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Lékařská fakulta
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KOMPLEXNÍ KARDIOVASKULÁRNÍ CENTRUM
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ESC 2019 guidelines – chronické koronární syndromy

Sluka M

ESC Guidelines 2019

2019 ESC Guidelines on the diagnosis and management of chronic coronary syndromes

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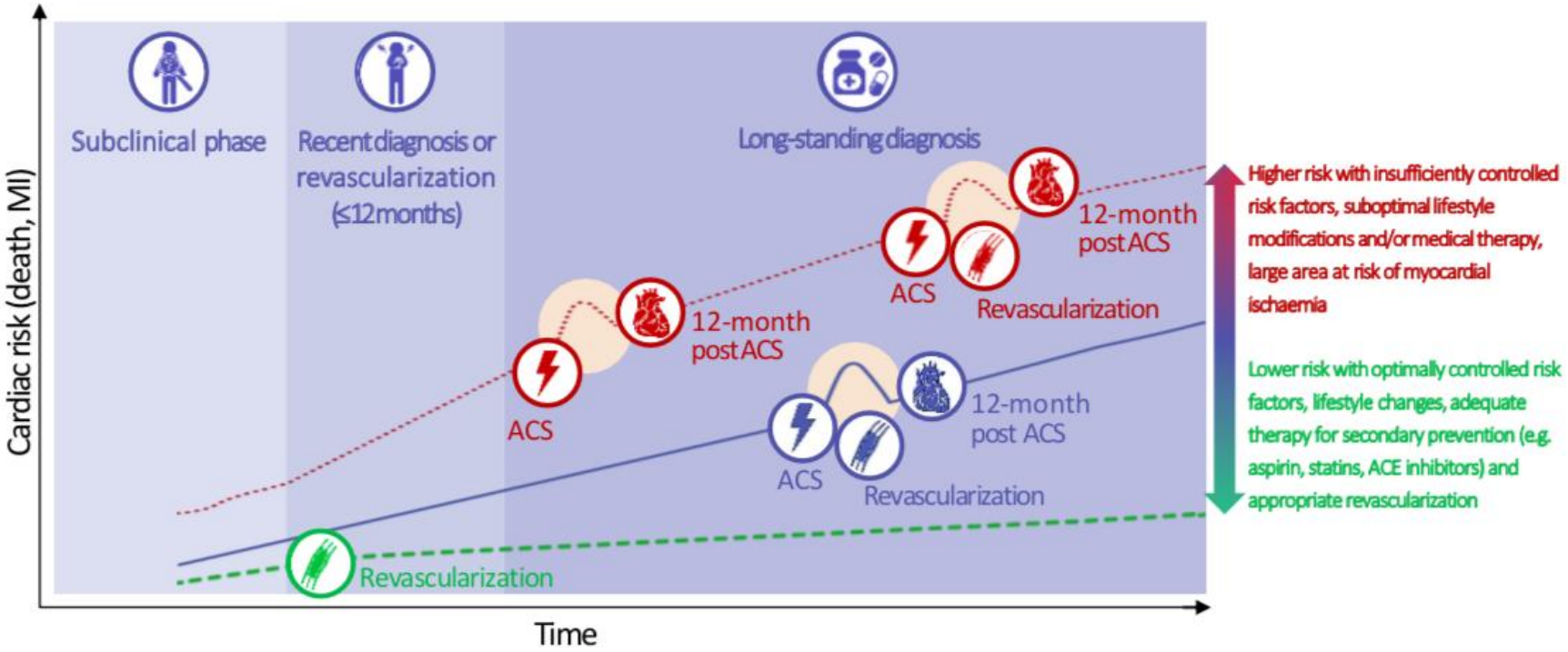
Nová data a evidence

Guidelines byla přepracována se zaměřením na chronický koronární syndrom (CCS) namísto stabilní ICHS.
Prevalence ICHS u symptomatické populace se snížila (nižší předtestová pravděpodobnost). Toto má nejvýznamnější vliv na volbu použitého typu diagnostických testů.
Jsou preferovány zobrazovací testy. Jak morfologické, tak i funkční jsou dostupné ve formě invazivních i neinvazivních testů. Významnější role CT.
Klíčovou roli ve snížení rizika úmrtí a výskytu srdečních příhod hraje pozitivní ovlivnění životního stylu.
Nová evidence týkající se intenzifikované antitrombotické terapie.
Revaskularizace má prognostický vliv v prevenci infarktu myokardu.
Nová antidiabetika pro pacienty se současným výskytem DM a ICHS.

Přirozený vývoj chronických koronárních syndromů



Chronický koronární syndrom

Pacienti se suspektní ICHS a „stabilními“ anginózními symptomy a/nebo dušností

Pacienti s recentním vznikem srdečního selhání nebo dysfunkce LK a suspektní ICHS

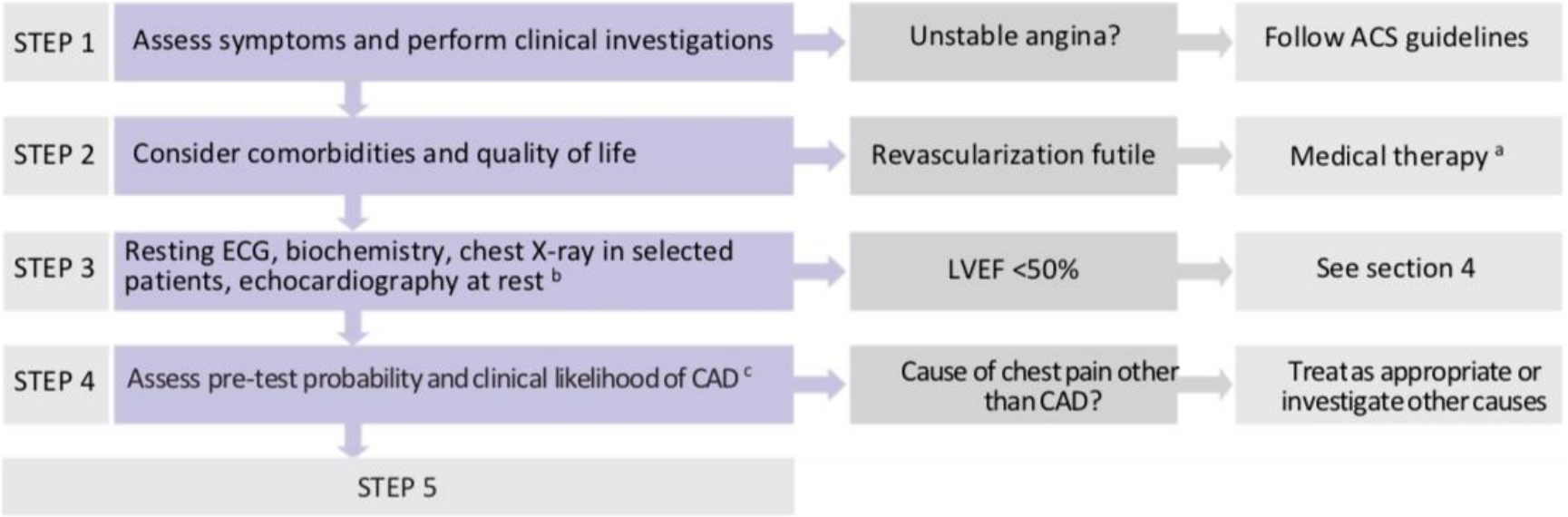
Pacienti se stabilizovanými symptomy <1 rok po akutním koronárním syndromu nebo po recentní revaskularizaci

Pacienti >1 rok po iniciální diagnóze ICHS nebo revaskularizaci

Pacienti s anginózní symptomatologií a suspektní vasospastickou nebo mikrovaskulární koronární nemocí

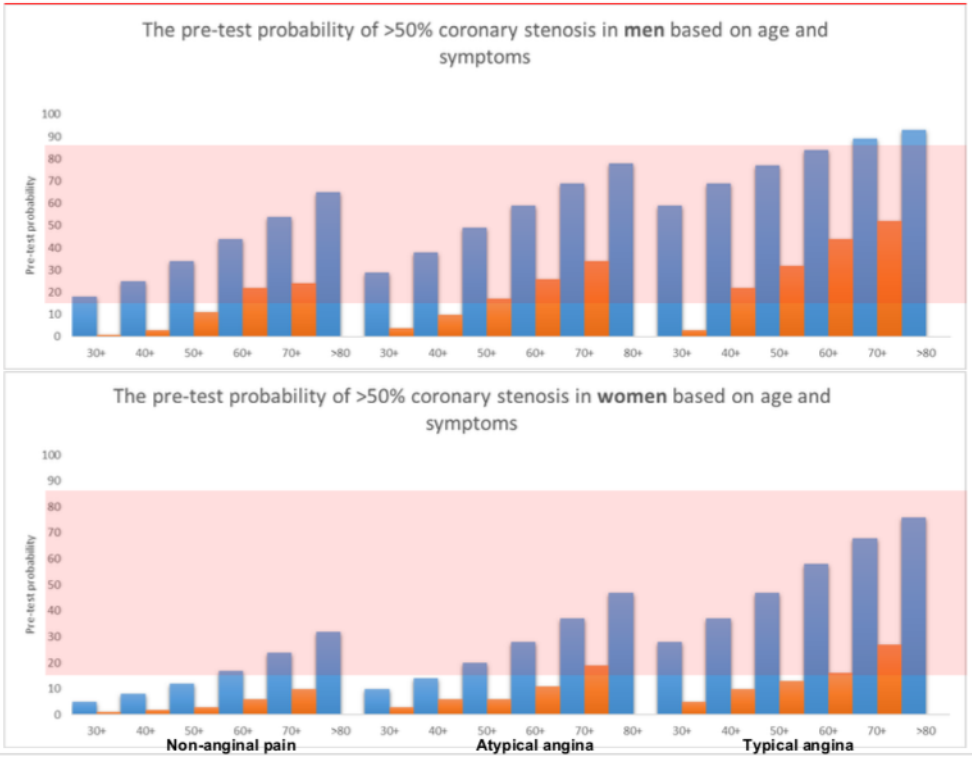
Asymptomatičtí jedinci u kterých byla ICHS diagnostikován a v rámci skríningu

Diagnostický přístup 1



[a] If the diagnosis of CAD is uncertain, establishing a diagnosis using non-invasive functional imaging for myocardial ischaemia before treatment may be reasonable. [b] May be omitted in very young and healthy patients with a high suspicion of an extracardiac cause of chest pain, and in multimorbid patients in whom the echocardiography result has no consequence for further patient management. [c] Consider exercise ECG to assess symptoms, arrhythmias, exercise tolerance, BP response, and event risk in selected patients.

Předtestová pravděpodobnost ICHS 2013/2019

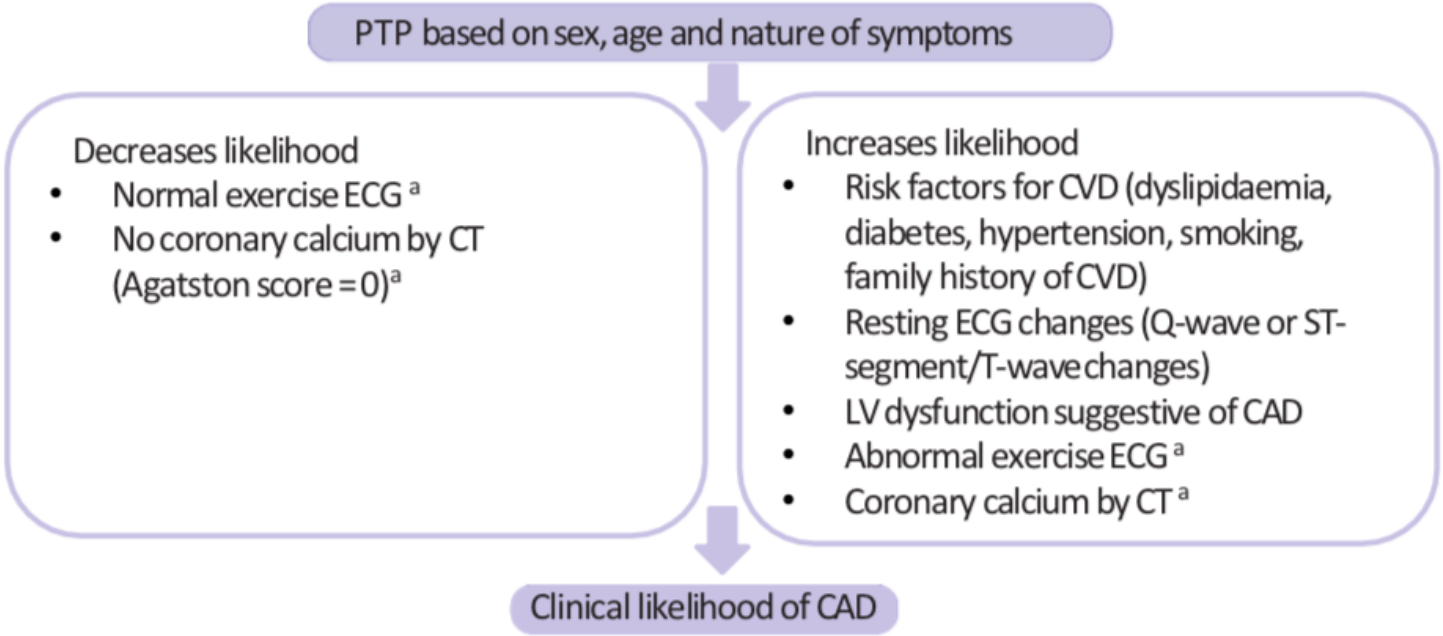


Předtestová pravděpodobnost ICHS 2019

	Typical		Atypical		Non-anginal		Dysponea[a]	
Age	M	W	M	W	M	W	M	W
30–39	3%	5%	4%	3%	1%	1%	0%	3%
40–49	22%	10%	10%	6%	3%	2%	12%	3%
50–59	32%	13%	17%	6%	11%	3%	20%	9%
60–69	44%	16%	26%	11%	22%	6%	27%	14%
70+	52%	27%	34%	19%	24%	10%	32%	12%

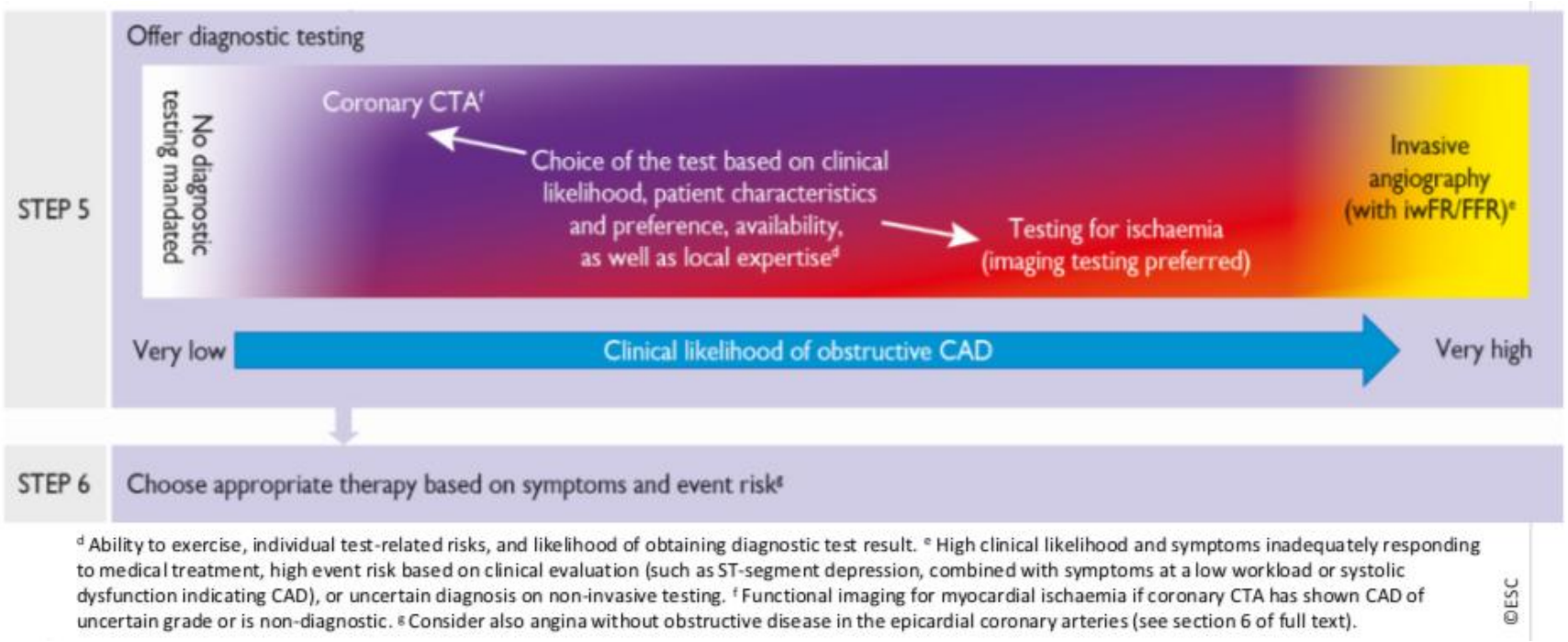
[a] In addition to the classic Diamond and Forrester classes, patients with dyspnoea only or dyspnoea as the primary symptom are included. The dark green shaded regions denote the groups in which non-invasive testing is most beneficial (pre-test probability >15%). The light green shaded regions denote the groups with pre-test probability of CAD between 5-15% in which the testing for diagnosis may be considered after assessing the overall clinical likelihood based on modifiers of pre-test probability .

Faktory ovlivňující pravděpodobnost výskytu ICHS



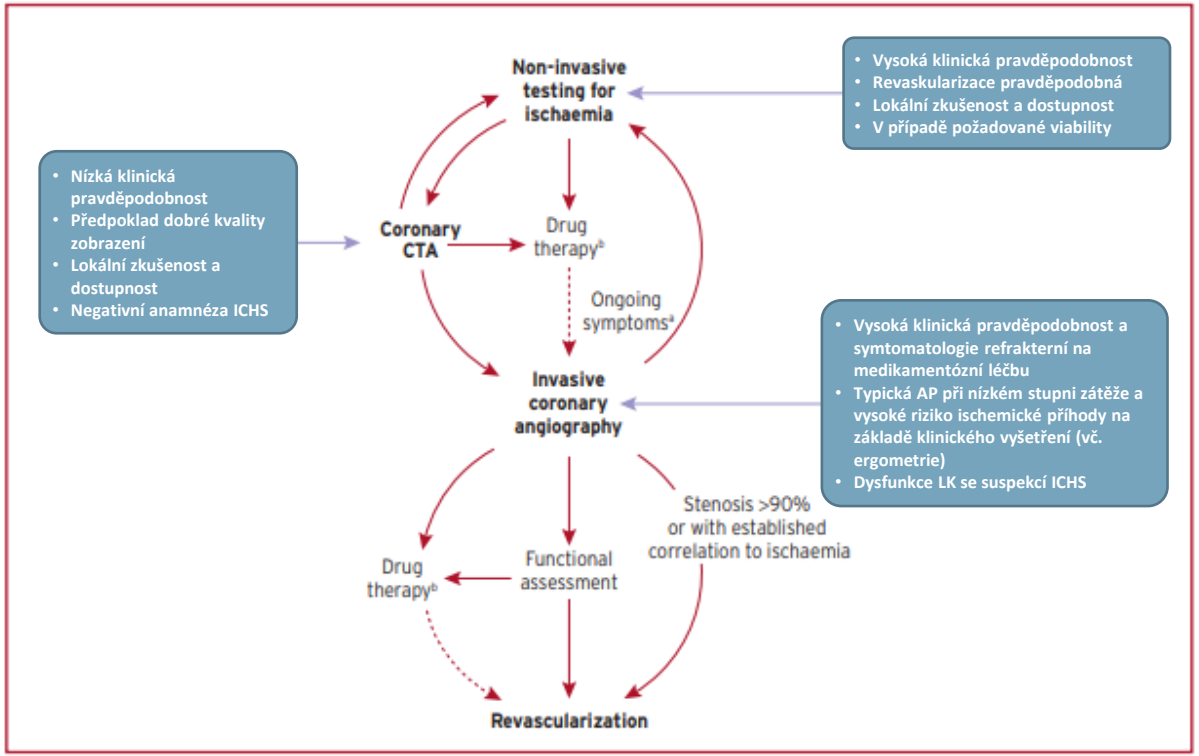
[a] if available.

Diagnostický přístup 2



[d] Ability to exercise, individual test-related risks, and likelihood of obtaining diagnostic test result. [e] High clinical likelihood and symptoms inadequately responding to medical treatment, high event risk based on clinical evaluation (such as ST-segment depression, combined with symptoms at a low workload or systolic dysfunction indicating CAD), or uncertain diagnosis on non-invasive testing. [f] Functional imaging for myocardial ischaemia if coronary CTA has shown CAD of uncertain grade or is non-diagnostic. [g] Consider also angina without obstructive disease in the epicardial coronary arteries (see section 6 of full text).

Diagnostický přístup 3



Terapie – úprava životního stylu

Improvement of lifestyle factors in addition to appropriate pharmacological management is recommended.	I	A

Použití farmakologických i nefarmakologických přístupů k podpoře zanechání kouření, zabránění pasivního kouření
Dieta bohatá na zeleninu, ovoce a celozrnné obiloviny Limit pro saturované tuky <10% celkového množství, alkohol do 100g/týden, 15g/den
30-60 min fyzické aktivity střední intenzity po většinu dní, nicméně i nepravidelná fyzická aktivita je prospěšná
Dosažení a udržení zdravé tělesné hmostnosti (BMI <25), nebo redukce tělesné hmotnosti v rámci doporučeného kalorického příjmu a zvýšené fyzické aktivity
Dobrá compliance k doporučené medikamentozní terapii Sexuální aktivita nízce riziková u stabilních pacientů, asymptomatických při fyzické aktivitě nízké/střední intenzity

Medikamentozní – antitrombotická terapie

Aspirin 75-100 mg daily is recommended in patients with a previous MI or revascularization.	I	A
Clopidogrel 75 mg daily is recommended as an alternative to aspirin in patients with aspirin intolerance.	I	B
Adding a second antithrombotic drug to aspirin for long-term secondary prevention should be considered in patients with high risk of ischaemic events[a] and without high bleeding risk.[b]	IIa	A
Adding a second antithrombotic drug to aspirin for long-term secondary prevention may be considered in patients with at least a moderately increased risk of ischaemic events[c] and without high bleeding risk.[b]	IIb	A

[a] Diffuse multivessel CAD with at least one of the following: diabetes mellitus requiring medication, recurrent MI, PAD, or CKD with eGFR 15-59 mL/min/1.73 m^2.
[b] Prior history of intracerebral haemorrhage or ischaemic stroke, history of other intracranial pathology, recent gastrointestinal bleeding or anaemia due to possible gastrointestinal blood loss, other gastrointestinal pathology associated with increased bleeding risk, liver failure, bleeding diathesis or coagulopathy, extreme old age or frailty, or renal failure requiring dialysis or with eGFR <15 mL/min/1.73 m^2.
[c] At least one of the following: multivessel/diffuse CAD, diabetes mellitus requiring medication, recurrent MI, PAD, HF, or CKD with eGFR 15-59 mL/min/1.73 m2

Medikamentozní – antitrombotická terapie

Clopidogrel	75 mg o.d.	Post-MI in patients who have tolerated DAPT for 1 year	
Prasugrel	10 mg o.d. or 5 mg o.d. if body weight <60 kg or age >75 years	Post-PCI for MI in patients who have tolerated DAPT for 1 year	Age >75 years
Rivaroxaban	2.5 mg b.i.d.	Post-MI >1 year or multivessel CAD	eGFR 15-29 mL/min/1.73 m^2
Ticagrelor	60 mg b.i.d.	Post-MI in patients who have tolerated DAPT for 1 year	

Medikamentozní – antikoagulační terapie

Antithrombotic therapy in patients with CCS and AF		
Long-term OAC therapy (NOAC or VKA with time in therapeutic range >70%) should be considered in patients with AF and a CHA_2DS_2-VASc score[a] of 1 in males and 2 in females.	IIa	B
Antithrombotic therapy in post-PCI patients with AF or another indication for an OAC		
It is recommended that peri-procedural aspirin and clopidogrel are administered to patients undergoing coronary stent implantation.	I	C
In patients who are eligible for a NOAC, it is recommended that a NOAC (apixaban 5 mg b.i.d., dabigatran 150 mg b.i.d., edoxaban 60 mg o.d., or rivaroxaban 20 mg o.d.)[a] is used in preference to a VKA in combination with antiplatelet therapy.	I	A

[a] See summary of product characteristics for reduced doses or contraindications for each NOAC in patients with CKD, body weight <60 kg, age >75-80 years, and/or drug interactions.

Medikamentozní – antikoagulační terapie

Antithrombotic therapy in post-PCI patients with AF or another indication for an OAC		
When rivaroxaban is used and concerns about high bleeding risk[a] prevail over concerns about stent thrombosis[b] or ischaemic stroke,[c] rivaroxaban 15 mg o.d. should be considered in preference to rivaroxaban 20 mg o.d. for the duration of concomitant single or dual antiplatelet therapy.	IIa	B
When dabigatran is used and concerns about high bleeding risk[a] prevail over concerns about stent thrombosis[b] or ischaemic stroke,[c] dabigatran 110 mg b.i.d. should be considered in preference to dabigatran 150 mg b.i.d. for the duration of concomitant single or dual antiplatelet therapy.	IIa	B

Medikamentozní – antikoagulační terapie

After uncomplicated PCI, early cessation (≤1 week) of aspirin and continuation of dual therapy with an OAC and clopidogrel should be considered if the risk of stent thrombosis [a] is low, or if concerns about bleeding risk prevail over concerns about the risk of stent thrombosis, [a] irrespective of the type of stent used.	IIa	B
Triple therapy with aspirin, clopidogrel, and an OAC for ≥1 month should be considered when the risk of stent thrombosis[a] outweighs the bleeding risk, with the total duration (≤6 months) decided according to assessment of these risks and clearly specified at hospital discharge.	IIa	C
In patients with an indication for a VKA in combination with aspirin and/or clopidogrel, the dose intensity of the VKA should be carefully regulated with a target international normalized ratio in the range of 2.0-2.5 and with time in therapeutic range >70%.	IIa	B

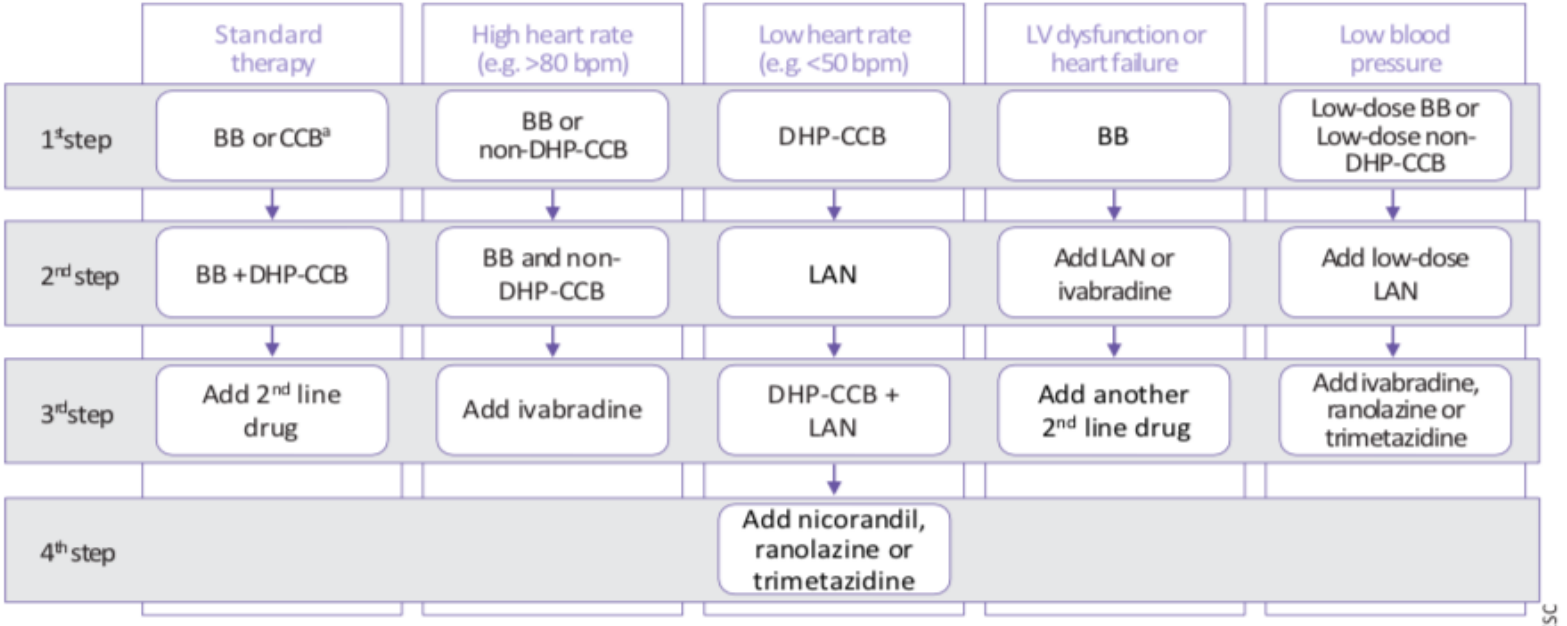
Medikamentozní – profylaktická terapie

Use of proton-pump inhibitors		
Concomitant use of a proton-pump inhibitor is recommended in patients receiving aspirin monotherapy, DAPT, or OAC monotherapy who are at high risk of gastrointestinal bleeding.	I	A

Medikamentozní – antiischemická terapie

Medical treatment of symptomatic patients requires one or more drug(s) for angina/ischaemia relief in association with drug(s) for event prevention.

I | C



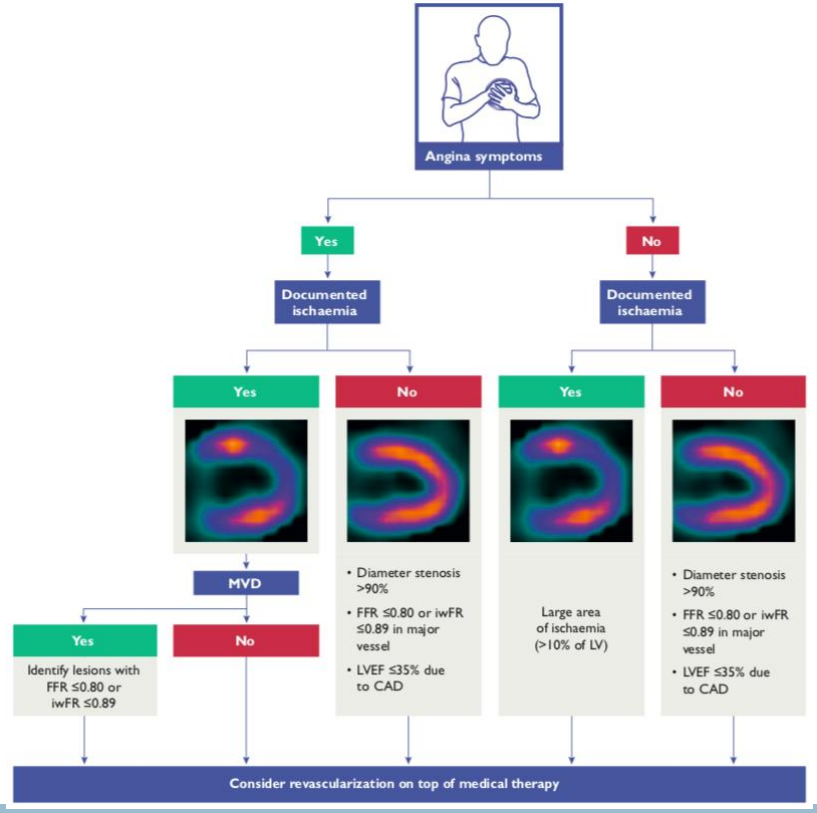
Medikamentozní – hypolipidemická terapie

Lipid-lowering drugs		
Statins are recommended in all patients with CCS.	I	A
If a patient's goal is not achieved with the maximum tolerated dose of statin, combination with ezetimibe is recommended.	I	B
For patients at very high risk who do not achieve their goal on a maximum tolerated dose of statin and ezetimibe, a combination with a PCSK9 inhibitor is recommended.	I	A

Medikamentozní – antidiabetická terapie

Recommendations	Class	Level
Risk factor (BP, LDL-C, and HbA1c) control to targets is recommended in patients with CAD and diabetes mellitus.	I	A
In asymptomatic patients with diabetes mellitus, a periodic resting ECG is recommended for cardiovascular detection of conduction abnormalities, AF, and silent MI.	I	C
ACE inhibitor treatment is recommended in CCS patients with diabetes for event prevention.	I	B
The sodium-glucose co-transporter 2 inhibitors empagliflozin, canagliflozin, or dapagliflozin are recommended in patients with diabetes and CVD.	I	A
A glucagon-like peptide-1 receptor agonist (liraglutide or semaglutide) is recommended in patients with diabetes and CVD.	I	A
In asymptomatic adults (age >40 years) with diabetes, functional imaging or coronary CTA may be considered for advanced cardiovascular risk assessment.	IIb	B

Revaskularizace



Revaskularizace

		Class	Level
For symptoms	Haemodynamically significant coronary stenosis in the presence of limiting angina or angina equivalent, with insufficient response to optimized medical therapy.[a]	I	A

[a]Posouzení compliance a preference pacienta v souvislosti s intenzitou antianginozní terapie

Typ revaskularizace
Chirurgické riziko
Rozsah koronárního postižení, event. chlopenní/strukturální srdeční onem.
Technická možnost kompletní revaskularizace
Přítomnost DM

Ticagrelor With AspIrin or ALone In HiGH-Risk Patients After Coronary InTervention

Roxana Mehran, MD
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on behalf of the TWILIGHT Investigators
Icahn School of Medicine at Mount Sinai, New York, NY

Mount Sinai

ClinicalTrials.gov Number: NCT02270242

twilight

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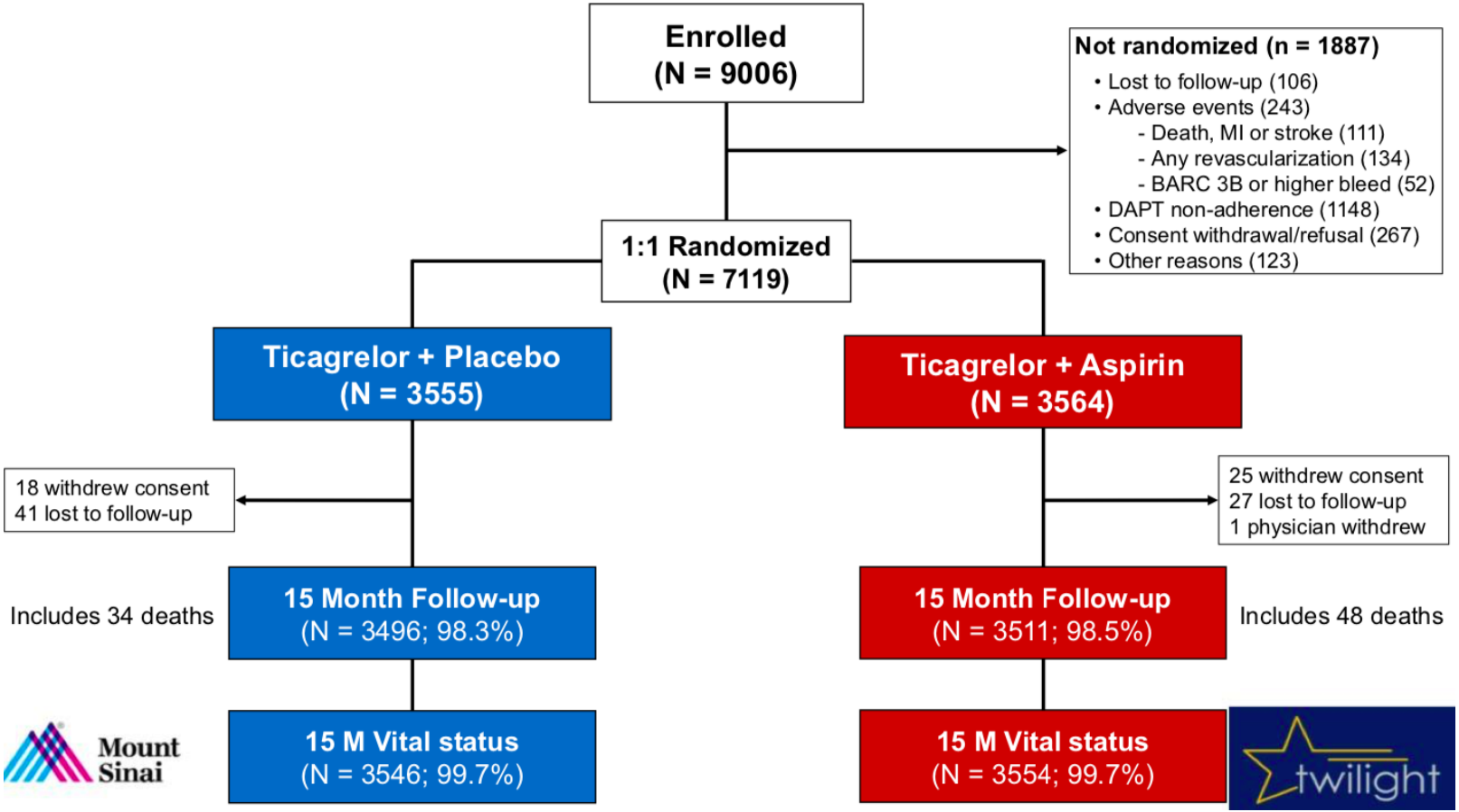


Mehran R, TCT 2019, San Francisco

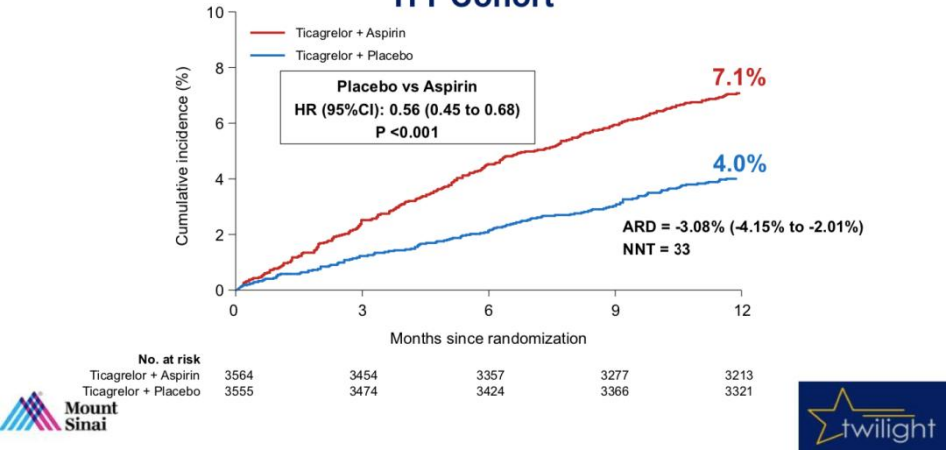
Charakteristika souboru

Age, years [Mean ± SD]	65.2 ± 10.3	65.1 ± 10.4
Diabetes Mellitus	37.1%	36.5%
Insulin requiring	9.4%	10.5%
Chronic Kidney Disease	16.8%	16.8%
Anemia	19.8%	19.1%
ACS presentation	64.0%	65.7%
Multivessel CAD	63.9%	61.6%
Lesion morphology		
Thrombus	10.4%	10.7%
Calcification, moderate/severe	14.0%	13.7%
Any bifurcation	12.2%	12.1%
Total stent length	40.1 ± 24.2	39.7 ± 24.3

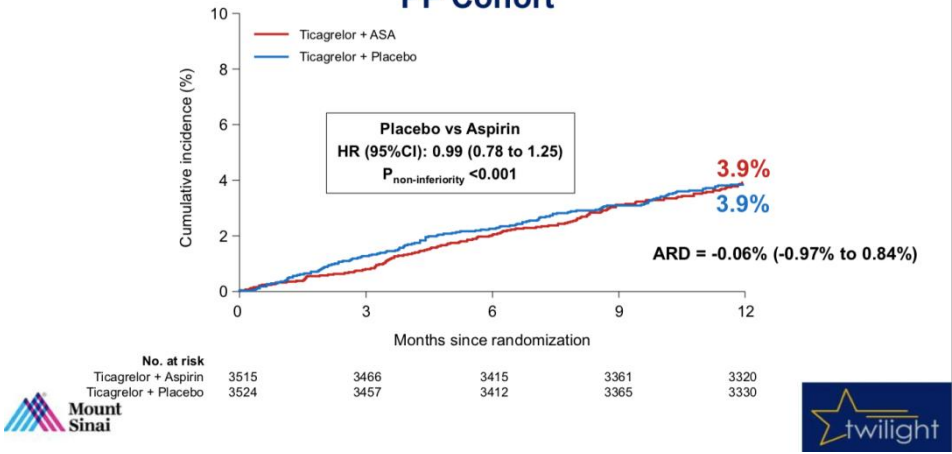
Mehran R, TCT 2019, San Francisco

Výsledky

Primary Endpoint: BARC 2, 3 or 5 Bleeding



Key Secondary Endpoint: Death, MI or Stroke



Mehran R, TCT 2019, San Francisco

International Study Of Comparative Health Effectiveness With Medical And Invasive Approaches (ISCHEMIA):

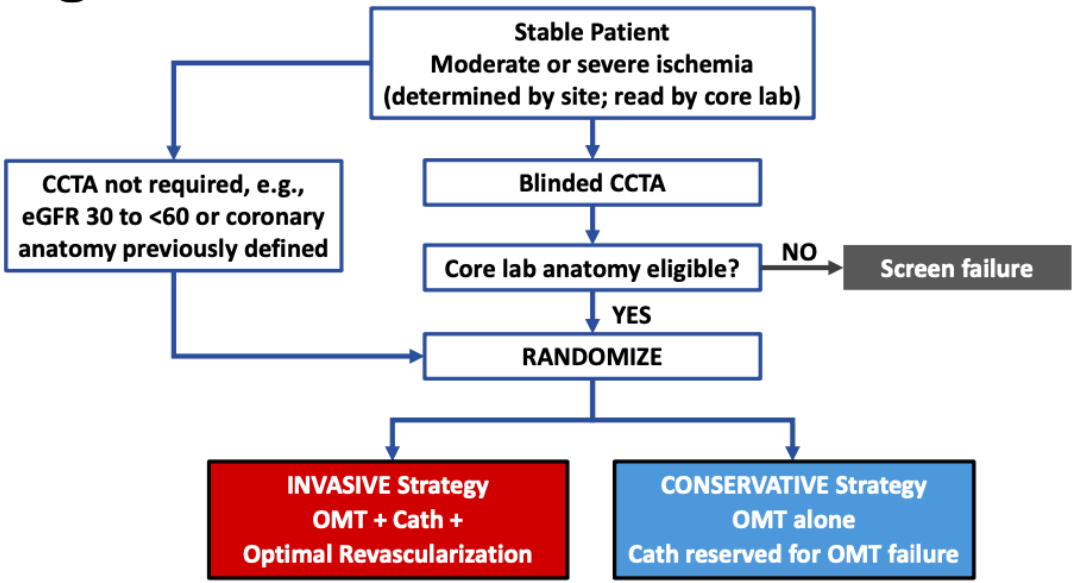
Primary Report of Clinical Outcomes

Funded by the National Heart, Lung, and Blood Institute

Judith S. Hochman, MD
NYU School of Medicine
On behalf of the ISCHEMIA Research Group

Scientific Sessions 2019 NYU Langone Health #AHA19

Study Design



NYU Langone Health Cardiovascular Clinical Research Center

Maron DJ, et al. American Heart Journal. 2018; 201;124-135.

ISCHEMIA

Hochman JS, AHA Scientific Session 2019, Philadelphia

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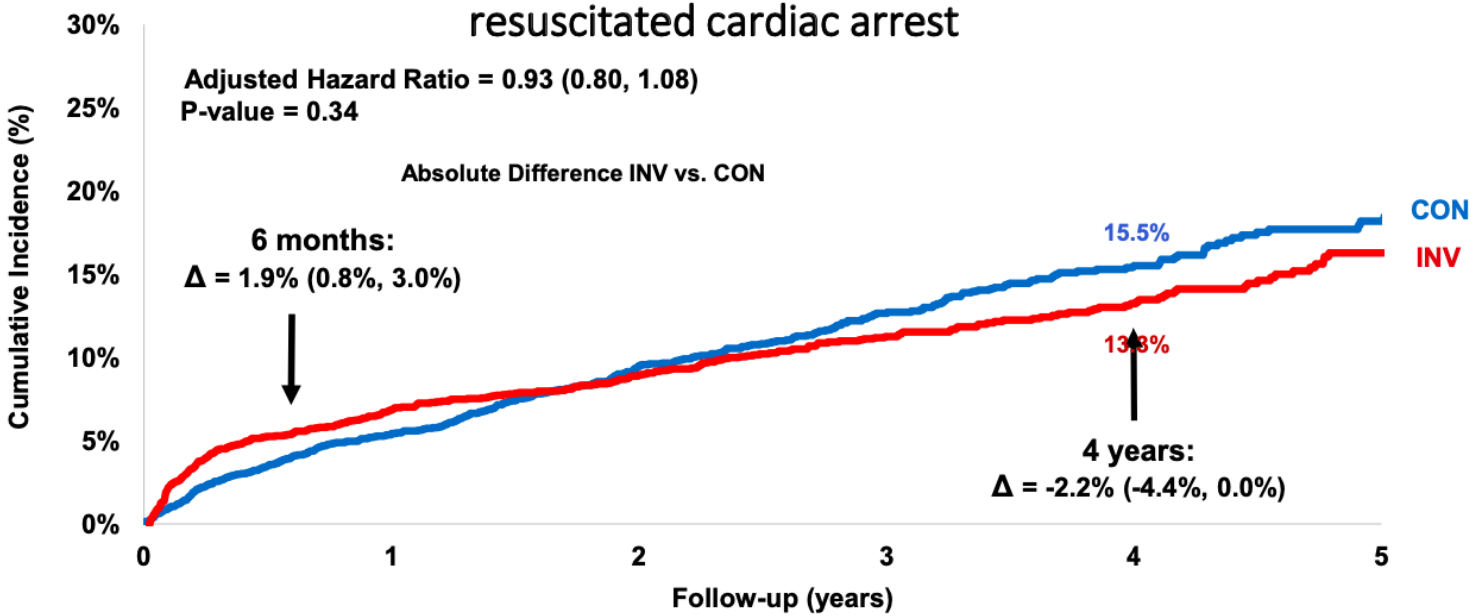
Primary Outcome: CV Death, MI, hospitalization for UA, HF or resuscitated cardiac arrest



Subjects at Risk

CON	2591	2431	1907	1300	733	293
INV	2588	2364	1908	1291	730	271

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Hochman JS, AHA Scientific Session 2019, Philadeplhia

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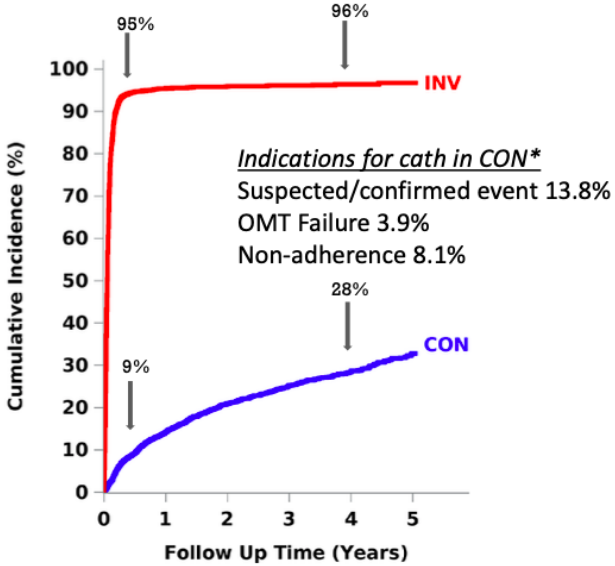
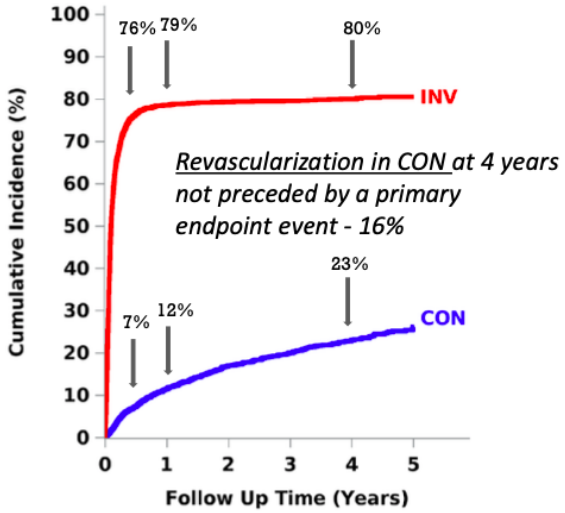
Cardiac Catheterization and Revascularization

Cardiac Catheterization



Revascularization



*Indications for Cath are percentages of CON patients whereas cumulative event rate shown at 4 years reflects censoring and the rate at that time point.

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Hochman JS, AHA Scientific Session 2019, Philadeplhia

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