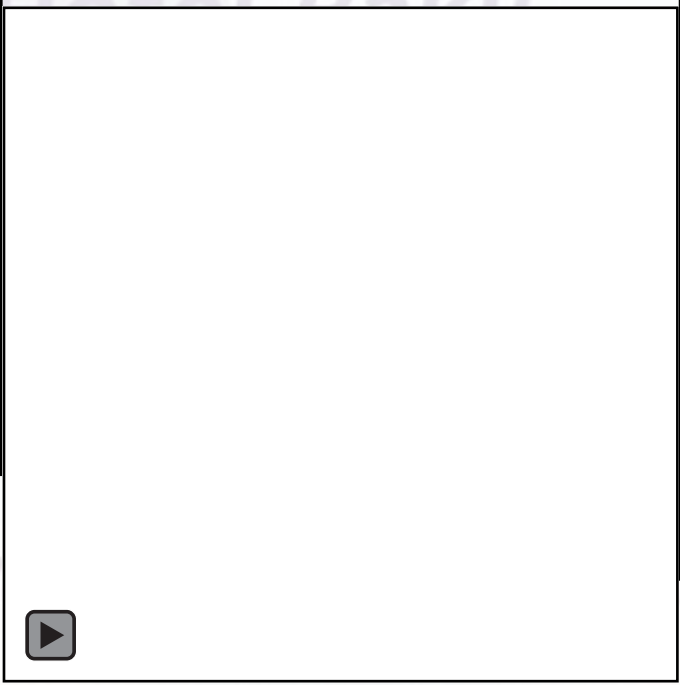
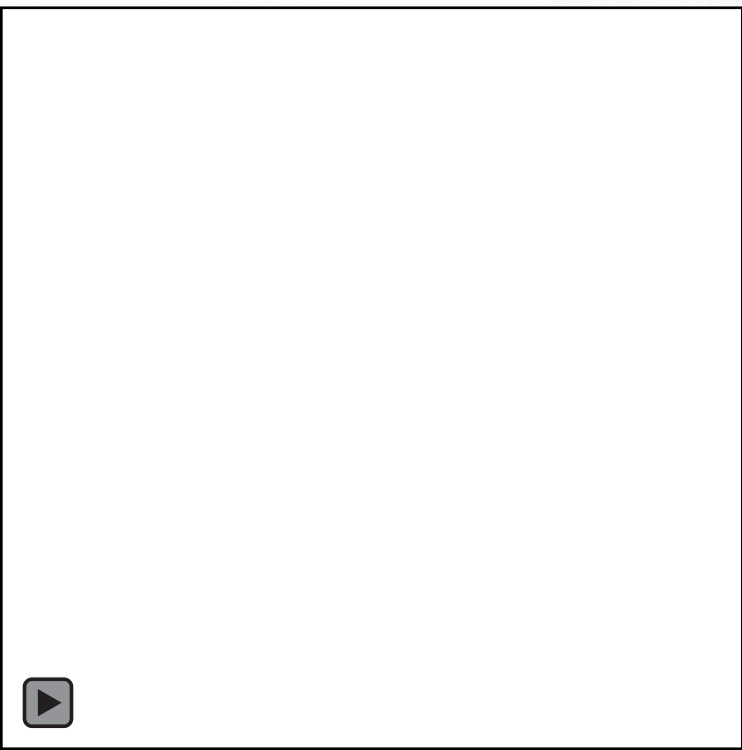
- Əgər perforasiya yerində balon şişirilibsə
- İkinci guiding kateteri **eyni kateterdən** daxil et
- Örtüklü stenti implant edin
- Əgər balon çıxarılıbsa - Örtüklü stenti birbaşa implant edin



Tip 4 -kardiak boşluğa açılan perforasiya



Tip 4



INTERVENTIONAL CARDIOLOGY

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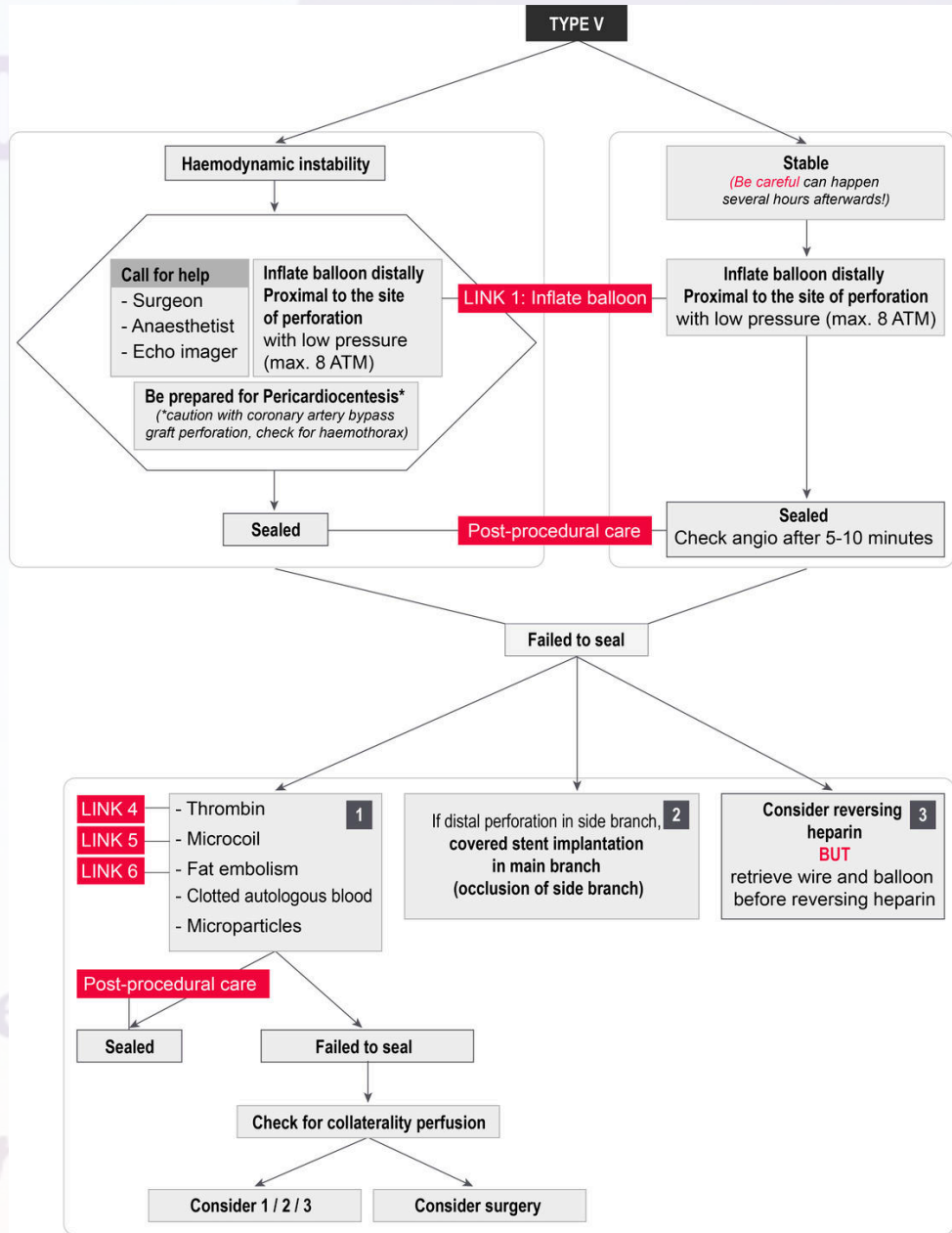
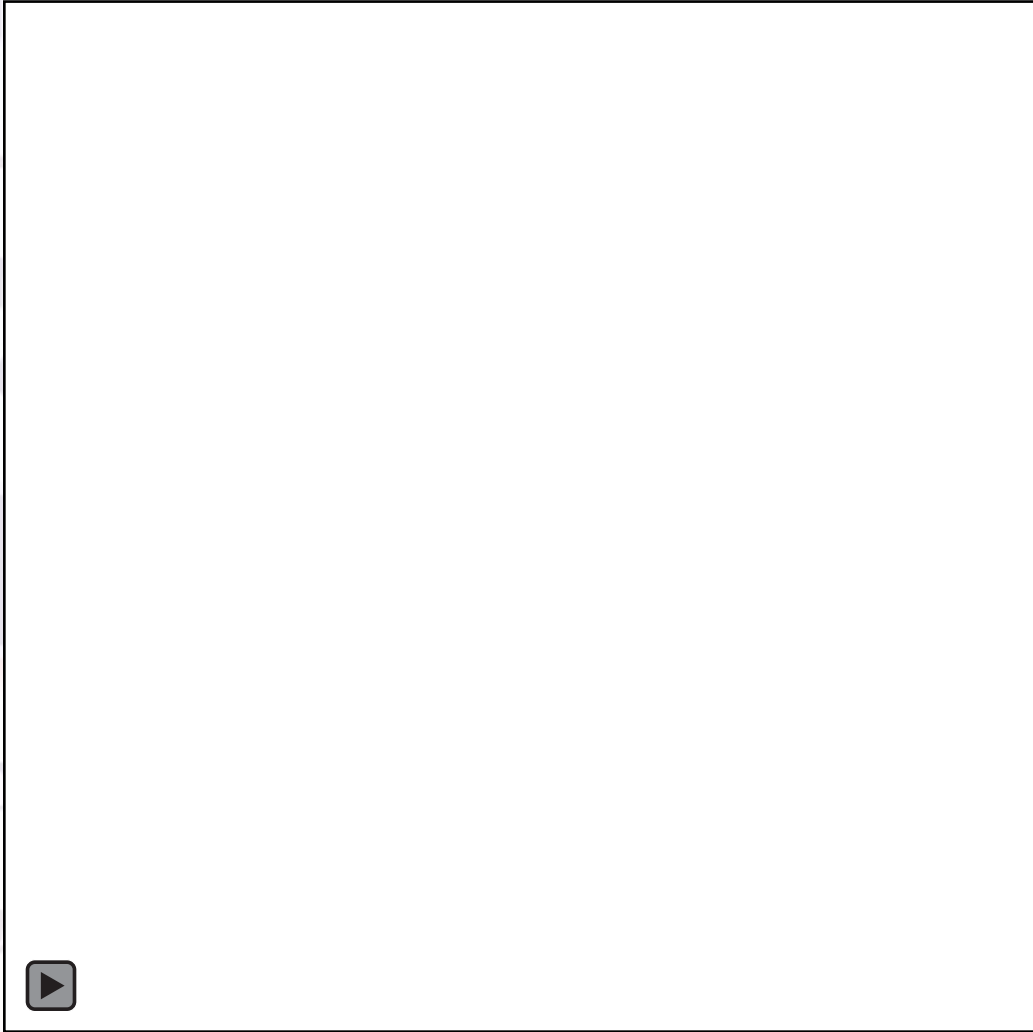


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Tip 5-distal perforasiyalar

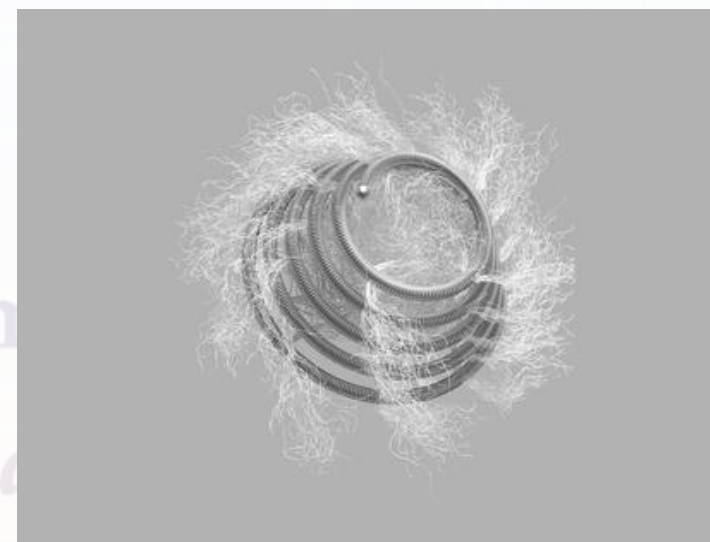
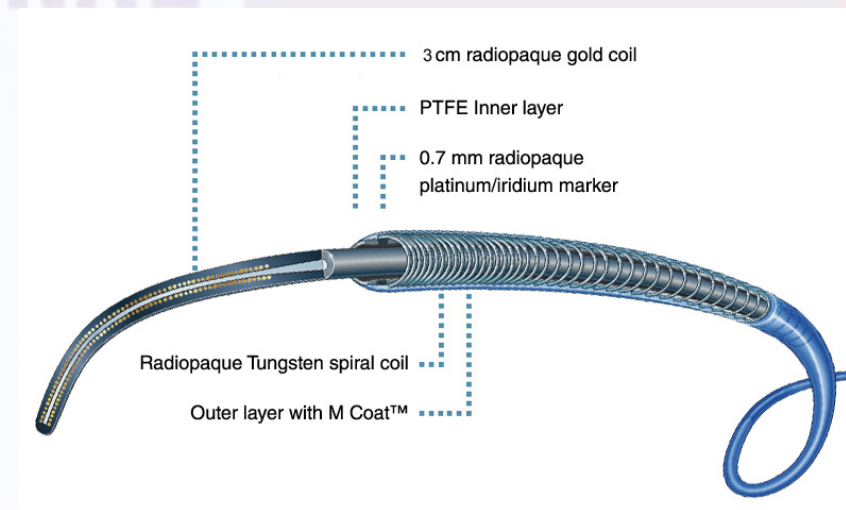


Trombin inyeksiyası

- **Trombin:**
- Trombosit aktivatorudur
- Birbaşa və dolayı yolla fibrin sapların əmələ gəlməsini aktivləşdirir
- **Hazırlıq :**
- OTW balon istifadə edin
- 50–100 IU Trombin +Na Cl qarışığı hazırlayın
- Yavaş sürətlə 3-5 dəq ərzində balon içindən perforasiya olunan yerə 100-300 Uİ trombini yeridin
- 10–15 min balonu şişmiş vəziyyətdə saxlayın
- **Fəndlər:**
- Trombin inyeksiyasından sonra əlavə olaraq 0,5 ml hava vurula bilər
- Trombinə kontrast əlavə etməklə onun gedişini izləmək olar

Coil

- Ayrılan coil, implantasiyadan əvvəl optimal pozisiyalana bilər
- İtələməklə implantasiya olunanlar daha balacadı amma repozisiya etmək mümkün deyil
- Mikrokateterlə çatdırılır:
- Progreat 2.8Fr (Terumo)
- 0.018" Nester, Tornado Platinum və ya Hilal Embolisation Microcoil (Cook Medical Bloomington, IN):
 - Finecross® MG 2.6Fr (Terumo)
 - OTW balon



Piy embolizasiyası

- Qanama üçün fiziki baryer
- Koaqulyasiya aktivatorudu
- Rahat, tez, ucuz
- **İcra texnikası:**
- Femoral punksiya yerindən bir qədər piy götürülür
- Piy kürəcikləri:
- 6Fr üçün 1 mm ,
- 7f üçün 1,2 mm,
- microcatheter bə ya OTW balon üçün :
 - wire ilə itələmə biləcək həcmdə
 - Və ya "emulsiya " halında fizioloji məhlulla qarışdırmaq
- Kateter perforasiya yerinə maksimal yaxın yerləşdirilir.:
 - Koronar şaxə və sistemik embolizasiya profilaktikası üçün

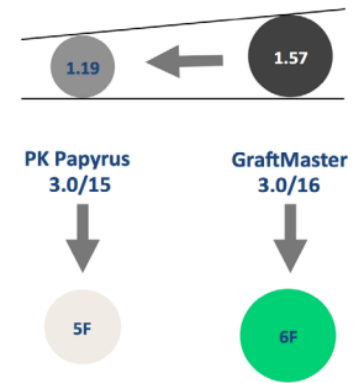
Örtüklü (covered) stentlər

DEVICE	BRAND	DIAMETER / LENGHT	COMPATIBLE GUIDE CATHETER	STRUCTURE
Graftmaster	Abbott	2.8 - 4.5mm / 16, 19, 26mm	6-7Fr	2 BMS with sandwiched layer of PTFE
BeGraft	Bentley	2.5 - 4mm / 8 - 24mm	5Fr	CoCr BMS stent, single layer ePTFE
Papyrus	Biotronik	2.5 - 5mm / 15, 20, 26mm	5-6Fr	CoCr BMS stent, single layer polyurethane
Over and Under / Aneugraft® DX	ITGI	2.5 - 4.0mm / 13 - 27mm	6-7Fr	BMS with equine pericardial covering

Coronary covered-stent devices

	BIOTRONIK excellence for life	Abbott Vascular
Device name	PK Papyrus	GraftMaster
Cover material	Polyurethane	PTFE
Nominal Pressure	8 atm (7atm / ø4-5mm)	14 atm
Rated Burst Pressure	16 atm	18 atm
Device Design	Single Stent	Stent Sandwich
Available Size Range	L	15 - 26mm
	ø	2.5 - 5.0mm

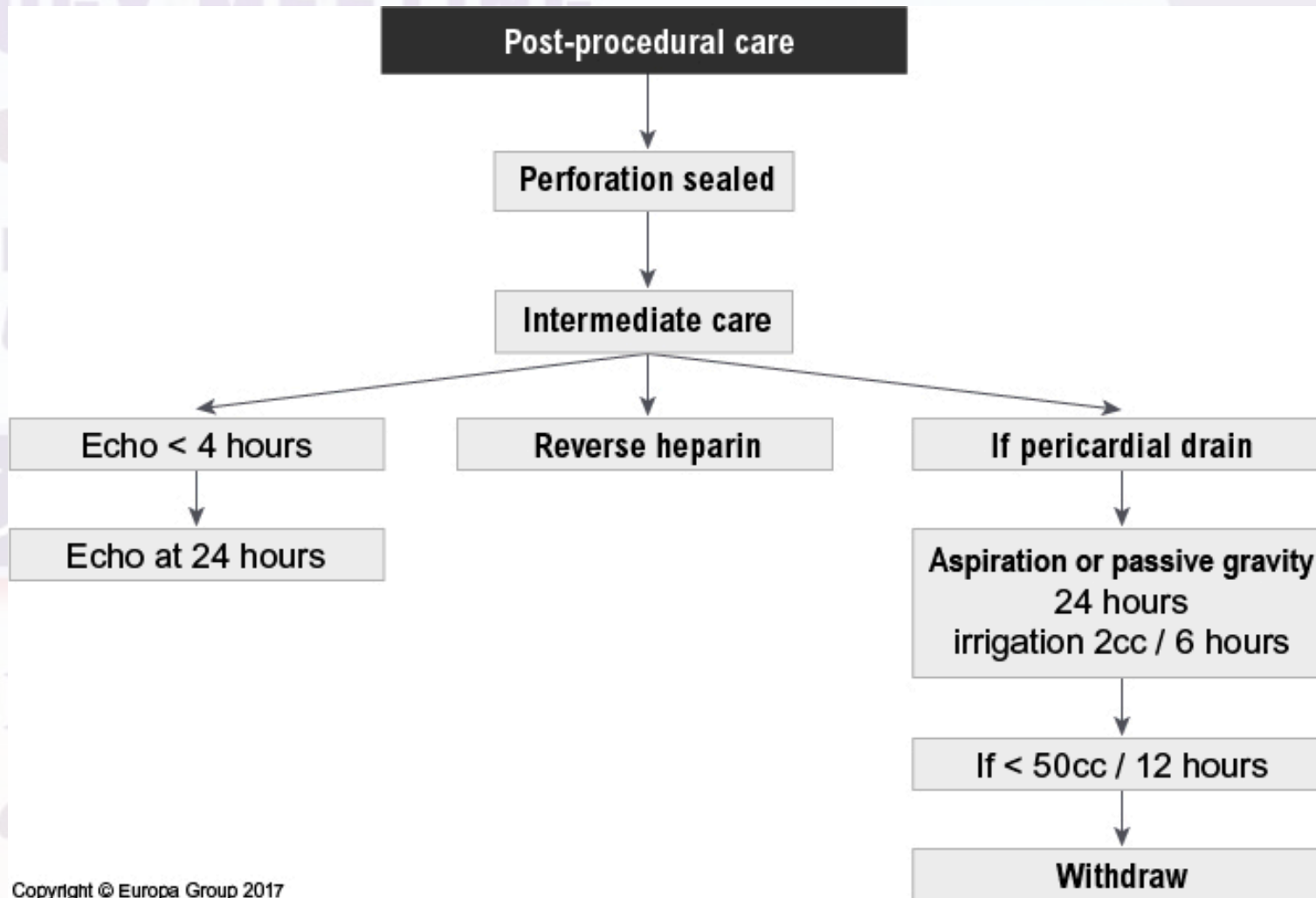
Crossing profile [mm diameter]



- 24% reduction in diameter
- 43% reduction in cross-sectional area

Data on file at BIOTRONIK
*4.5 and 5.0mm diameters are 6F compatible

Post procedural nəzarət



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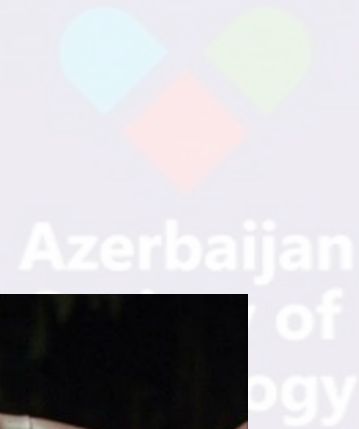
2-14 October 2023

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Coronary perforation and management

koronar perforasiya və idarə olunması



- Bütün mərkəzlər örtüklü stentlə təchiz olunub?
- Örtüklü stentlərin bütün ölçüləri varmı?
- Tortous və kalsifik damarlarda örtüklü stenti keçirmək həmişə mümkündürmü?

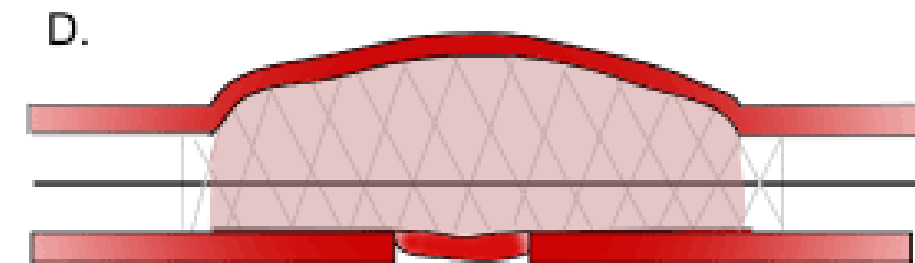
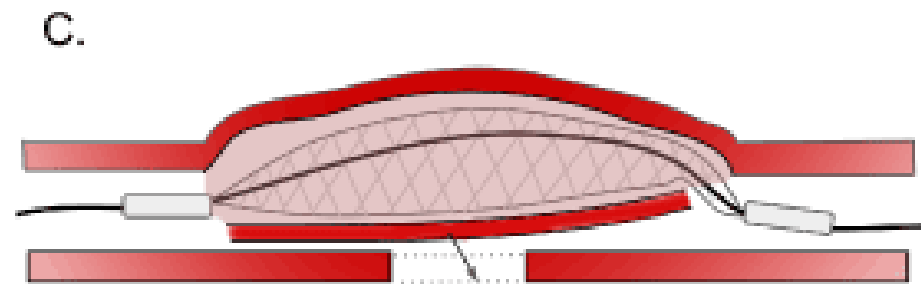
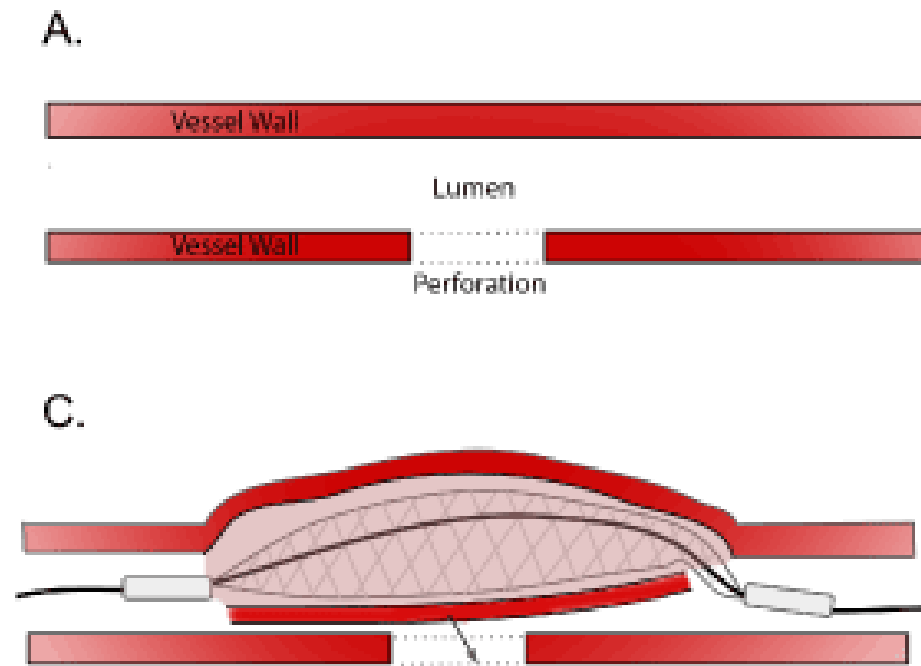


The self-made covered stent technique for treating coronary artery perforations

● Darshan Doshi ● Raja Hatem ● Amirali Masoumi ● Nicholas J. Lembo ● Dimitri Karpaliotis

DOI: 10.15761/JCCR.1000141

Article	Article Info	Author Info	Figures & Data
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Research Article

Clinical Outcomes of Self-Made Polyurethane-Covered Stent Implantation for the Treatment of Coronary Artery Perforations

Xiaoyue Song , Qing Qin, Shufu Chang, Rende Xu, Mingqiang Fu, Hao Lu, Lei Ge, Juying Qian, Jianying Ma , and Junbo Ge 

Department of Cardiology, Zhongshan Hospital, Fudan University, Shanghai Institute of Cardiovascular Diseases, Shanghai 200032, China

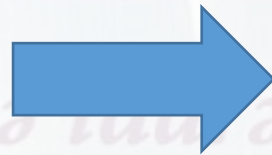
Correspondence should be addressed to Jianying Ma; ma.jianying@zs-hospital.sh.cn and Junbo Ge; jbge@zs-hospital.sh.cn

Received 15 December 2020; Accepted 29 April 2021; Published 17 May 2021

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Objectives. The present study aimed to investigate the short- and long-term clinical outcomes of self-made polyurethane-covered stents (PU-CS) in patients for the management of coronary artery perforation (CAP) during percutaneous coronary intervention (PCI). **Background.** Coronary artery perforation is reckoned as a serious complication in PCI and associated with considerable morbidity and mortality. Covered stents have been used for treating the life-threatening CAP during PCI. But in some catheterization laboratories, no commercial CS is immediately available when there is an urgent need for CS to rescue the coronary



CASE

Successful Treatment of Coronary Artery Perforation with Hand-Made Stent Graft

by Bahadır Şarlı | FEBRUARY 11, 2013

OPERATOR(S)

Bahadır Şarlı,MD; Erkan

Demirci MD; Ahmet Baktir MD

AFFILIATION

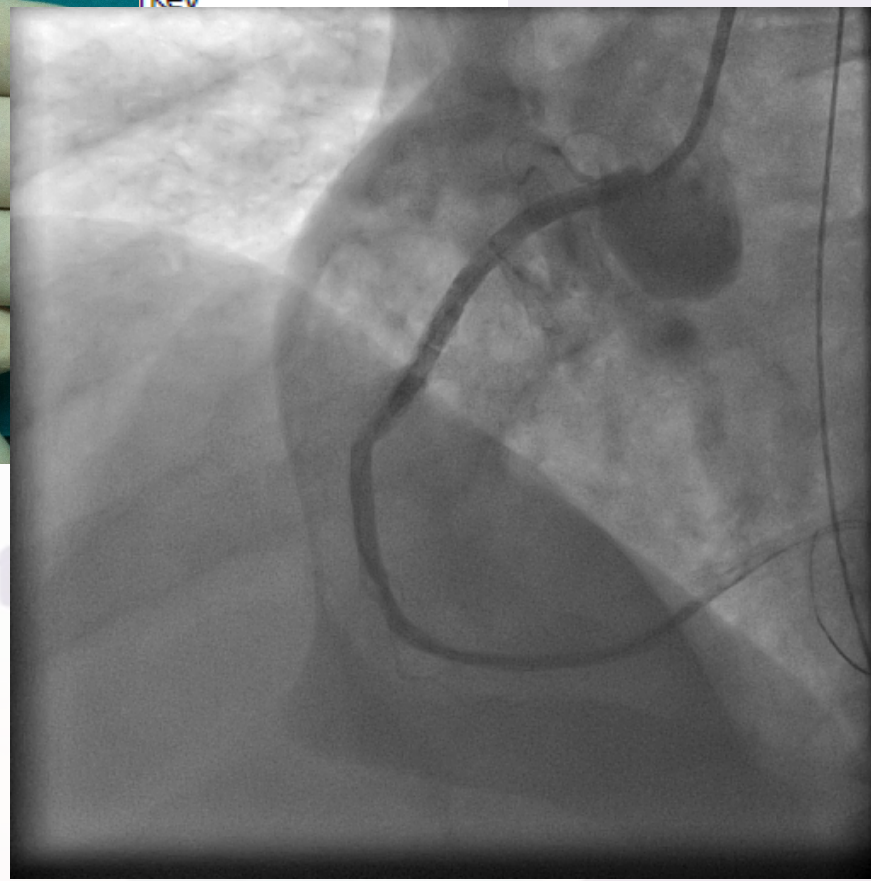
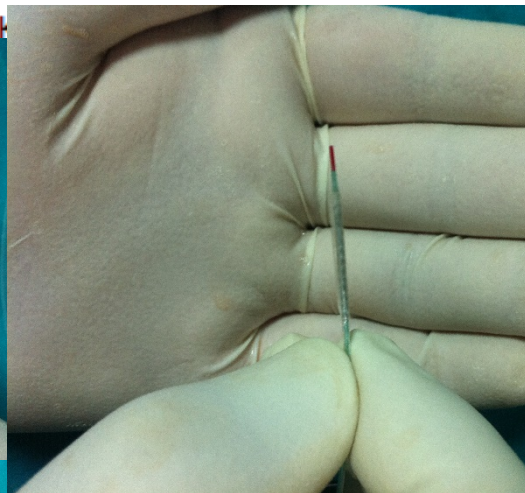
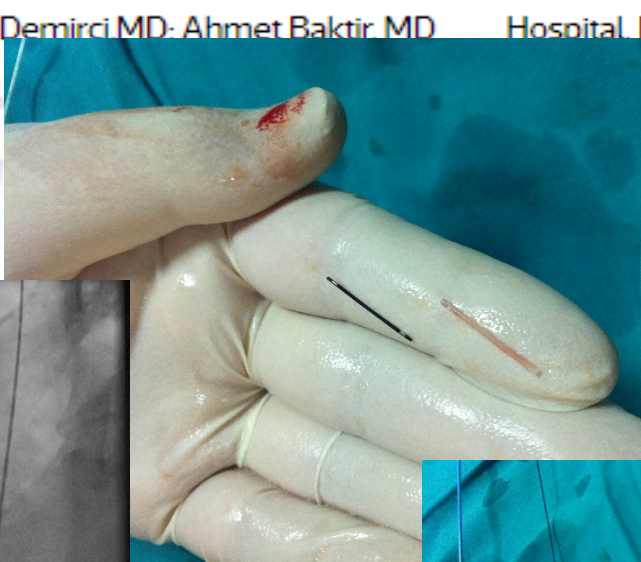
Kayseri Education and Research

Hospital, K

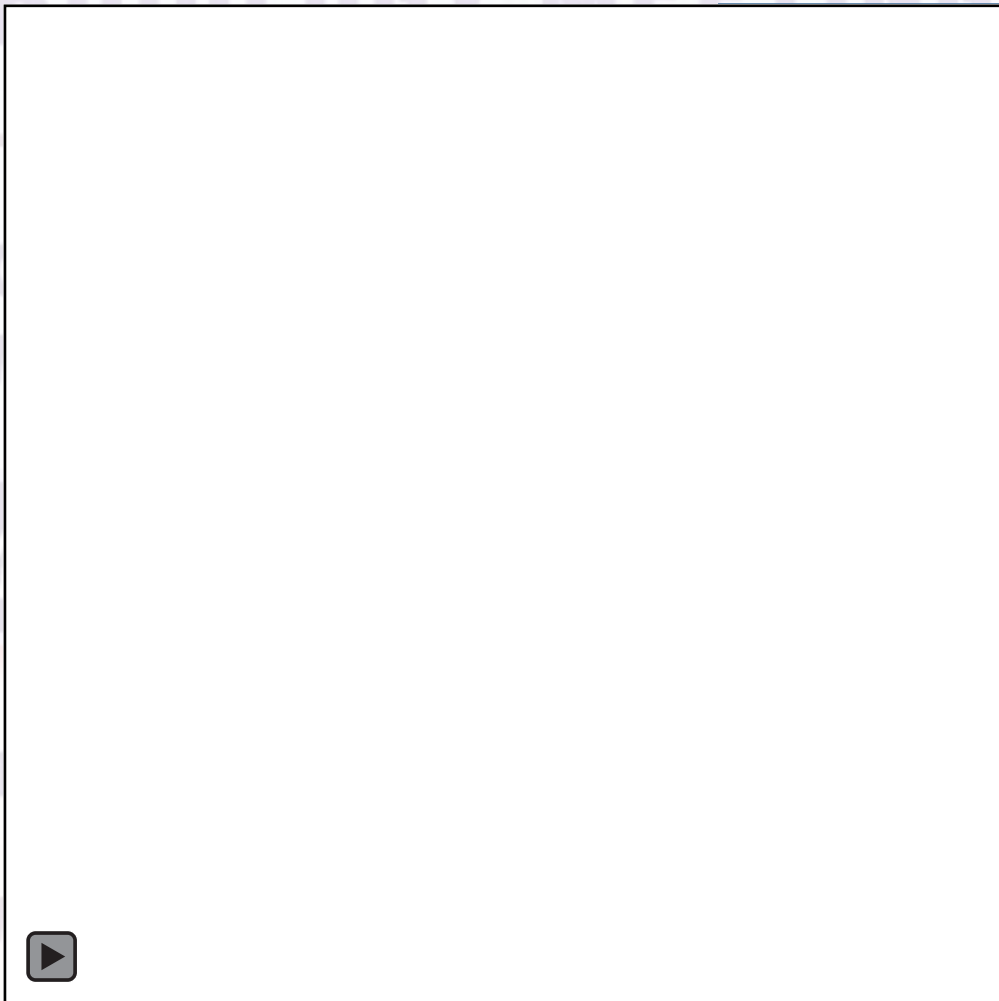
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Tip-3 case



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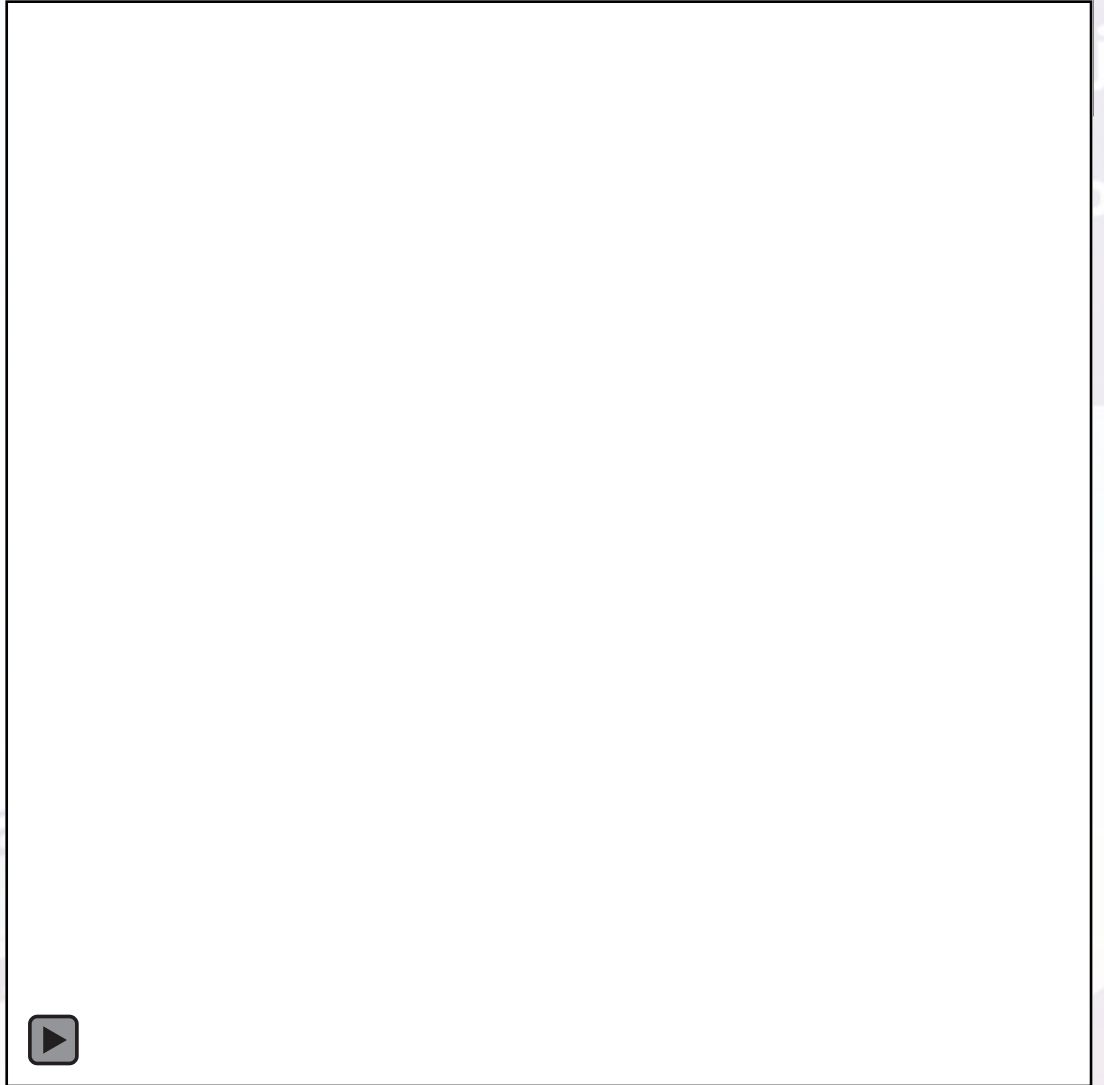
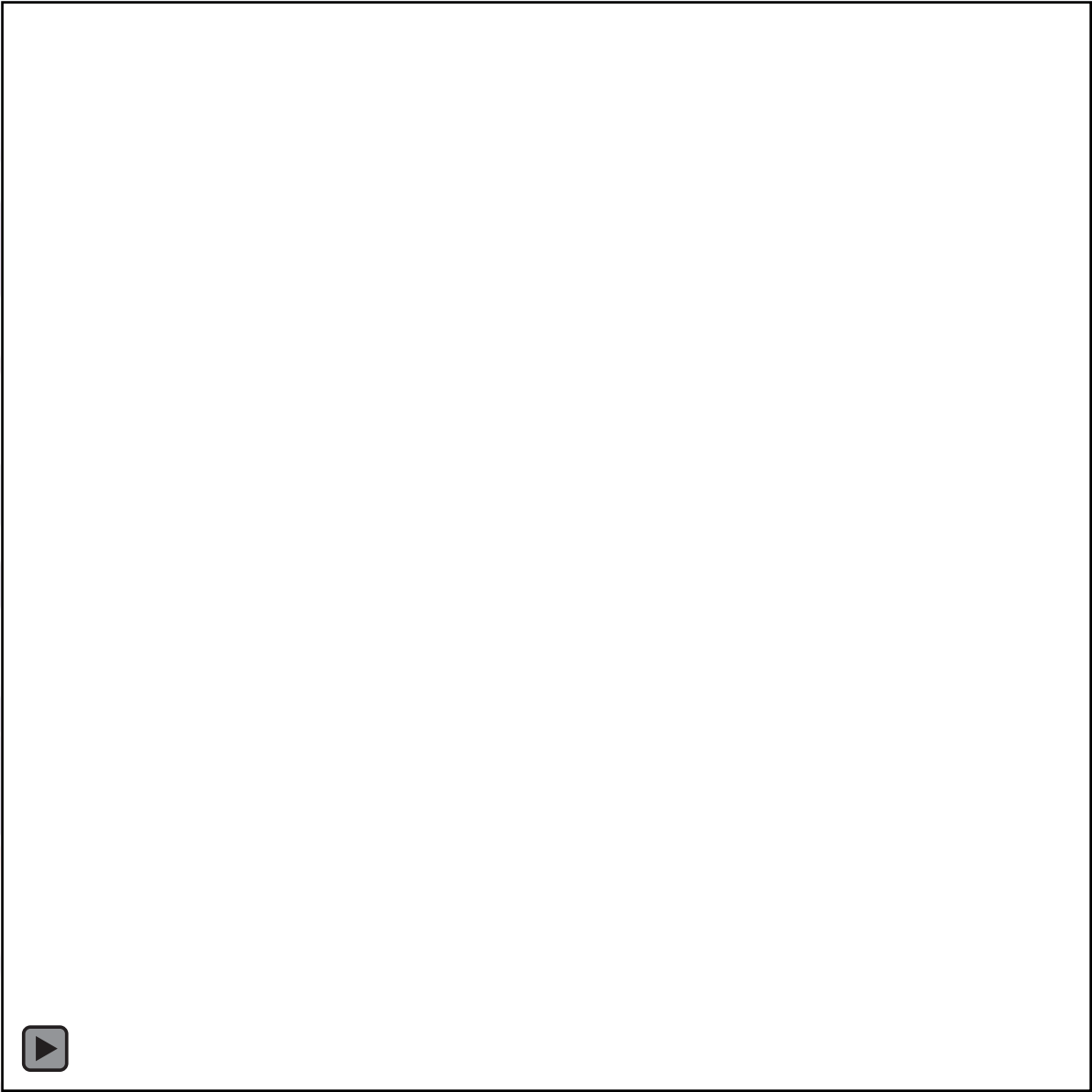
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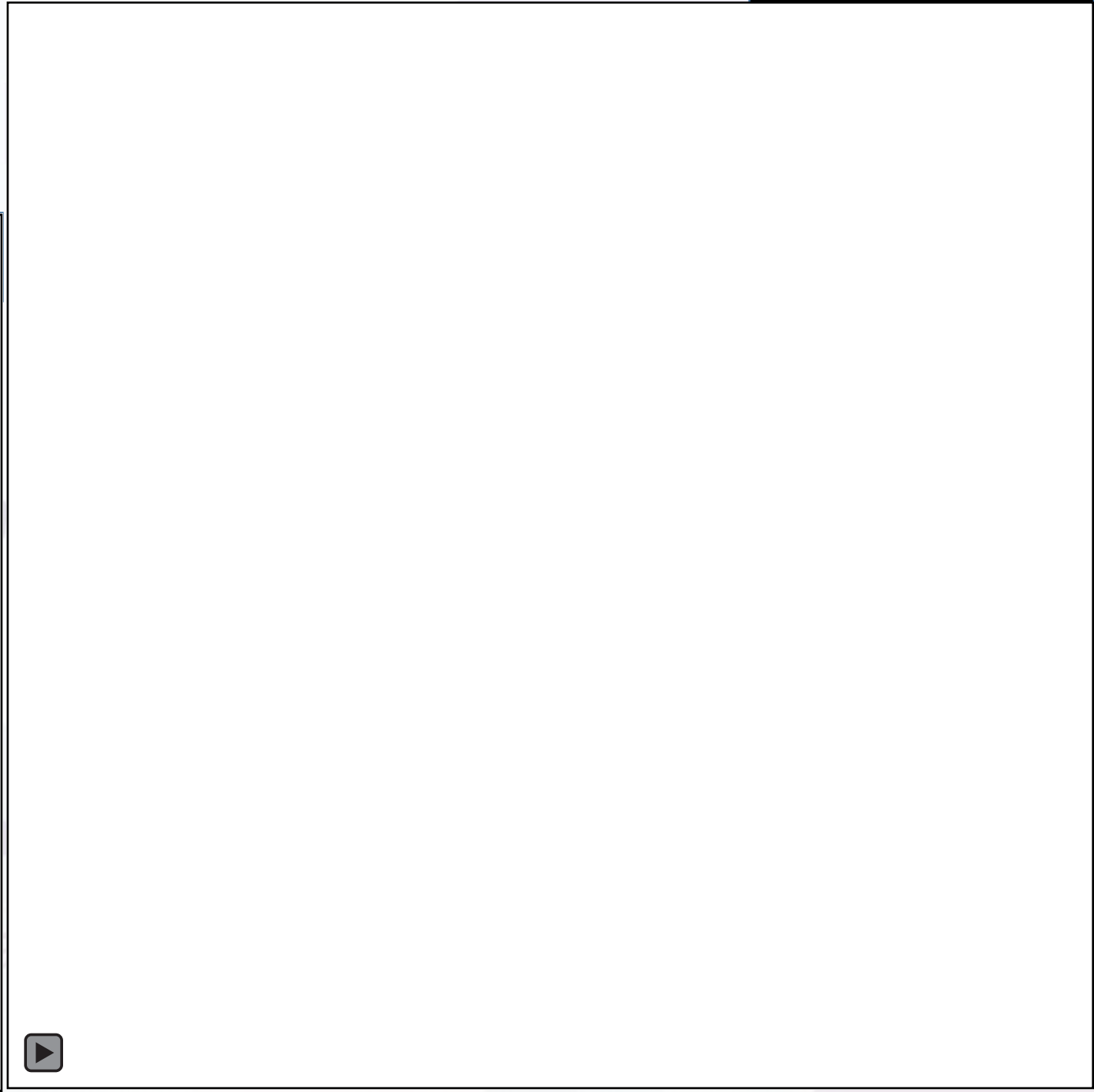
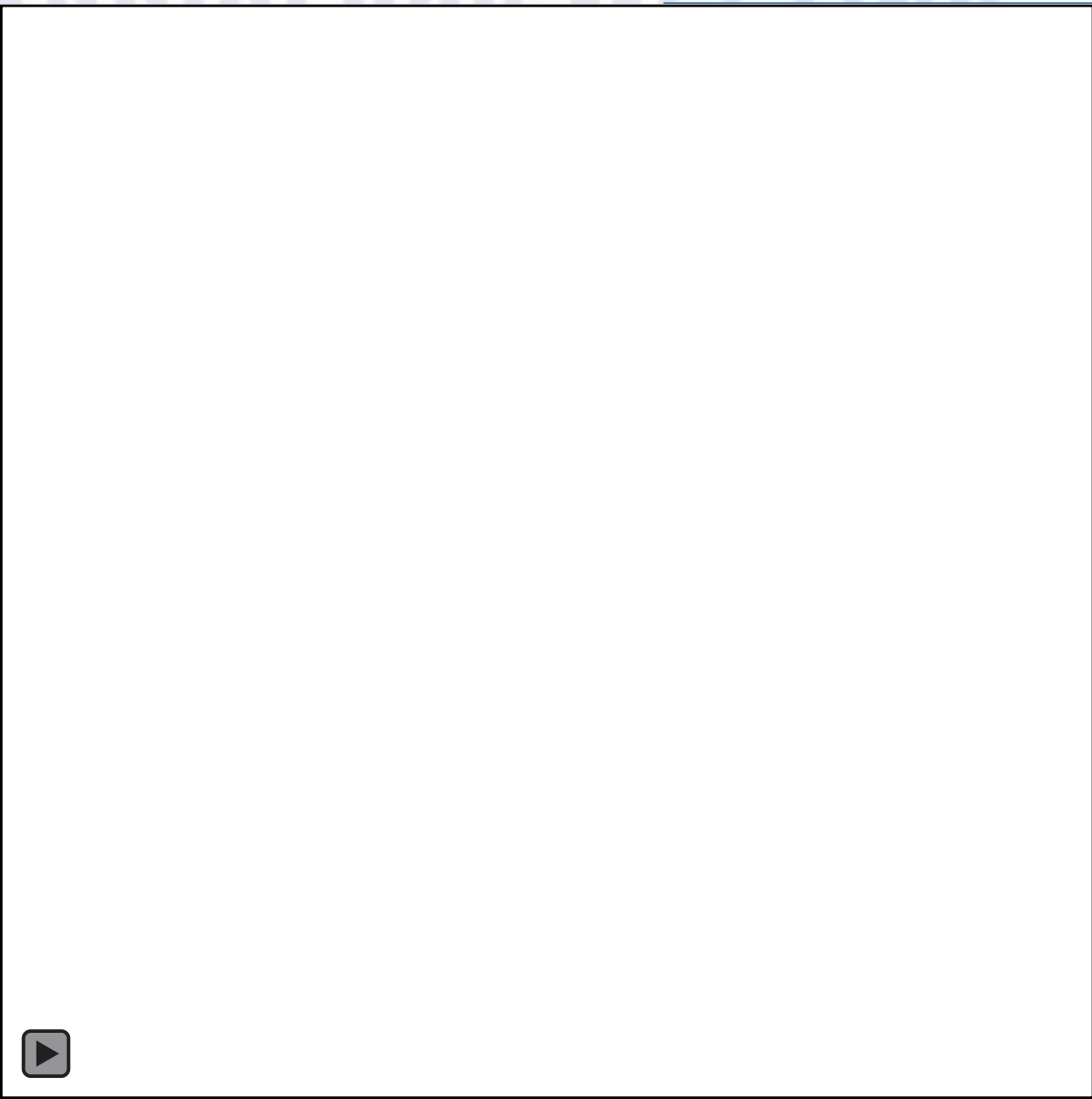
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Tip-2 case



10TH AZERBAIJAN INTERVENTIONAL CARDIOLOGY MEETING

12-14 October 2023

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- DAVAM yoxsa TAMAM
Taktikanız?

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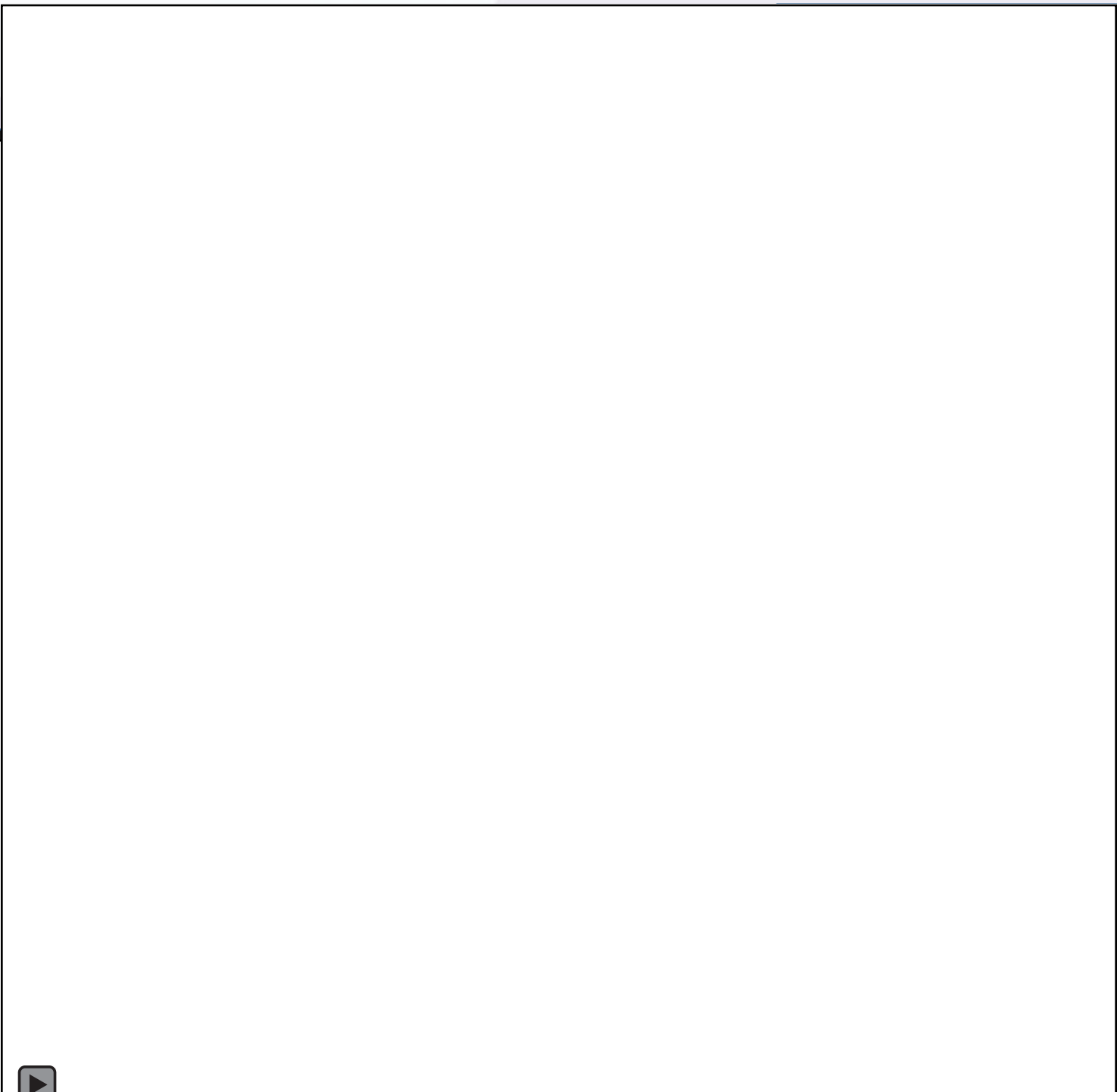
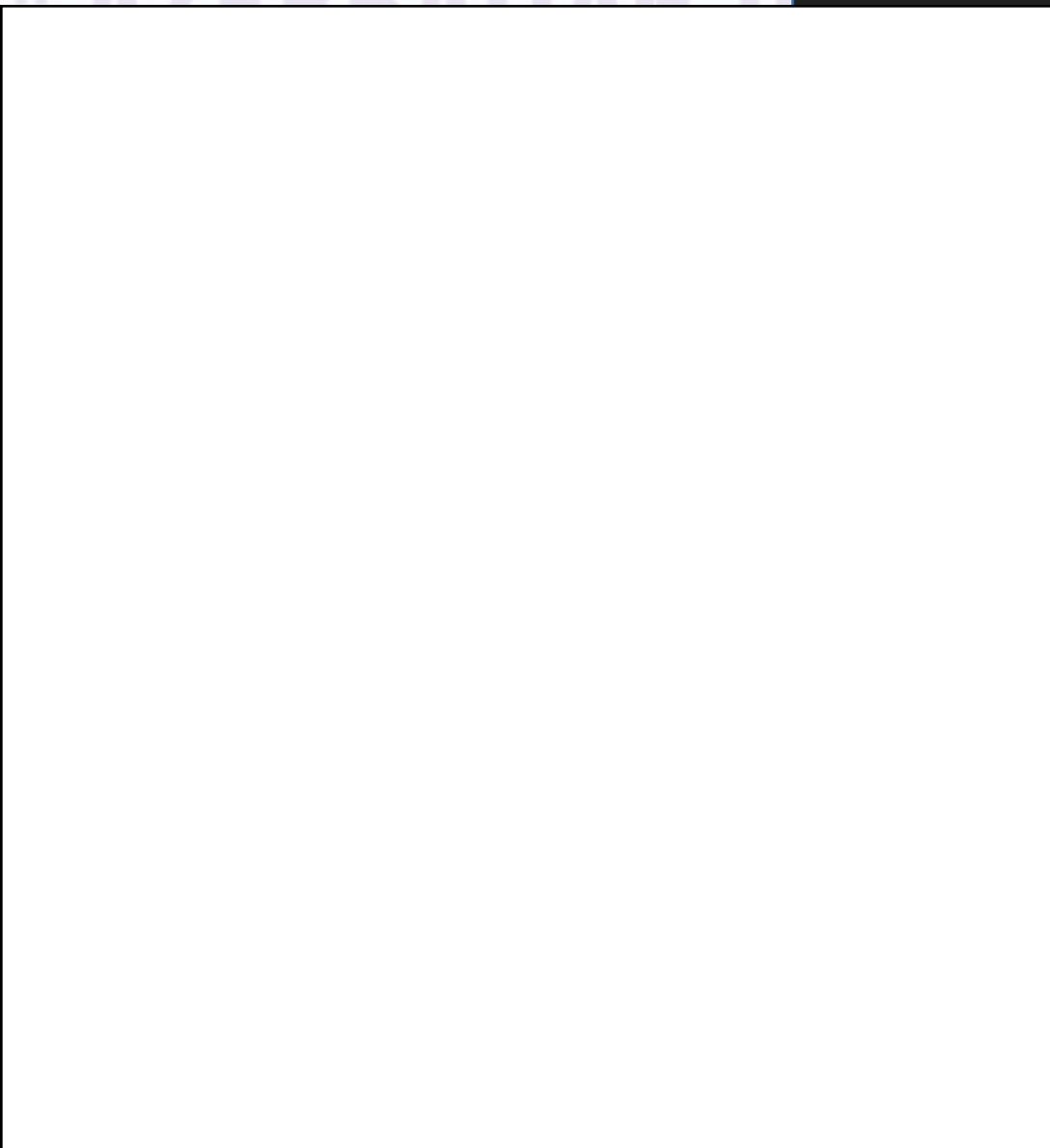
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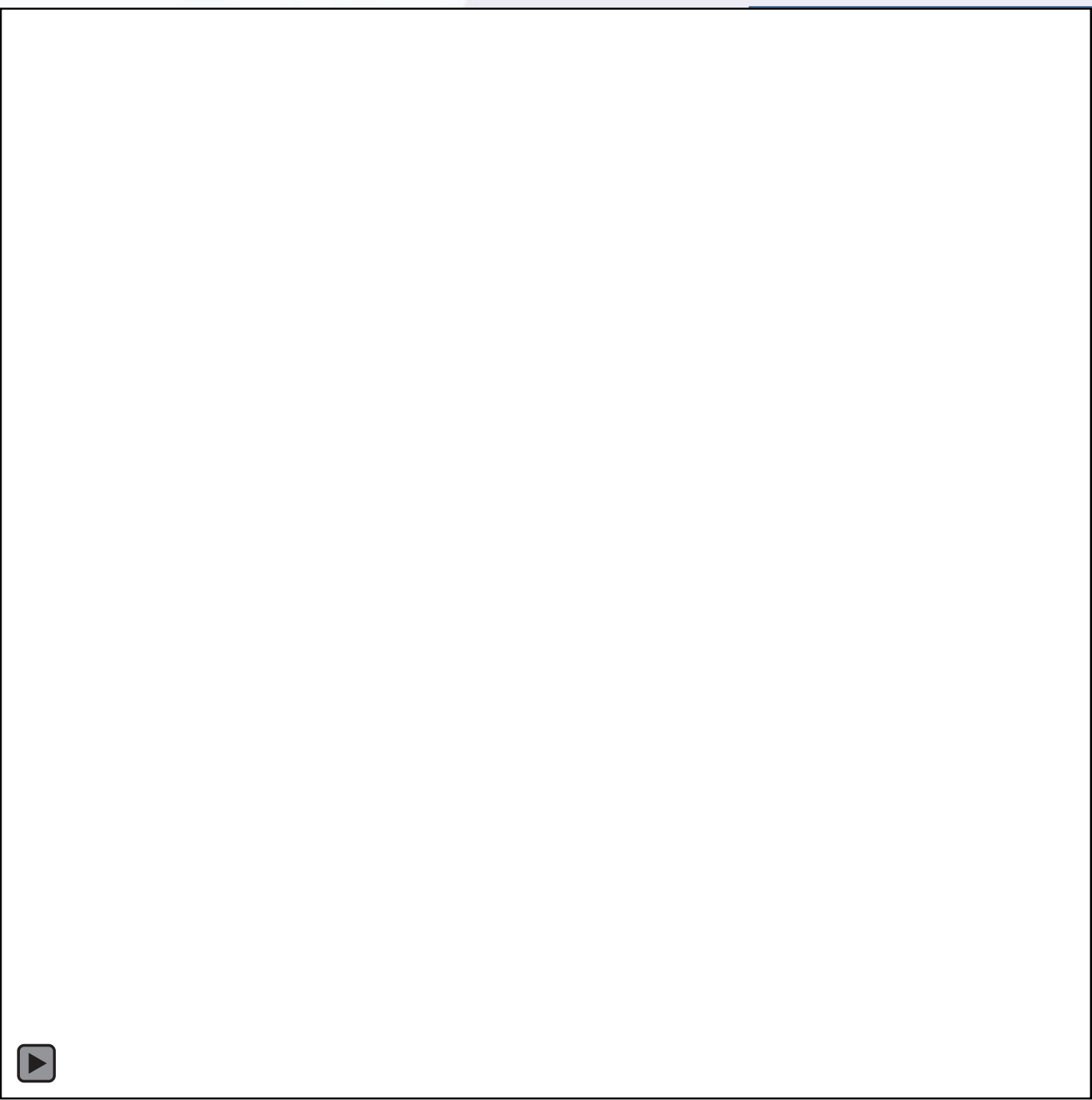
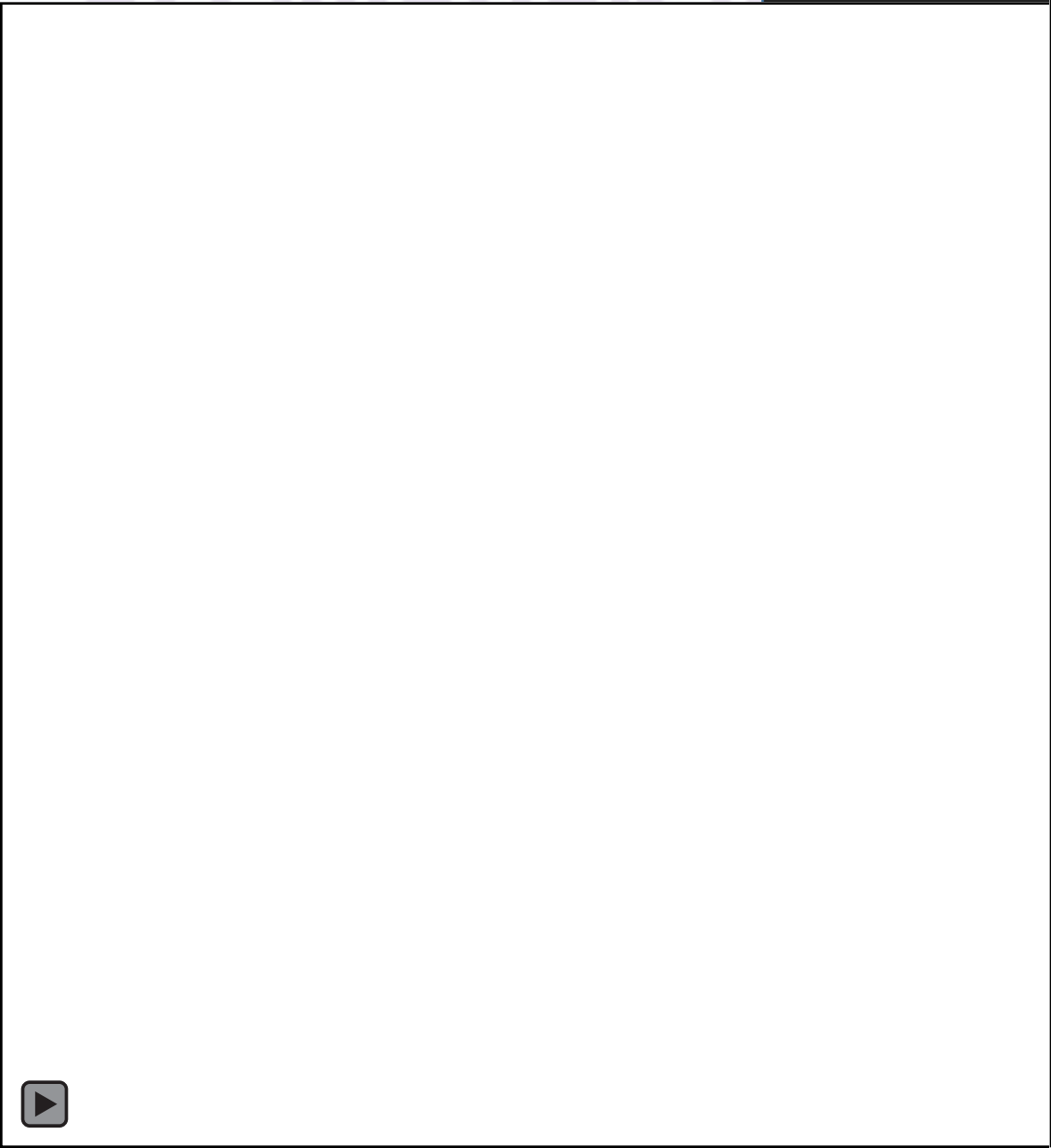
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