Co je standardem antikoagulační léčby okolo ablace pro FS ?

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KLINIKA KARDIOLOGIE

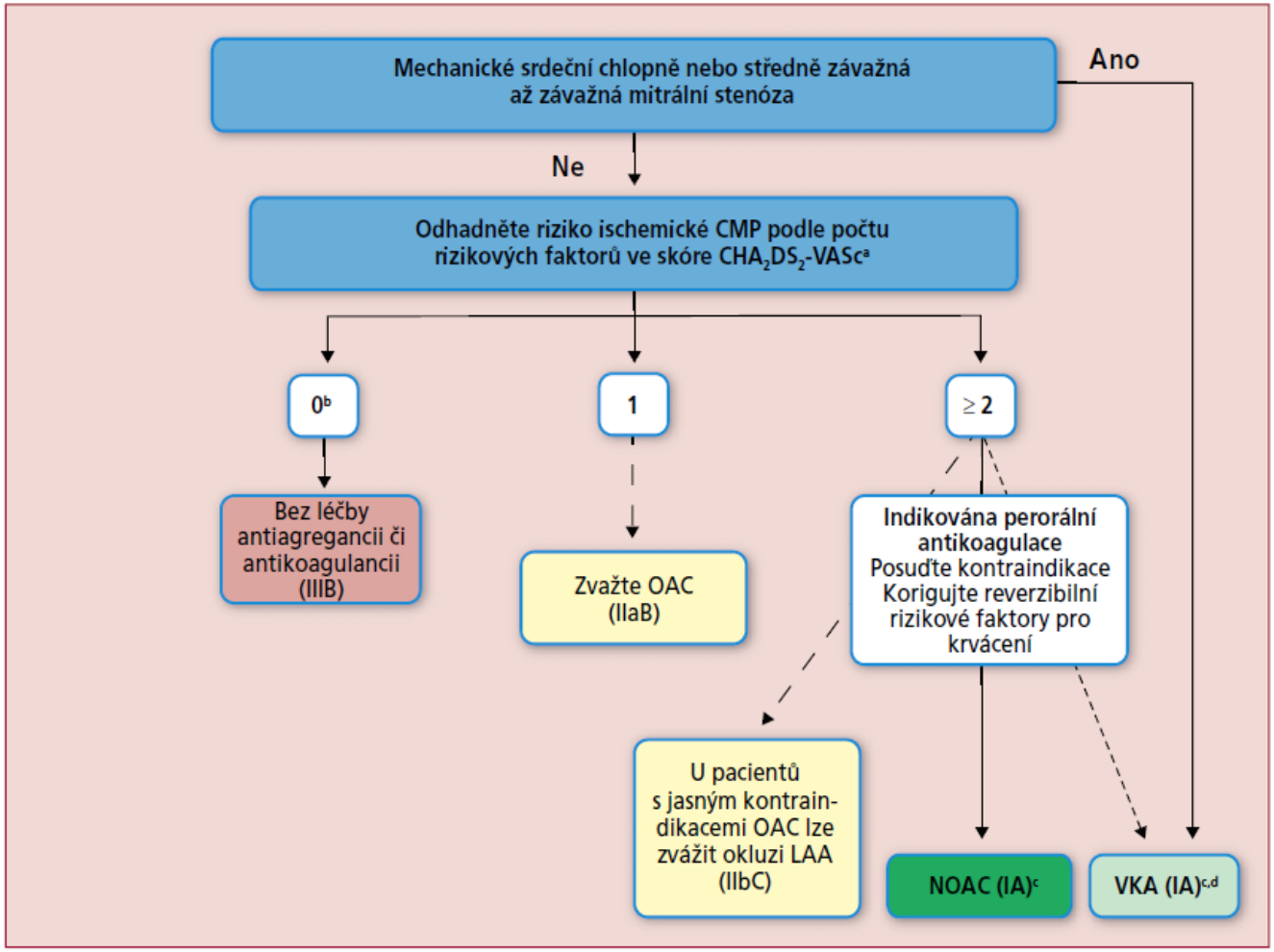
Agenda

- Prevence TE při zvažování ablace
- Antikoagulační léčba bezprostředně před ablací
- Antikoagulační léčba při ablaci
- Antikoagulační léčba po ablaci
- Je možné po ablaci vysadit antikoagulační léčbu ?

Co je standardem antikoagulační léčby okolo ablace pro FS ?

Prevence TE při zvažování ablace

Doporučení pro prevenci TE u pacientů s FS



Kirchhof et al, EHJ 2016

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Doporučení pro prevenci TE u pacientů s FS: skóre 1

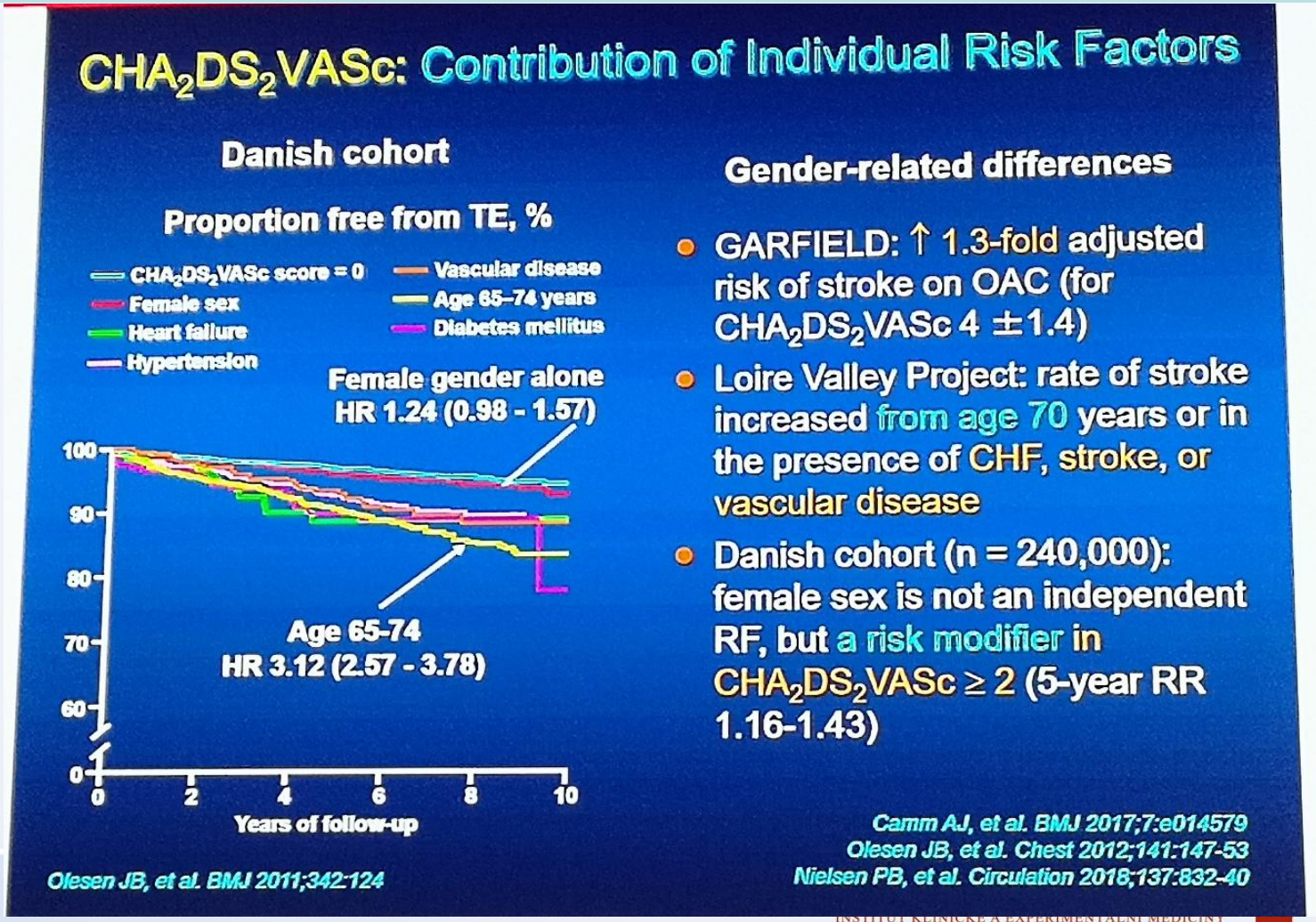
Anticoagulation in Patients With CHA_2DS_2VASc 1: *Pro and Contra*

Contra	Pro
Rates of ischaemic stroke are low (further lowered by OMT and life style modification)	Risk of stroke is not "0" (age is the strongest risk factor)
Risk of major bleed is not "0"	Risk factors beyond CHA_2DS_2VASc need to be considered (CKD, LAE, borderline HTN, ethnicity, genetics)
Net clinical benefit/gain is not as impressive as for high-risk patients	Stroke risk is not "static" and may increase in-between patient review
No adequate RCTs in low-risk patients	The uniform approach is likely be beneficial at the population level (with possible harm in individual patients)
CHA_2DS_2VASc 1 patients are not identical (weight of individual components is not equal)	Limited "real-world" experience (but also may serve as *contra*)
CHA_2DS_2-VASc 1 patients are more likely to be treated with rhythm control which may further modify their risk of stroke	? Lower risk of bleeding on NOACs

Savelieva, EHRA Lisbon 2019

Doporučení pro prevenci TE u pacientů s FS:

všichni si nejsou rovni !! (RF u FS)



Savelieva, EHRA Lisbon 2019

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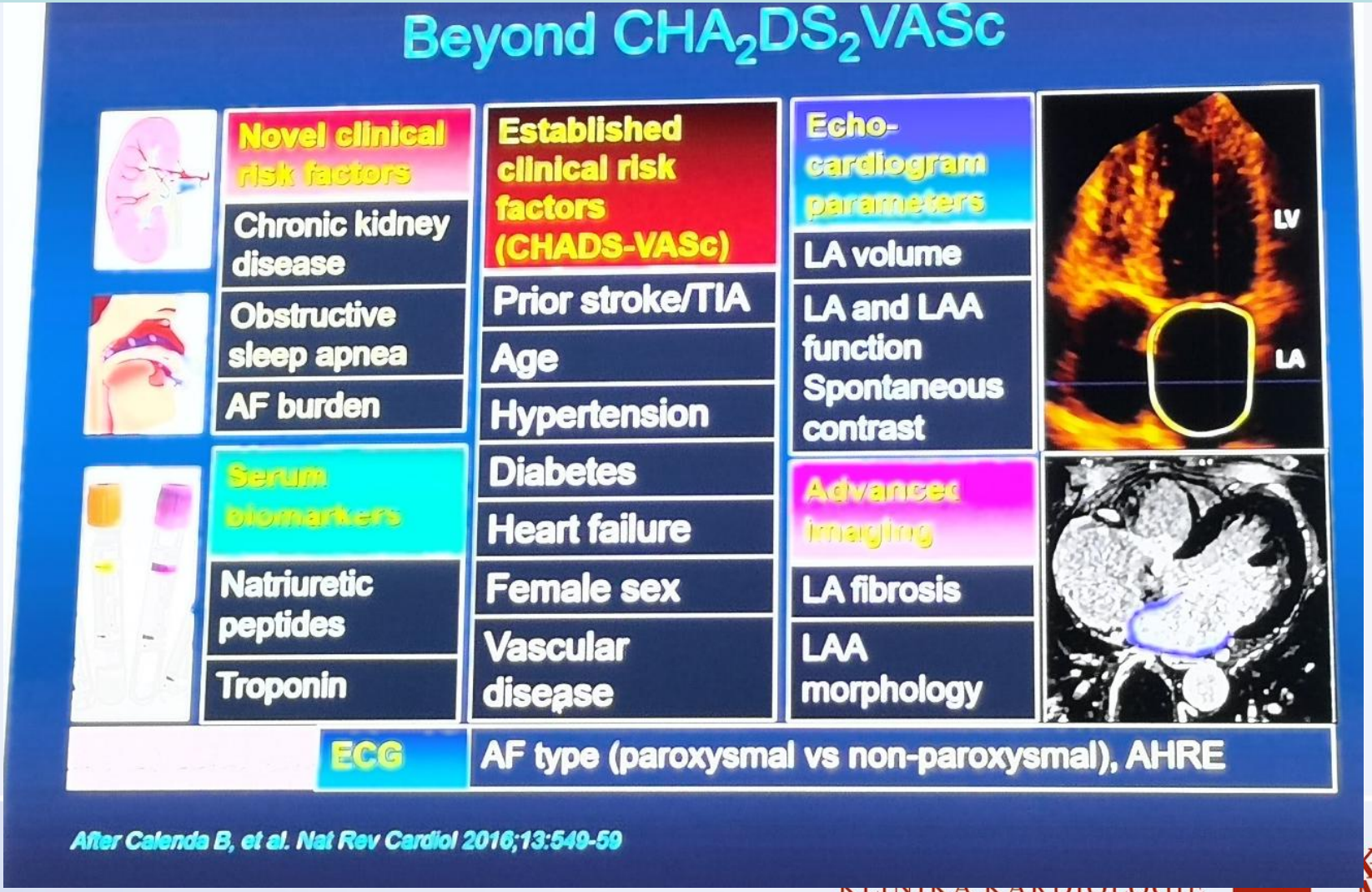
Doporučení pro prevenci TE u pacientů s FS:

Existují další rizika TE !!



Savelieva, EHRA Lisbon 2019

Co je standardem antikoagulační léčby okolo ablace pro FS ?

Antikoagulační léčba bezprostředně před ablací

Antikoagulaci před ablací nevysazujeme ! Žádné překlenování !

2019: RCT evidence on uninterrupted OAC for AF

Study	Treatment arms	Primary outcome	Total follow-up (days)	Main findings
COMPARE[1]	Uninterrupted vs. interrupted Warfarin	Incidence of TE events		Reduced incidence of TE with continued warfarin
VENTURE-AF[2]	**Rivaroxaban 20mg** od vs. Warfarin	Major bleeding after CA	30	Similarly low event rate, feasible treatment regimen
RE-CIRCUIT[3]	**Dabigatran 150mg** bid vs. Warfarin	Major bleeding after CA	60	Fewer bleeding events compared to warfarin
AXAFA-AF-NET[4]	**Apixaban 5mg** bid* vs. Warfarin	Composite: all-cause death, stroke or major bleeding	90	Apixaban safe and effective compared to warfarin
ELIMINATE-AF[5]	**Edoxaban 60mg** od* vs. VKA	Composite: all-cause death, stroke or major bleeding	120	Low rates of the primary endpoint (1 vs 2 events)

*Dose reduction as per the respective drug label.

[1]Di Biase L, et al. Circulation. 2014;129:2638-2644; [2]Cappato R, et al. Eur Heart J 2015; 36:1805-1811; [3]Calkins H, et al. N Engl J Med 2017;376:1627-1636; [4]Kirchhof P, et al. Eur Heart J 2018;39:2942-2955; [5]Pending publication.

EHRA 2019 LISBON PORTUGAL 17-19 MARCH www.escardio.org/EHRA-Congress

Podpara T, EHRA Lisbon 2019

Co je standardem antikoagulační léčby okolo ablace pro FS ?

Charakteristika populací studií

Variable	VENTURE-AF[1]	RE-CIRCUIT[2]	AXAFA-AF-NET[3]	ELIMINATE-AF[4]
Age (years)	59.5	59	64	60.5
Female sex	29%	27.4%	33%	28.5%
CHA_2DS_2-VASc (mean)	1.6	2.0	2.4	NR (50.2% ≥2)

2019: RCT evidence

Dávkování NOAC kolem ablace

Study	NOAC dose pre-ablation	NOAC dose post-ablation	Additional features
VENTURE-AF[1]	Evening before	≥6h after haemostasis	---
RE-CIRCUIT[2]	Morning on the day of	≥3h after haemostasis	---
AXAFA-AF-NET[3]	Morning on the day of	NA	MRI imaging sub-study QoL and cognitive function assessment
ELIMINATE-AF[4]	Evening before	Mean 6.1h after sheath removal	MRI imaging sub-study

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Podpara T, EHRA Lisbon 2019

Co je standardem antikoagulační léčby okolo ablace pro FS ?

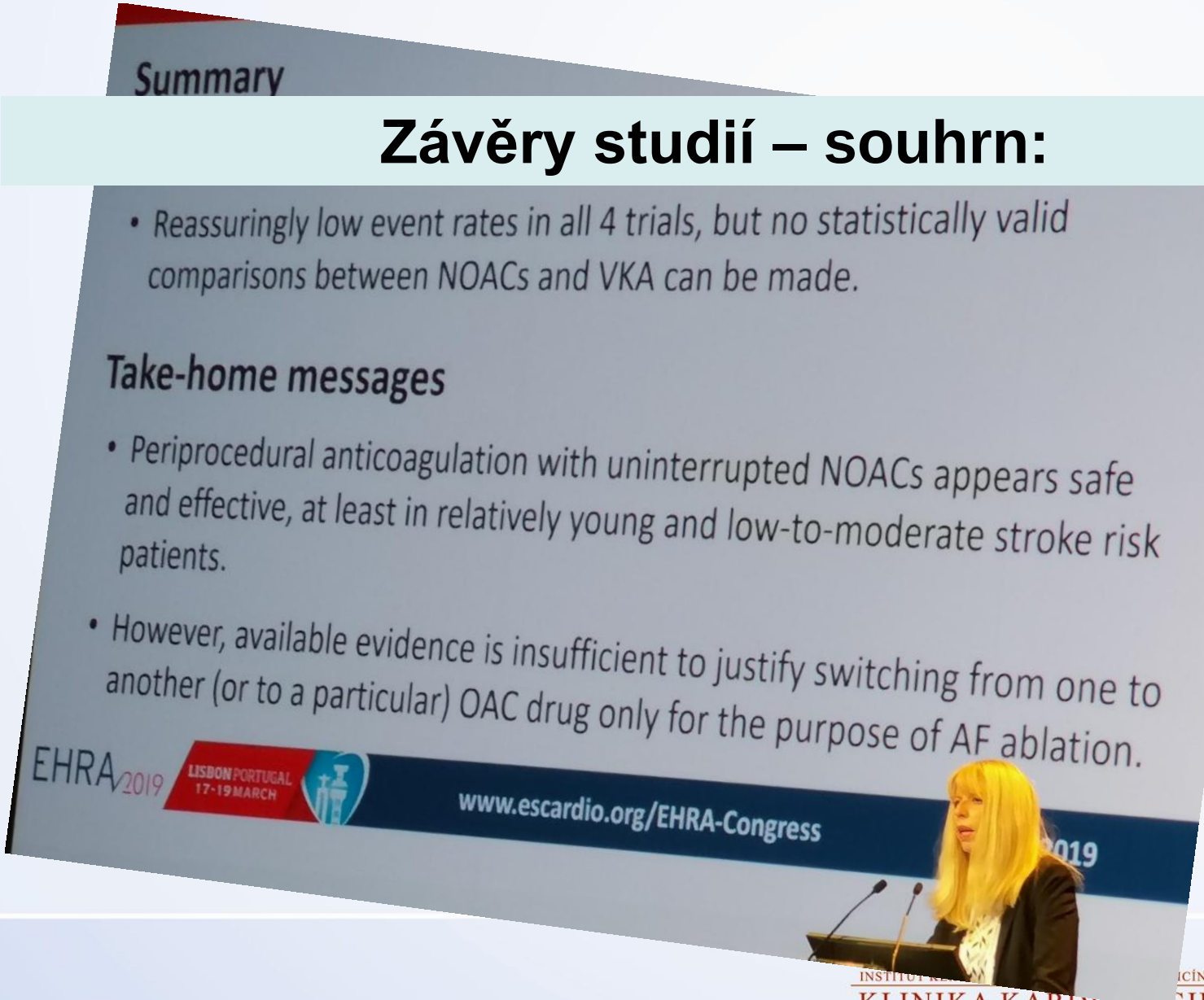
Úmrtí, ischemický iktus a krvácivé komplikace
Kompozitní ukazatel

Incidence of major outcomes in NOAC AF ablation RCTs

Outcome	VENTURE-AF[1]		RE-CIRCUIT[2]		AXAFA-AF-NET[3]		ELIMINATE-AF[4]	
	Riva (124)	VKA (124)	Dabi (317)	VKA (318)	Apix (318)	VKA (315)	Edox (375)	VKA (178)
Death	0.0%	0.8%	0.0%	0.0%	0.3%	0.3%	0.0%	0.0%
Ischemic stroke	0.0%	0.8%	0.0%	0.3%	0.6%	0.0%	0.3%	0.0%
Major bleeding	0.0%	0.8%	1.6%	6.9%	3.1%	4.4%	2.4%	1.7%
Composite	0.0%	2.4%	1.6%	7.2%	4.0%	4.7%	2.7%	1.7%

Podpara T, EHRA Lisbon 2019

Závěry studií – souhrn:



Podpara T, EHRA Lisbon 2019

Co je standardem antikoagulační léčby okolo ablace pro FS ?

Antikoagulační léčba při ablaci

- Pacient přichází z nepřerušovanou antikoagulační léčbou (NOAC vynecháváme jen dávku ráno před výkonem)
- Při perzistující FS/vysokém skóre - TEE
- Během výkonu heparin iv (první dávka před TS punkcí), cílové ACT 300-350s
- Po ablaci vytažení sheathů na sále, Z steh, heparinizace (částečně) rušena protaminem
- 3-4 hodiny po ablaci TTE k vyloučení separace perikardu a dávka warfarinu/NOAC
- Pokud není možné TTE, při poklesu ACT pod 170 s zahájit infuzi UFH s cílem aPTT ratio 1.5-2.5 (nebo ACT 120-160 s).

Antikoagulační léčba po ablaci

- Antikoagulační léčbu podáváme alespoň dva měsíce po výkonu
- Vysazování po ablaci lze podle rizikové stratifikace, ne (jen) podle průběhu po výkonu

Table 4 Anticoagulation strategies: pre-, during, and postcatheter ablation of AF

	Recommendation	Class	LOE
	to reverse heparin is reasonable.		
Postablation	In patients who are not therapeutically anticoagulated prior to AF.	I	C-EO
	Adherence to AF anticoagulation guidelines is recommended for patients who have undergone an AF ablation procedure, regardless of the apparent success or failure of the procedure.	I	C-EO
	Decisions regarding continuation of systemic anticoagulation more than 2 months post ablation should be based on the patient's stroke risk profile and not on the perceived success or failure of the ablation procedure.	I	C-EO
	In patients who have not been anticoagulated prior to catheter ablation of AF or in whom anticoagulation with a NOAC or warfarin has been interrupted prior to ablation, administration of a NOAC 3 to 5 hours after achievement of hemostasis is reasonable postablation.	IIa	C-EO
	Patients in whom discontinuation of anticoagulation is being considered based on patient values and preferences should consider undergoing continuous or frequent ECG monitoring to screen for AF recurrence.	IIb	C-EO

AF = atrial fibrillation; LOE = Level of Evidence; NOAC = novel oral anticoagulant; TEE = transesophageal electrocardiogra
*Time in therapeutic range (TTR) should be > 65% – 70% on warfarin.

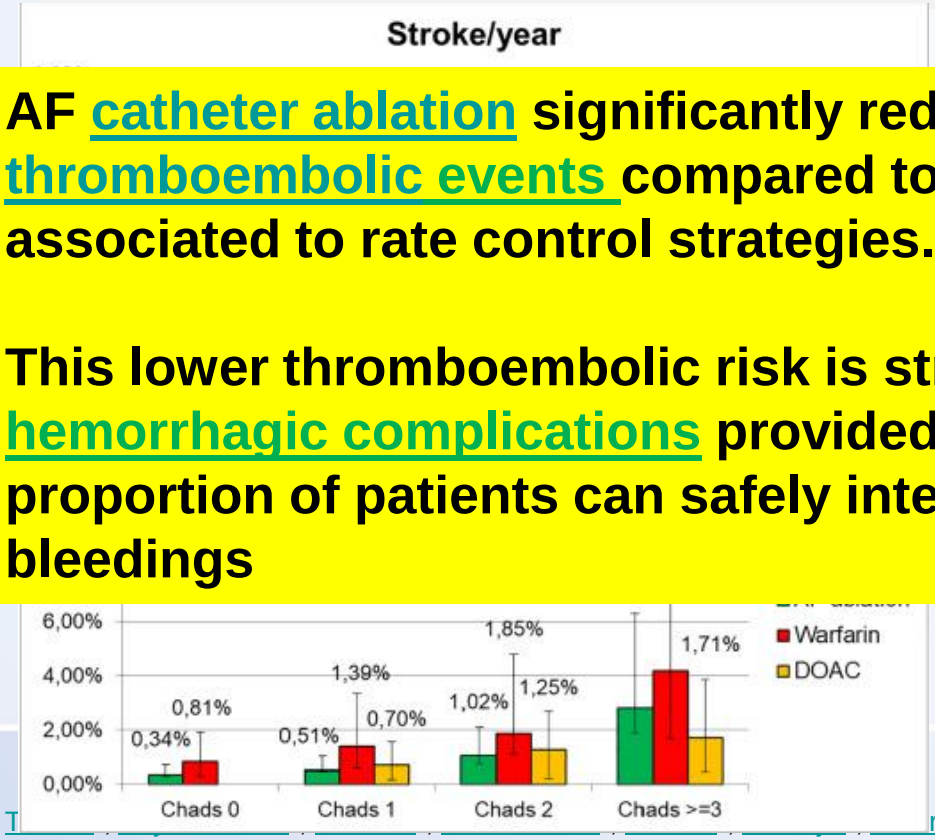
Calkins et al, 2017
2017 HRS/EHRA/ECAS/APHRS/SOLAECE expert consensus statement on catheter and surgical ablation of atrial fibrillation

Co je standardem antikoagulační léčby okolo ablace pro FS ?

Je možné po ablaci vysadit antikoagulační léčbu ?

Incidence of thromboembolic events following atrial fibrillation catheter ablation and rate control strategies according to the kind of oral anticoagulation: A systematic review and meta-analysis.

- 27 studies were selected, including 50,973 patients in the AF catheter ablation group; 281,595 patients in the VKA group; 54,811 patients in the NOAC group



AF catheter ablation significantly reduces the incidence of long-term thromboembolic events compared to OAT through both VKA and DOAC associated to rate control strategies.

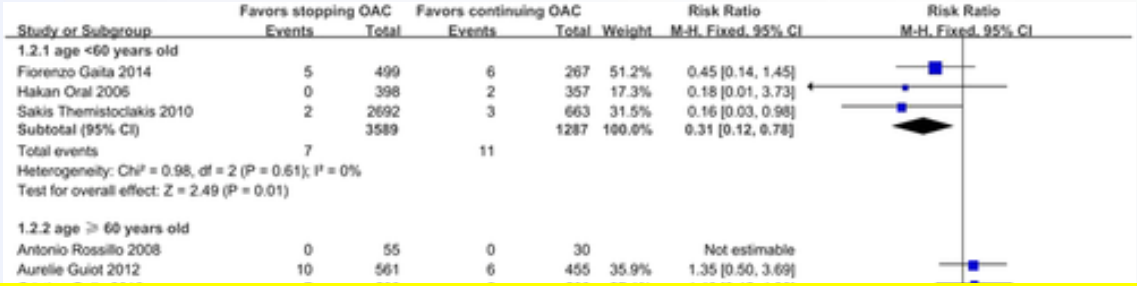
This lower thromboembolic risk is strengthened by the reduction in hemorrhagic complications provided by AF ablation, as a large proportion of patients can safely interrupt OAT and avoid related bleedings

T… ricks G[5], Jared Bunch T[6], Saliba W[7]. *Int J Cardiol. 2018 Nov 1*;

Co je standardem antikoagulační léčby okolo ablace pro FS ?

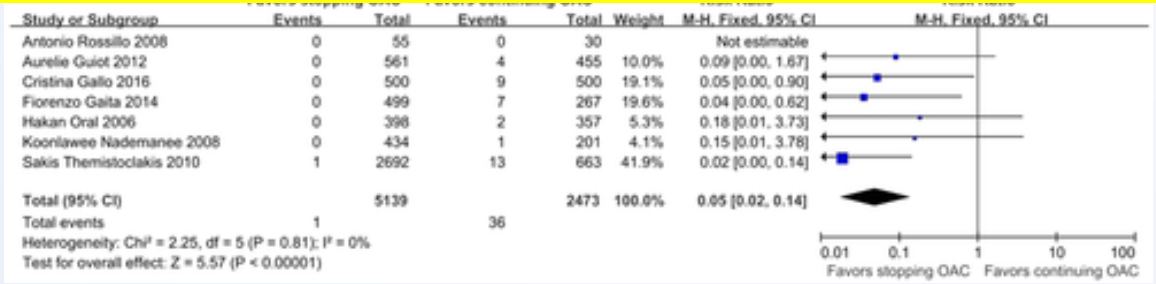
Je možné po ablaci vysadit antikoagulační léčbu ?

Withdrawal of oral anticoagulants 3 months after successful radiofrequency catheter ablation in patients with atrial fibrillation:
A meta-analysis (7 studies).



TE risk

The withdrawal of oral anticoagulants 3 months after successful radiofrequency catheter ablation for patients with AF may be safe and feasible



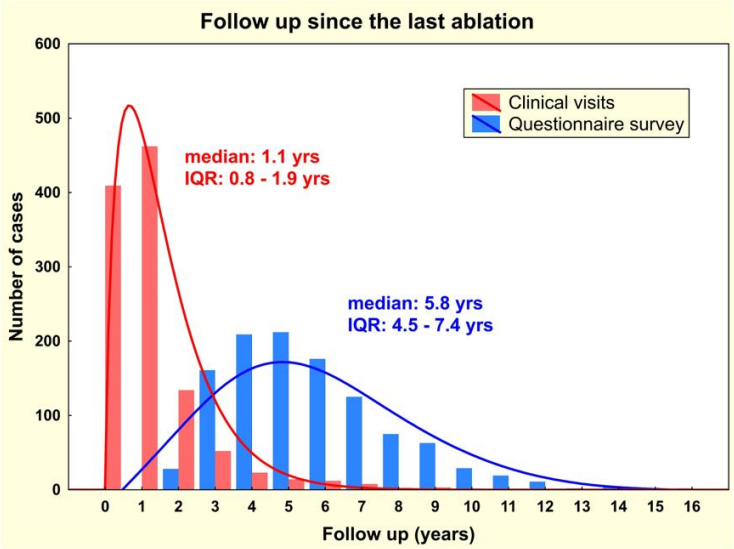
bleeding risk

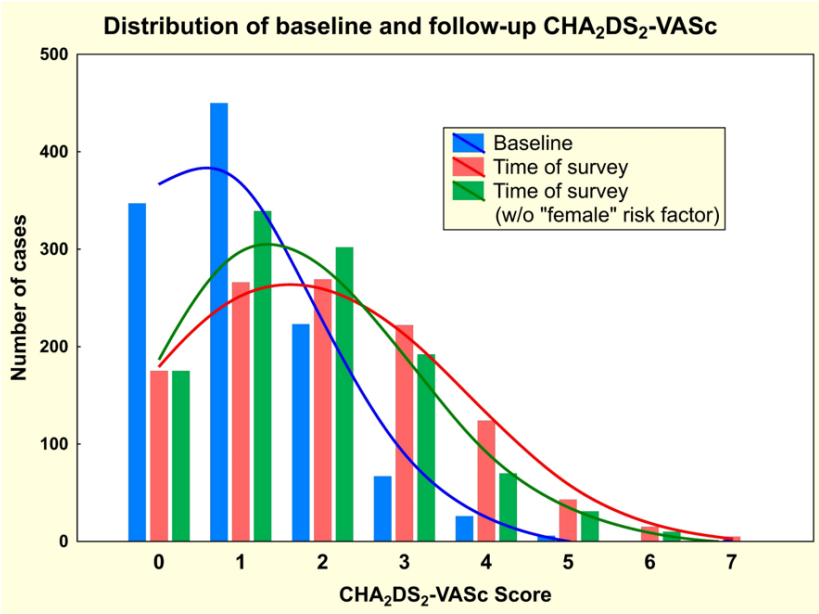
Deng L, et al, PACE Sept 2018

Co je standardem antikoagulační léčby okolo ablace pro FS ?

Jak pokračují pacienti v antikoagulační léčbě po ablaci v IKEM ? (dotazníková data)

Follow Up: Clinical versus Survey





Wichterle D a spol, 2018 (nepubl)

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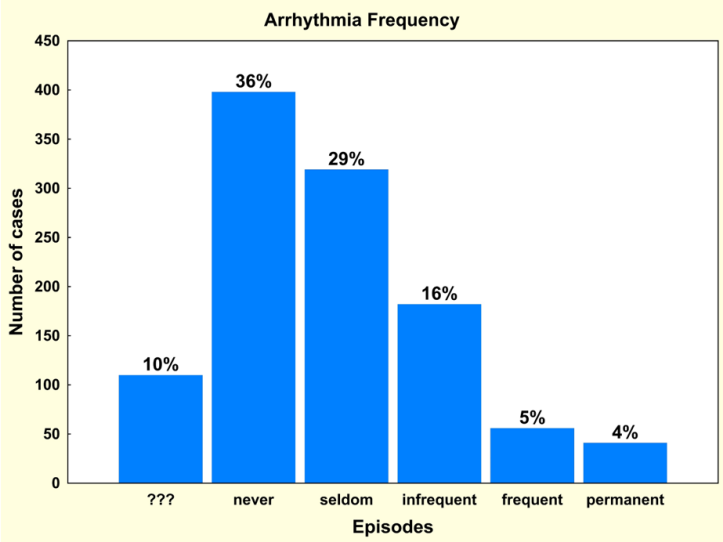
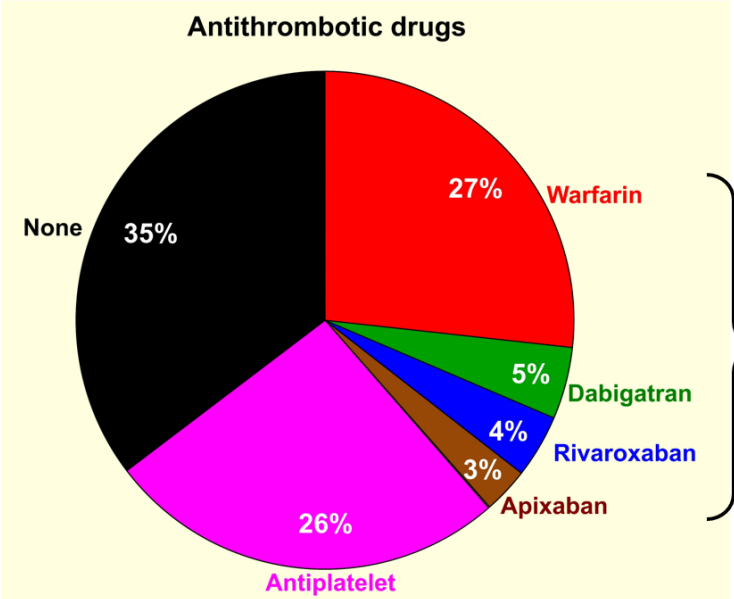
Jak pokračují pacienti v antikoagulační léčbě po ablaci v IKEM ?



Antithrombotic Drugs (Oct 2016 – Apr 2018)



Wichterle D a spol, 2018 (nepubl)

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Je možné po ablaci vysadit antikoagulační léčbu ?

Pill (NOAC)-in-the pocket

"As Needed" nonvitamin K antagonist oral anticoagulants for infrequent atrial fibrillation episodes following atrial fibrillation ablation guided by diligent pulse monitoring: A feasibility study

- 99 patients (age 64 ± 8 years), CHA_2DS_2-VASc score ≥ 1 in men and ≥ 2 in women, capable of pulse assessment twice daily
- All patients were instructed to start NOAC if AF >1 hour or recurrent shorter episodes. Duration of NOAC use after restart was typically 2 to 4 weeks.

The use of as needed NOACs when AF is suspected with pulse monitoring is effective and safe

Zato ES, …. Marchlinski FE. J Cardiovas Electrophysiol Feb 2019

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Je možné po ablaci vysadit antikoagulační léčbu ?

Anticoagulation after successful AF ablation:

Brushing you teeth may keep you off blood thinners

Winkle RA. PACE 2018

Co je standardem antikoagulační léčby okolo ablace pro FS ?

- Prevence TE při zvažování ablace

  podle zásad rizikové stratifikace

- Antikoagulační léčba bezprostředně před ablací

  nevysazujeme warfarin ani NOAC

- Antikoagulační léčba při ablaci

  heparin s cílovým ACT 300-350

- Antikoagulační léčba po ablaci

  pokračujeme vždy alespoň dva měsíce

- Je možné po ablaci vysadit antikoagulační léčbu ?

  ponecháváme dle rizikové stratifikace, ale při středním riziku lze v individuálních případech možné vysazení zvážit

Co je standardem antikoagulační léčby okolo ablace pro FS ?

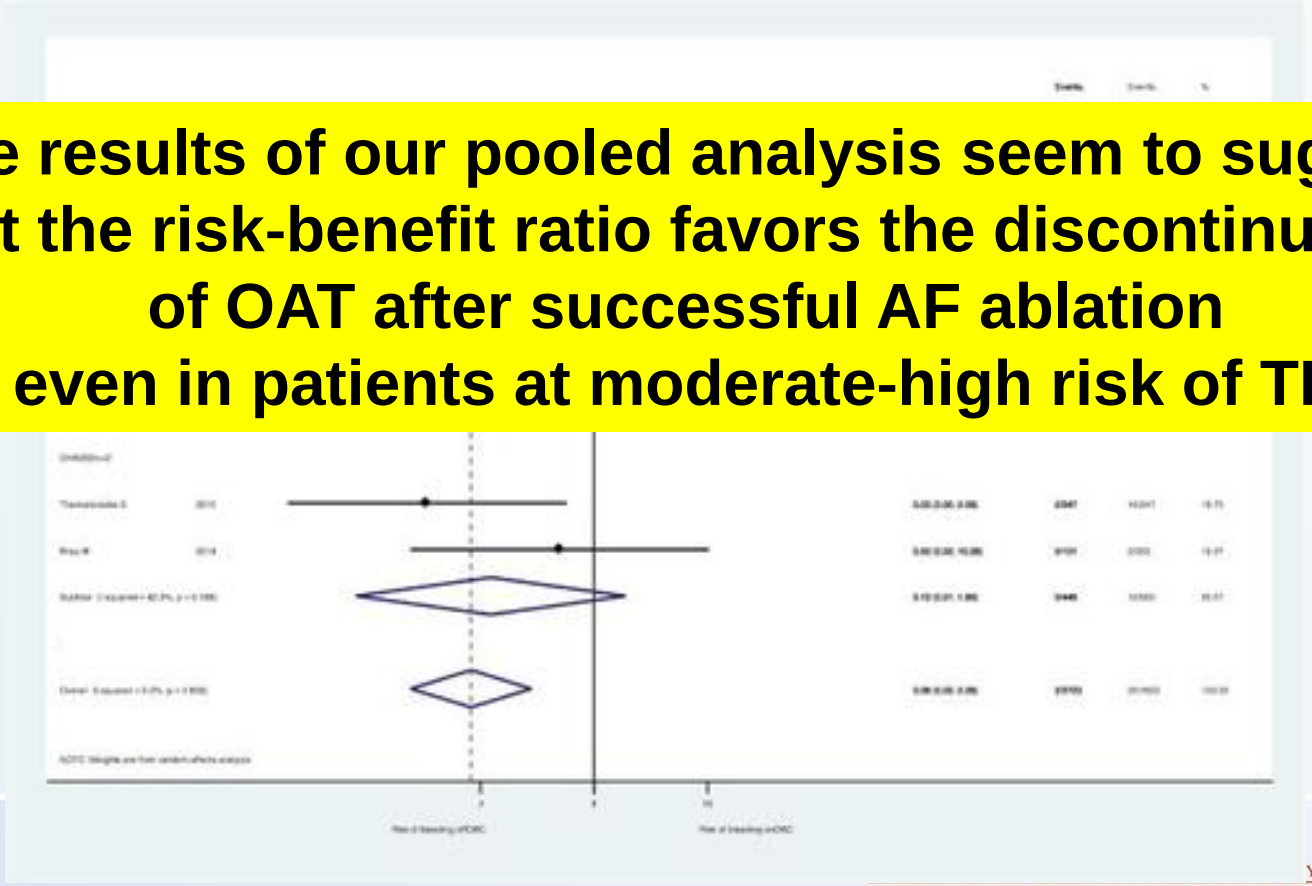
Botanická zahrada Praha, 11.5.2019

Děkuji za pozornost !

Je možné po ablaci vysadit antikoagulační léčbu ?

Anticoagulation after catheter ablation of atrial fibrillation: An unnecessary evil? A systematic review and meta-analysis (16 studies).

bleeding risk



The results of our pooled analysis seem to suggest that the risk-benefit ratio favors the discontinuation of OAT after successful AF ablation even in patients at moderate-high risk of TE.

Proietti R, et al. J Cardiovasc Electrrophysil Dec 2018