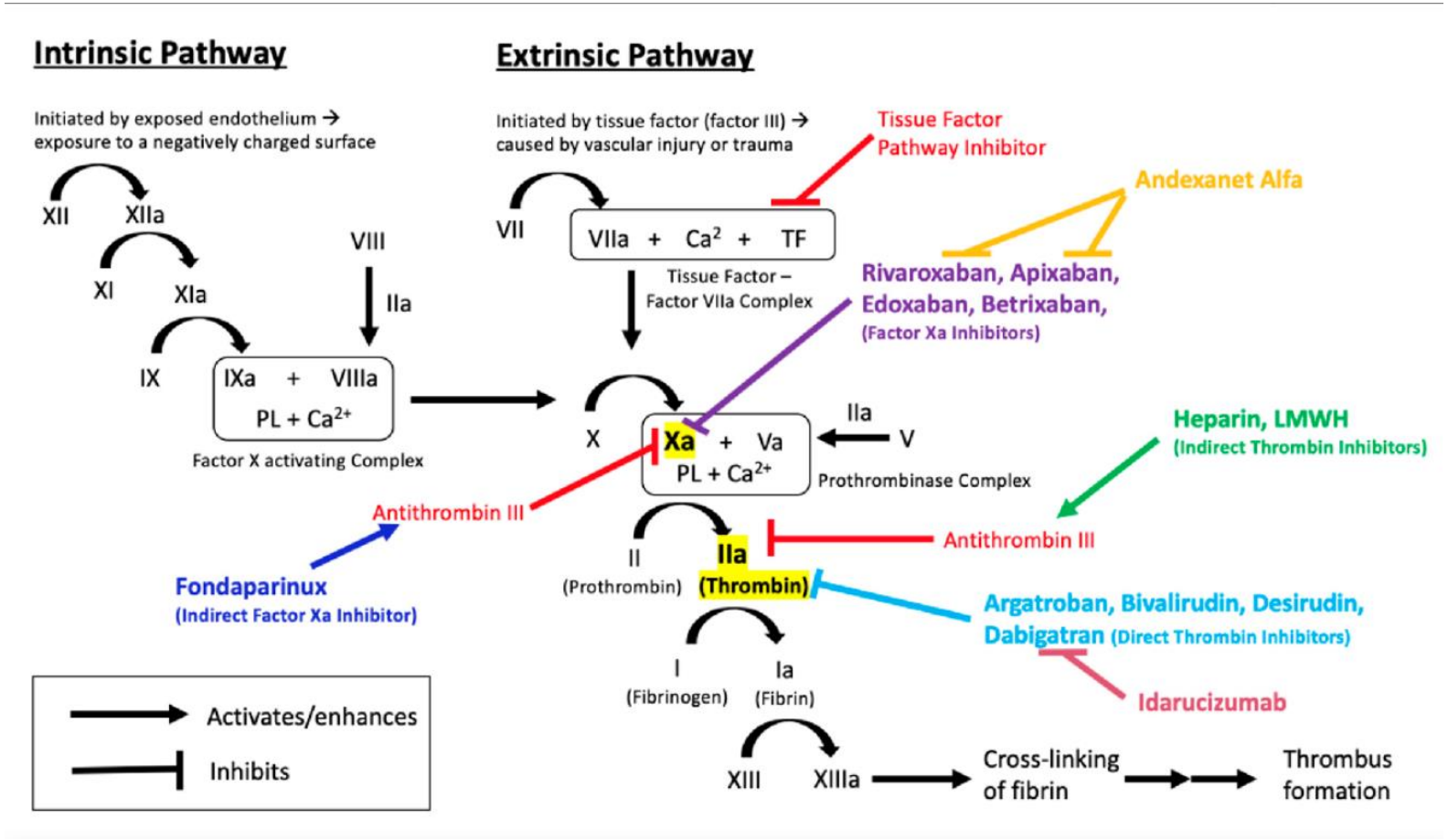
YOAK KULLANIMINDA GÜNCEL DEĞİŞİKLİKLER

Uzm Dr HANDE ERMAN

SBÜ. İSTANBUL KARTAL DR LÜTFİ KIRDAR ŞEHİR HASTANESİ

İÇ HASTALIKLARI KLİNİĞİ

YOAK: Yeni oral antikoagülanlar
NOAK: non-vitamin K antagonist oral anticoagulants
DOAC: Direct oral anticoagulants

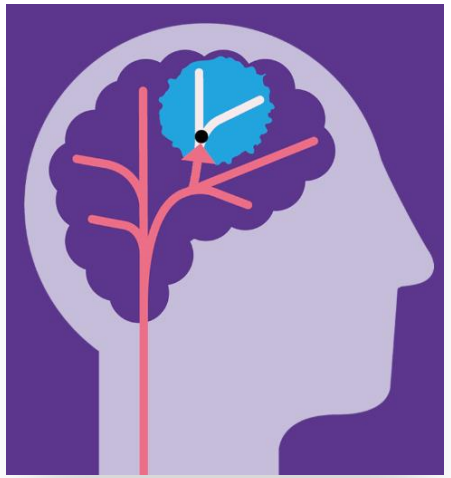


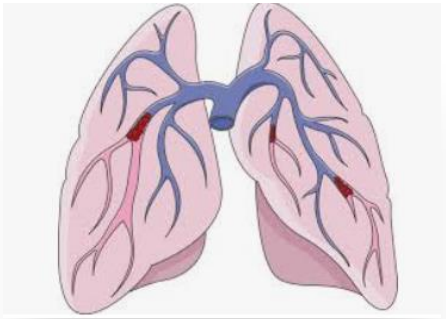
Kustos SA, Fasinu PS. Direct-Acting Oral Anticoagulants and Their Reversal Agents-An Update. Medicines (Basel). 2019 Oct 15;6(4):103. doi: 10.3390/medicines6040103.

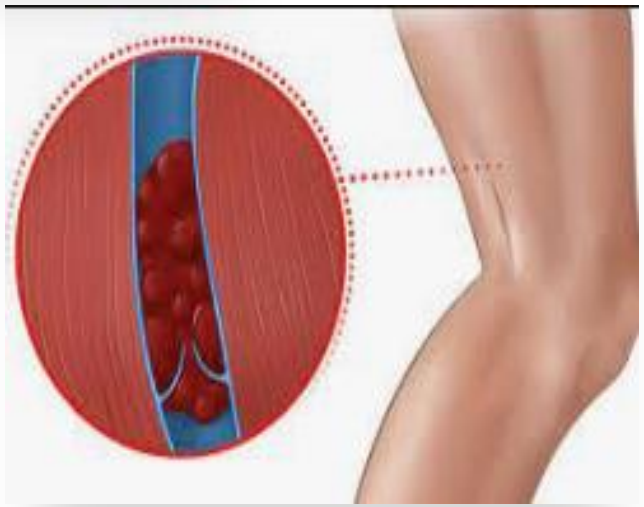
YOAK: Yeni oral antikoagülanlar

Oral antikoagülan tedavi endikasyonu olan, uygun hasta gruplarında yeni oral antikoagülanların kullanımı tromboemboli riskini azaltmada oldukça önemlidir.

Varfarin kullanımındaki zorluklar (labil INR, dar terapötik aralık, çoklu diyet ve ilaç etkileşimi, sık izlem gerekliliği, kanama korkusu) nedeni ile YOAK kullanımı uygun hastalarda tercih sebebidir.

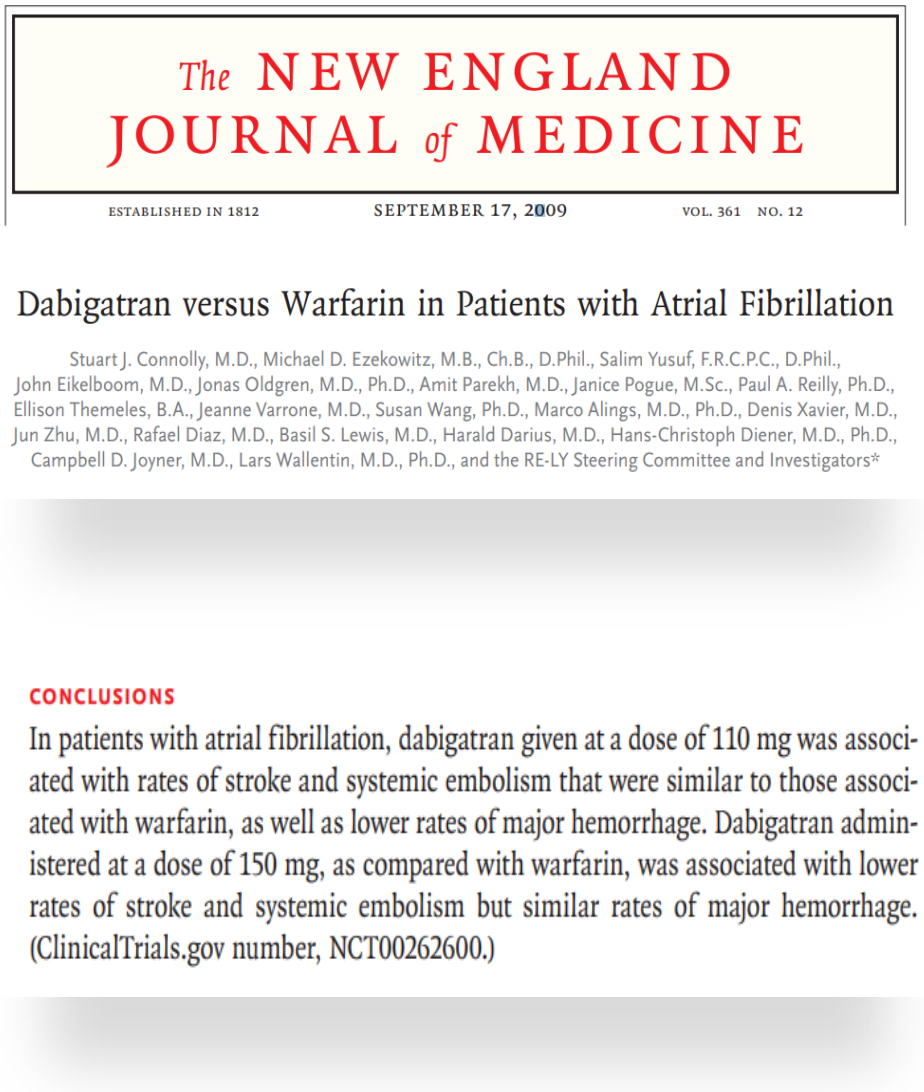






Yeni oral antikoagülanlar: Dabigatran

- Direk trombin (faktör IIa) inhibitörüdür.
- Dabigatran eteksilatın aktif halidir. Karaciğerde aktif metabolite dönüşür ve eliminasyon %80 renal yolladır.
- GFR' ye göre doz ayarı gerekir
- Yarılanma süresi 14-17 saat.
- Non-valvular atrial fibrilasyonda 2x150mg olarak alınmalıdır (>80 yaş, beraberinde verapamil kullanımı ve GIS kanamada 110mg bid)



The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 SEPTEMBER 17, 2009 VOL. 361 NO. 12

Dabigatran versus Warfarin in Patients with Atrial Fibrillation

Stuart J. Connolly, M.D., Michael D. Ezekowitz, M.B., Ch.B., D.Phil., Salim Yusuf, F.R.C.P.C., D.Phil., John Eikelboom, M.D., Jonas Oldgren, M.D., Ph.D., Amit Parekh, M.D., Janice Pogue, M.Sc., Paul A. Reilly, Ph.D., Ellison Themeles, B.A., Jeanne Varrone, M.D., Susan Wang, Ph.D., Marco Alings, M.D., Ph.D., Denis Xavier, M.D., Jun Zhu, M.D., Rafael Diaz, M.D., Basil S. Lewis, M.D., Harald Darius, M.D., Hans-Christoph Diener, M.D., Ph.D., Campbell D. Joyner, M.D., Lars Wallentin, M.D., Ph.D., and the RE-LY Steering Committee and Investigators*

CONCLUSIONS

In patients with atrial fibrillation, dabigatran given at a dose of 110 mg was associated with rates of stroke and systemic embolism that were similar to those associated with warfarin, as well as lower rates of major hemorrhage. Dabigatran administered at a dose of 150 mg, as compared with warfarin, was associated with lower rates of stroke and systemic embolism but similar rates of major hemorrhage. (ClinicalTrials.gov number, NCT00262600.)

Yeni oral antikoagülanlar: Rivaroksaban

- Yarışmalı ve geri dönüşlü olarak serbest ve trombosite bağlı FXa'yı inhibe eder.
- Yarı ömrü 7-11 saattir.
- Eliminasyonu %60 oranında karaciğerden gerçekleşir
- Kanama riski ile seyreden karaciğer hastalıklarında, Child-b, Child-C sirozda kontraendikedir.,
- Nonvalvular AF tanılı hastalarda 20mg önerilmektedir.


The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 SEPTEMBER 8, 2011 VOL. 365 NO. 10

Rivaroxaban versus Warfarin in Nonvalvular Atrial Fibrillation

Manesh R. Patel, M.D., Kenneth W. Mahaffey, M.D., Jyotsna Garg, M.S., Guohua Pan, Ph.D., Daniel E. Singer, M.D., Werner Hacke, M.D., Ph.D., Günter Breithardt, M.D., Jonathan L. Halperin, M.D., Graeme J. Hankey, M.D., Jonathan P. Piccini, M.D., Richard C. Becker, M.D., Christopher C. Nessel, M.D., John F. Paolini, M.D., Ph.D., Scott D. Berkowitz, M.D., Keith A.A. Fox, M.B., Ch.B., Robert M. Califf, M.D., and the ROCKET AF Steering Committee, for the ROCKET AF Investigators*

CONCLUSIONS

In patients with atrial fibrillation, rivaroxaban was noninferior to warfarin for the prevention of stroke or systemic embolism. There was no significant between-group difference in the risk of major bleeding, although intracranial and fatal bleeding occurred less frequently in the rivaroxaban group. (Funded by Johnson & Johnson and Bayer; ROCKET AF ClinicalTrials.gov number, NCT00403767.)

Yeni oral antikoagülanlar: Apiksaban

- Oral direkt Faktör Xa inhibitörüdür.
- %70 oranında fekal yolla elimine olur.
- Yarı ömrü 10-14 saattir.
- Nonvalvuler AF tanılı hastalarda apiksaban 5mg bid kullanımı önerilmektedir (kreatinin>1.5, <60kg, >80yaş → 2.5mg/bid)

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 SEPTEMBER 15, 2011 VOL. 365 NO. 11

Apixaban versus Warfarin in Patients with Atrial Fibrillation

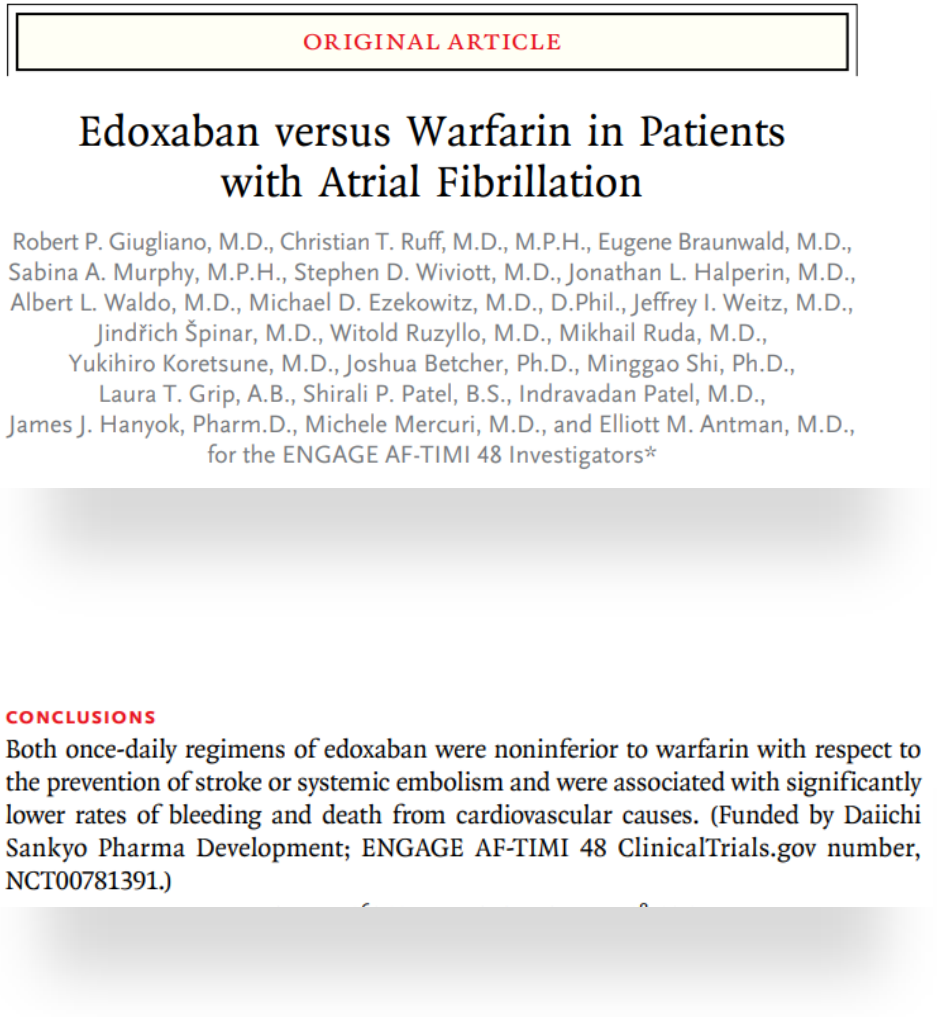
Christopher B. Granger, M.D., John H. Alexander, M.D., M.H.S., John J.V. McMurray, M.D., Renato D. Lopes, M.D., Ph.D., Elaine M. Hylek, M.D., M.P.H., Michael Hanna, M.D., Hussein R. Al-Khalidi, Ph.D., Jack Ansell, M.D., Dan Atar, M.D., Alvaro Avezum, M.D., Ph.D., M. Cecilia Bahit, M.D., Rafael Diaz, M.D., J. Donald Easton, M.D., Justin A. Ezekowitz, M.B., B.Ch., Greg Flaker, M.D., David Garcia, M.D., Margarida Geraldes, Ph.D., Bernard J. Gersh, M.D., Sergey Golitsyn, M.D., Ph.D., Shinya Goto, M.D., Antonio G. Hermosillo, M.D., Stefan H. Hohnloser, M.D., John Horowitz, M.D., Puneet Mohan, M.D., Ph.D., Petr Jansky, M.D., Basil S. Lewis, M.D., Jose Luis Lopez-Sendon, M.D., Prem Pais, M.D., Alexander Parkhomenko, M.D., Freek W.A. Verheugt, M.D., Ph.D., Jun Zhu, M.D., and Lars Wallentin, M.D., Ph.D., for the ARISTOTLE Committees and Investigators*

CONCLUSIONS

In patients with atrial fibrillation, apixaban was superior to warfarin in preventing stroke or systemic embolism, caused less bleeding, and resulted in lower mortality. (Funded by Bristol-Myers Squibb and Pfizer; ARISTOTLE ClinicalTrials.gov number, NCT00412984.)

Yeni oral antikoagülanlar: Edoksaban

- Faktör Xa'nın direkt ve geri dönüşümlü inhibitörüdür.
- Yarı ömrü 8-10 saattir
- Eliminasyon büyük oranda renal yolla gerçekleşir.
- Nonvalvular atrial fibrilasyonda 60mg tek doz kullanımı önerilmektedir.



ORIGINAL ARTICLE

Edoxaban versus Warfarin in Patients with Atrial Fibrillation

Robert P. Giugliano, M.D., Christian T. Ruff, M.D., M.P.H., Eugene Braunwald, M.D., Sabina A. Murphy, M.P.H., Stephen D. Wiviott, M.D., Jonathan L. Halperin, M.D., Albert L. Waldo, M.D., Michael D. Ezekowitz, M.D., D.Phil., Jeffrey I. Weitz, M.D., Jindřich Špinar, M.D., Witold Ruzyllo, M.D., Mikhail Ruda, M.D., Yukihiro Koretsune, M.D., Joshua Betcher, Ph.D., Minggao Shi, Ph.D., Laura T. Grip, A.B., Shirali P. Patel, B.S., Indravadan Patel, M.D., James J. Hanyok, Pharm.D., Michele Mercuri, M.D., and Elliott M. Antman, M.D., for the ENGAGE AF-TIMI 48 Investigators*

CONCLUSIONS

Both once-daily regimens of edoxaban were noninferior to warfarin with respect to the prevention of stroke or systemic embolism and were associated with significantly lower rates of bleeding and death from cardiovascular causes. (Funded by Daiichi Sankyo Pharma Development; ENGAGE AF-TIMI 48 ClinicalTrials.gov number, NCT00781391.)

Non-valvular AF de inme önlemede

Stroke prevention in atrial fibrillation (SPAF)		
	Standard dose	**Comments/dose reduction**
Apixaban[47]	5 mg BID	2.5 mg BID if two out of three fulfilled: weight ≤60 kg, age ≥80 years, serum creatinine ≥133 µmol/L (1.5 mg/dL) (*or* single criterion: if CrCl 15–29 mL/min)
Dabigatran[48]	150 mg BID/110 mg BID	No pre-specified dose-reduction criteria in phase III trial[a]
Edoxaban[49]	60 mg QD	30 mg QD if: weight ≤60 kg *or* CrCl 15–49 mL/min *or* concomitant therapy with strong P-Gp inhibitor (see 'Pharmacokinetics and drug-drug interactions of NOACs' section)
Rivaroxaban[46]	20 mg QD	15 mg QD if CrCl ≤15–49 mL/min

SmPc' refers to European SmPc.
BID, twice daily; CrCl, creatinine clearance; GI, gastrointestinal; NOAC, non-vitamin K antagonist oral anticoagulant; QD, once daily.
[a]SmPC: 110 mg BID if age ≥80 years, concomitant verapamil, increased risk of GI bleeding.

2021 European Heart Rhythm Association Practical Guide on the Use of Non-Vitamin K Antagonist Oral Anticoagulants in Patients with Atrial Fibrillation. Europace. 2021 Oct 9;23(10):1612-1676. doi: 10.1093/europace/euab065.

Nonvalvular AF ve Akut koroner sendrom

	Standard dose	Comments/dose reduction
Apixaban[244]	5 mg BID	Dose reduction as for SPAF
Dabigatran[247]	150 mg BID or 110 mg BID	110mg as for SPAF[403]
Edoxaban[245]	60 mg QD	Dose reduction as for SPAF
Rivaroxaban[246]	15 mg QD	Dose reduction to 10 mg QD if CrCl 30–49 mL/min

In addition to single/dual antiplatelet therapy, where applicable. See 'Patients with atrial fibrillation and coronary artery disease' section for details.
BID, twice daily; CrCl, creatinine clearance; QD, once daily; SPAF, stroke prevention in atrial fibrillation.

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DVT ve Pulmoner emboli tedavisinde

Recommendations	Class[a]	Level[b]
Therapeutic anticoagulation for ≥ 3 months is recommended for all patients with PE.[347]	I	A

Treatment of DVT/PE

	Initial therapy	Remainder of treatment phase
Apixaban[498]	10 mg BID, 7 days	5 mg BID, no dose reduction
Dabigatran[499]	Heparin/LMWH	150 mg BID, no dose reduction[a]
Edoxaban[500]	Heparin/LMWH	60 mg QD, same dose reduction as for SPAF (see above)
Rivaroxaban[501,502]	15 mg BID, 21 days	20 mg QD, no dose reduction[b]

BID, twice daily; GI, gastrointestinal; LMWH, low molecular weight heparin; QD, once daily; SPAF, stroke prevention in atrial fibrillation.
[a]Per SmPC: 110 mg BID if age ≥80 years, concomitant verapamil, increased risk of GI bleeding [based on pharmacokinetic/pharmacodynamic (PK/PD) analyses; not studied in this setting].
[b]Per SmPc: 15 mg if risk of bleeding outweighs risk for recurrent DVT and PE (based on PK/PD analyses; not studied in this setting).

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DVT ve Pulmoner emboli tedavisinde

Patients in whom extension of anticoagulation beyond 3 months is recommended		
Oral anticoagulant treatment of indefinite duration is recommended for patients presenting with recurrent VTE (that is, with at least one previous episode of PE or DVT) not related to a major transient or reversible risk factor.[358]	I	B
Oral anticoagulant treatment with a VKA for an indefinite period is recommended for patients with antiphospholipid antibody syndrome.[359]	I	B
NOAC dose in extended anticoagulation[e]		
If extended oral anticoagulation is decided after PE in a patient without cancer, a reduced dose of the NOACs apixaban (2.5 mg b.i.d.) or rivaroxaban (10 mg o.d.) should be considered after 6 months of therapeutic anticoagulation.[352,353]	IIa	A

Long-term prevention of recurrent DVT/PE

	Standard dose	Comments/dose adjustment
Apixaban[503]	2.5 mg BID	
Dabigatran[504]	150 mg BID	No pre-specified dose-reduction criteria in clinical trial[a]
Edoxaban[473,500,505]	60 mg QD[b]	
Rivaroxaban[506]	10 mg QD	[c]

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Post-majör ortopedi cerrahisi sonrası VTE önlemede

VTE prevention post-major orthopaedic surgery

	Standard dose	Comments/dose reduction
Apixaban[507]	2.5 mg BID	
Dabigatran[508,509]	220 mg QD/150 mg QD	[a]
Edoxaban[510,511]	30 mg QD	Not approved in Europe (only studied in Asia)
Rivaroxaban[512–515]	10 mg QD	

BID, twice daily; QD, once daily.
[a]SmPc: 1× 150 mg if CrCl 30–50 mL/min; concomitant verapamil, amiodarone, quinidine; age >75 years.

2021 European Heart Rhythm Association Practical Guide on the Use of Non-Vitamin K Antagonist Oral Anticoagulants in Patients with Atrial Fibrillation. Europace. 2021 Oct 9;23(10):1612-1676. doi: 10.1093/europace/euab065.

Hangi YOAK ne zaman?

Stable coronary heart disease	ACS, PCI and stenting	Cardioversion	Ablation	Mechanical valves and rheumatic valve disease
Monotherapy with NOAC No preference for a particular NOAC	Continue VKA (TTR >70%) Reduced dose of NOAC with triple therapy No preference for a particular NOAC	Continue VKA NOACs can be used No preference for a particular NOAC	Uninterupted warfarin Uninterupted NOAC Interupted warfarin with bridging	VKA

TTR >70% on warfarin	CHA2DS2VASC = 1 in males, 2 in females	Single first episode of AF	Anti-arrhythmic drugs	Prior TIA or stroke
Continue with VKA NOAC: a) Therapy complications b) SAMe-TT_2R_2 >2	Dabigatran Apixaban	No preference for VKA or a particular NOAC	Patient on verapamil: reduced of dabigatran or edoxaban Patient on dronedarone: reduced dose of edoxban, contraindicated with dabigatran, taken with care on rivaroxban and apixaban	NOACs superior to VKA Avoid combination with aspirin

Thrombolyis in acute ischemic stroke	Start of anticoagulation after stroke	High risk of GI bleeding	Renal impairment	Advanced age	Hypertension
VKA and INR<1.7 Dabigatran and normal aPTT	No data on efficacy and safety of early anticoagulation with NOACs	Apixaban 5 mg Dabigatran 110 mg	Apixaban 5 mg Apixaban 2.5 mg in age>80 25 years, weight ≤60 kg or creatinine >1.5 mg/dl Rivaroxaban 15 mg Edoxaban 30 mg	Apixaban 2.5 mg Dabigtran 110 mg	No preference for a particular NOAC

e I Summary of the treatment suggestions.

Diener HC, Aisenberg J, Ansell J, et al. Choosing a particular oral anticoagulant and dose for stroke prevention in individual patients with non-valvular atrial fibrillation: part 2. Eur Heart J. 2017 Mar 21;38(12):860-868. doi: 10.1093/eurheartj/ehw069.

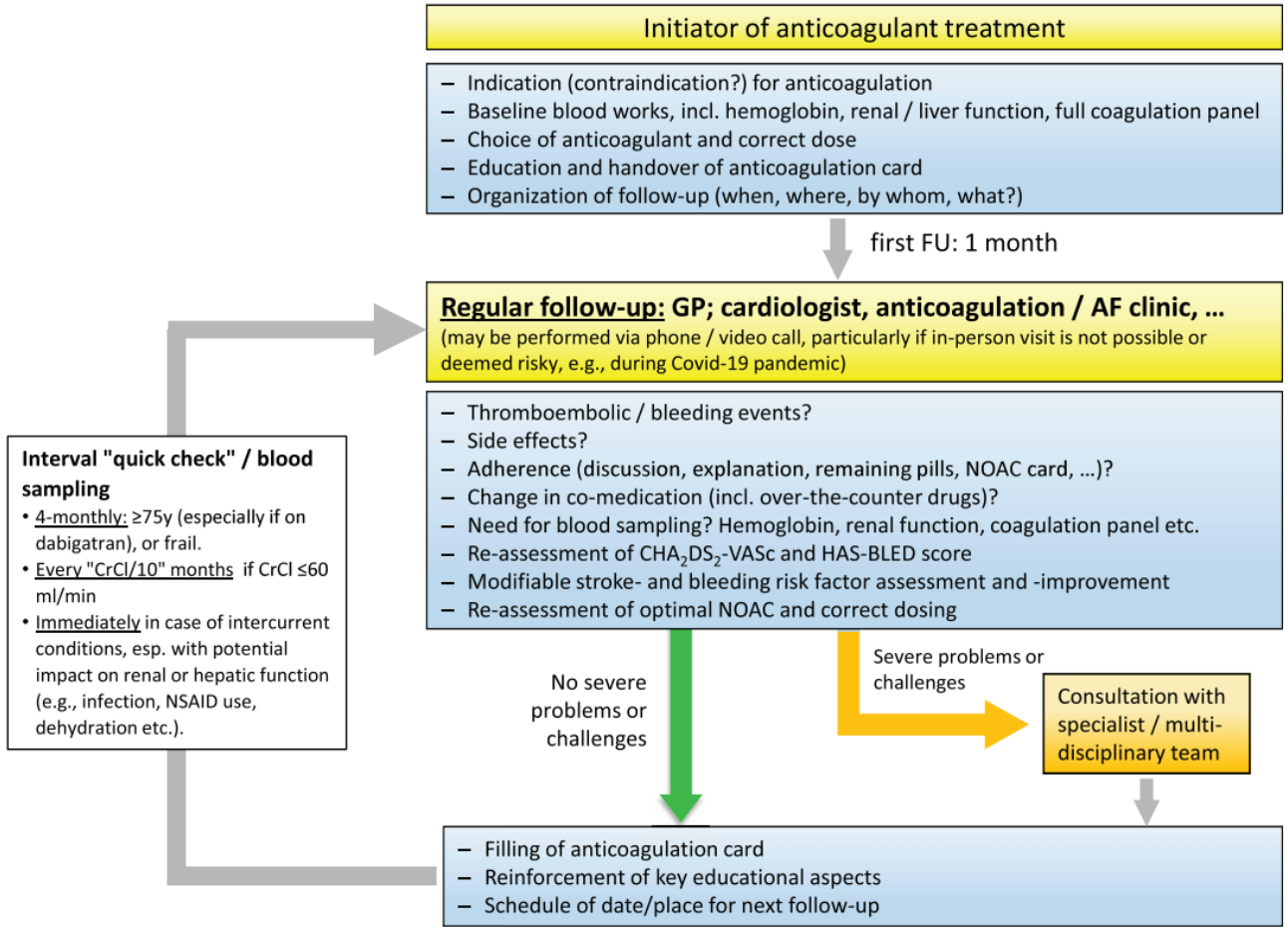
Kontraendikasyonlar

- Orta-ciddi MD
- Mekanik protez kapak
- Aktif kanama
- Gebelik
- Koagülapoati+KC ciddi yetmezliği
- CCl<30ml/dk (dabigatran)

CCl < 15ml/dk rivaroksaban ve apiksaban

Endikasyonlar

- Nonvalvular AF
- DVT Tedavi ve Önlemede
- PE tedavisinde
- Majör ortopedi operasyonu sonrasında VTE önlemede



CHA_2DS_2-VASc Score	
CHF (heart failure)	1
Hypertension	1
Age ≥ 75	2
Diabetes	1
Stroke	2
Vascular Disease	1
Age 65-74	1
Sex Category (female)	*1*

Condition	Points
H – Hypertension	1
A – Ab(N) liver/renal	1 point each
S – Stroke	1
B – Bleeding	1
L – Labile INRs	1
E – Elderly (>65)	1
D – Drugs or ETOH	1 point each

Figure 3 Initiation and structured follow-up of patients on NOACs. It is crucial to ensure a structured follow-up of patients on NOACs. The anti-coagulation card, as proposed in *Figure 2*, is intended to document each visit so that every person following up on the patient is well-informed. Moreover, written communication between different healthcare providers is required to inform them about the follow-up plan and execution. AF, atrial fibrillation; CrCl, creatinine clearance; GP, General Practitioner; NOAC, non-vitamin K antagonist oral anticoagulant.

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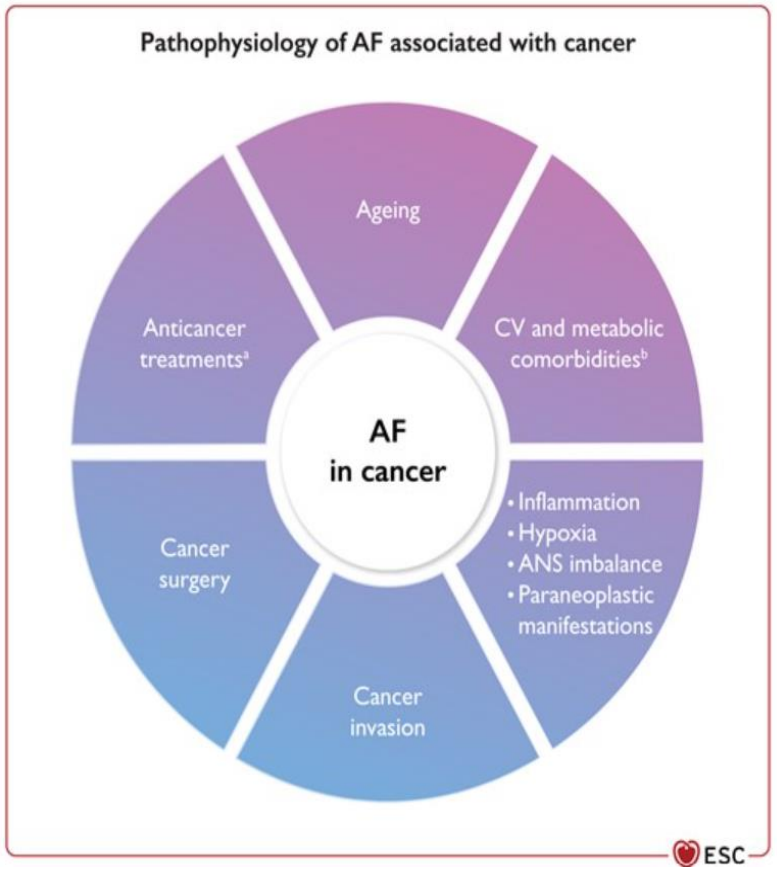
2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure
European Heart Journal 2021 – doi 10.1093/eurheartj/ehab368

AF ve Kalp yetersizliğinde YOAK kullanımı

- Avrupa Kardiyoloji Derneği Kalp Yetersizliği 2016 kılavuzunda kalp yetersizliği ve AF ‘si olan hastalarda YOAK kullanımı varfarine kıyasa gastrointestinal kanama riskini artırsa da inme ve intrakranial kanama ve mortalite riskini daha fazla düşürdüğü için sınıf IIa düzeyinde önerilmekteydi.
- 2021 kılavuzunda ise orta-ciddi mitral darlığı ve ya mekanik protez kalp kapağı olan hastalar haricinde YOAK’lar sınıf Ia olarak önerilmektedir.

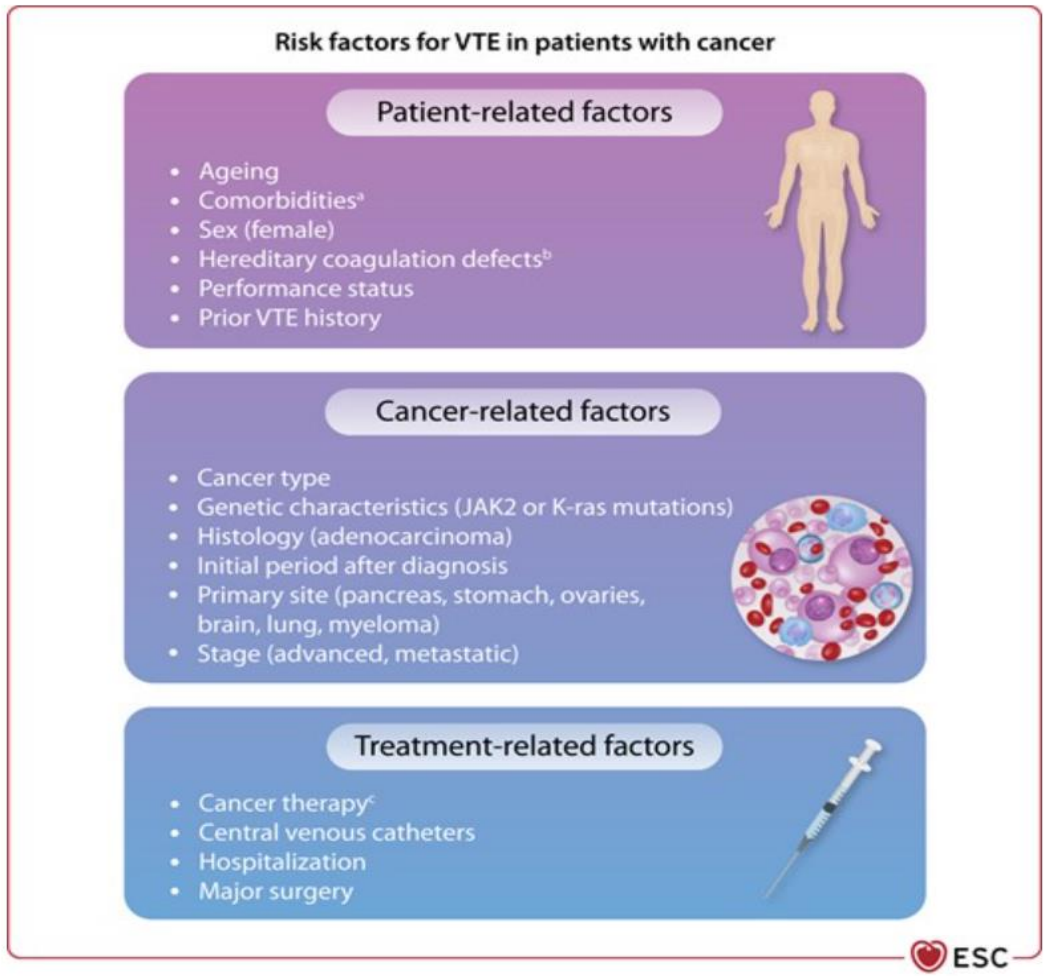
Kanser ve AF

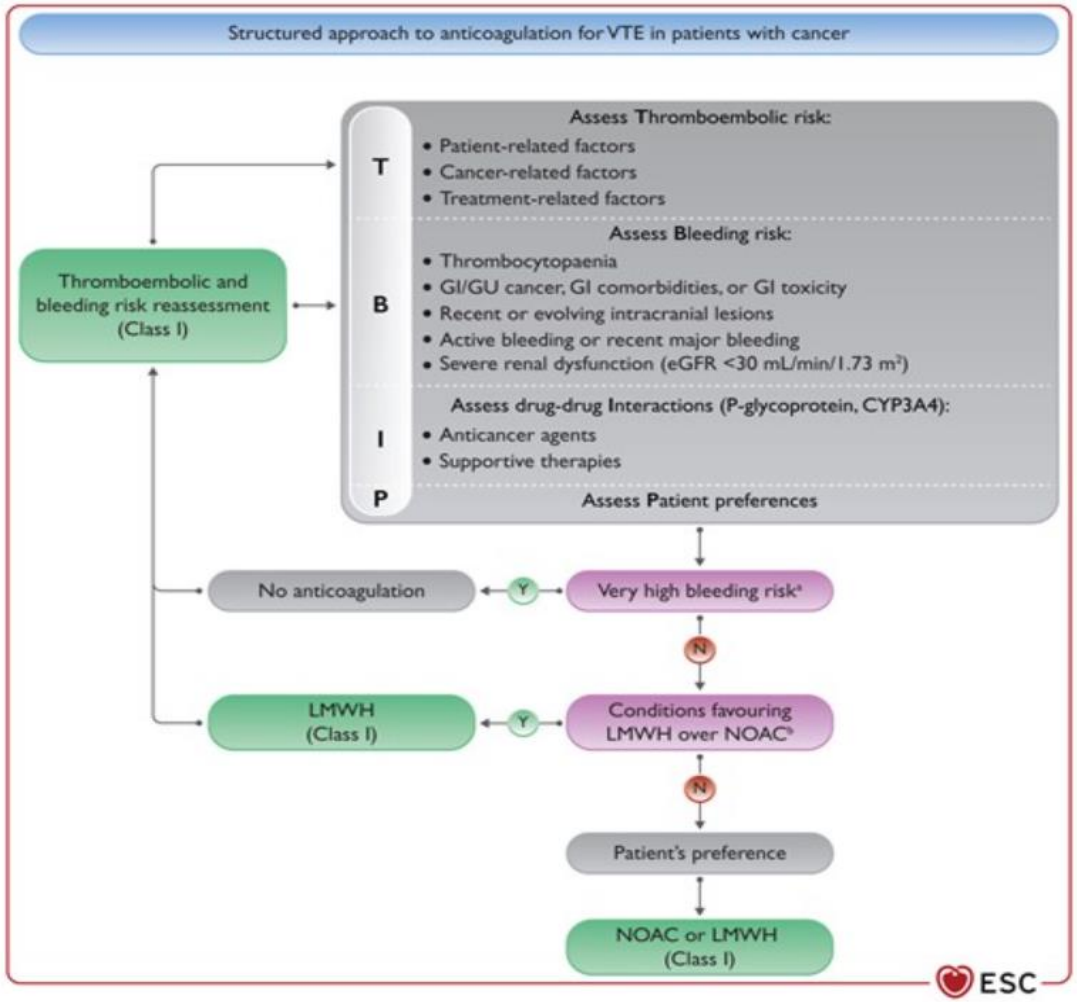
- Tüm kanser tiplerinde AF oluşum riskinin kanser olmayan kişilere göre artmış olduğu ifade edilmektedir.
- Kanser tedavisi sırasında AF gelişim oranı %2-16 arasında değişmektedir.
- YOAK'lar (mekanik kalp kapağı ve orta-ciddi mitral yetersizlik haricinde) kanama riski yüksek olmayan ve önemli ilaç etkileşim olmayan AF tanılı hastalarda DMAH ve VKA 'ya alternatif olarak değerlendirilmelidir (Sınıf IIa, Düzey: B).



2022 ESC Guidelines on cardio-oncology
(*European Heart Journal*; 2022 – doi: 10.1093/eurheartj/ehac244)

Kanser, VTE ve YOAK'lar





2022 ESC Guidelines on cardio-oncology
(*European Heart Journal*; 2022 – doi: 10.1093/eurheartj/ehac244)

Kanser, VTE ve YOAK'lar

- Kanser hastalarında semptomatik veya insidental VTE gelişmesi durumunda eğer kontraendikasyon yoksa apiksaban, edoksaban veya rivaroksaban kullanımı önerilmektedir. Sınıf I, Düzey A.
- Kateter ilişkili VTE de antikoagülan kullanım süresi 3 ay olarak önerilmektedir. Sınıf I, Düzey C.
- Yüksek tromboz riski olan (Khorana ya da COMPASS-CAT) kanser hastalarına primer profilaksi amaçlı YOAK (apiksaban veya rivaroksaban) veya DMAH kullanımı önerilebilir (Sınıf IIB, Düzey B).
- VTE risk faktörleri olan Multipl Myelom tanılı hastalarda DMAH ve aspirine alternatif olarak düşük doz apiksaban veya rivaroksaban kullanılabilir (Sınıf IIB, Düzey C).

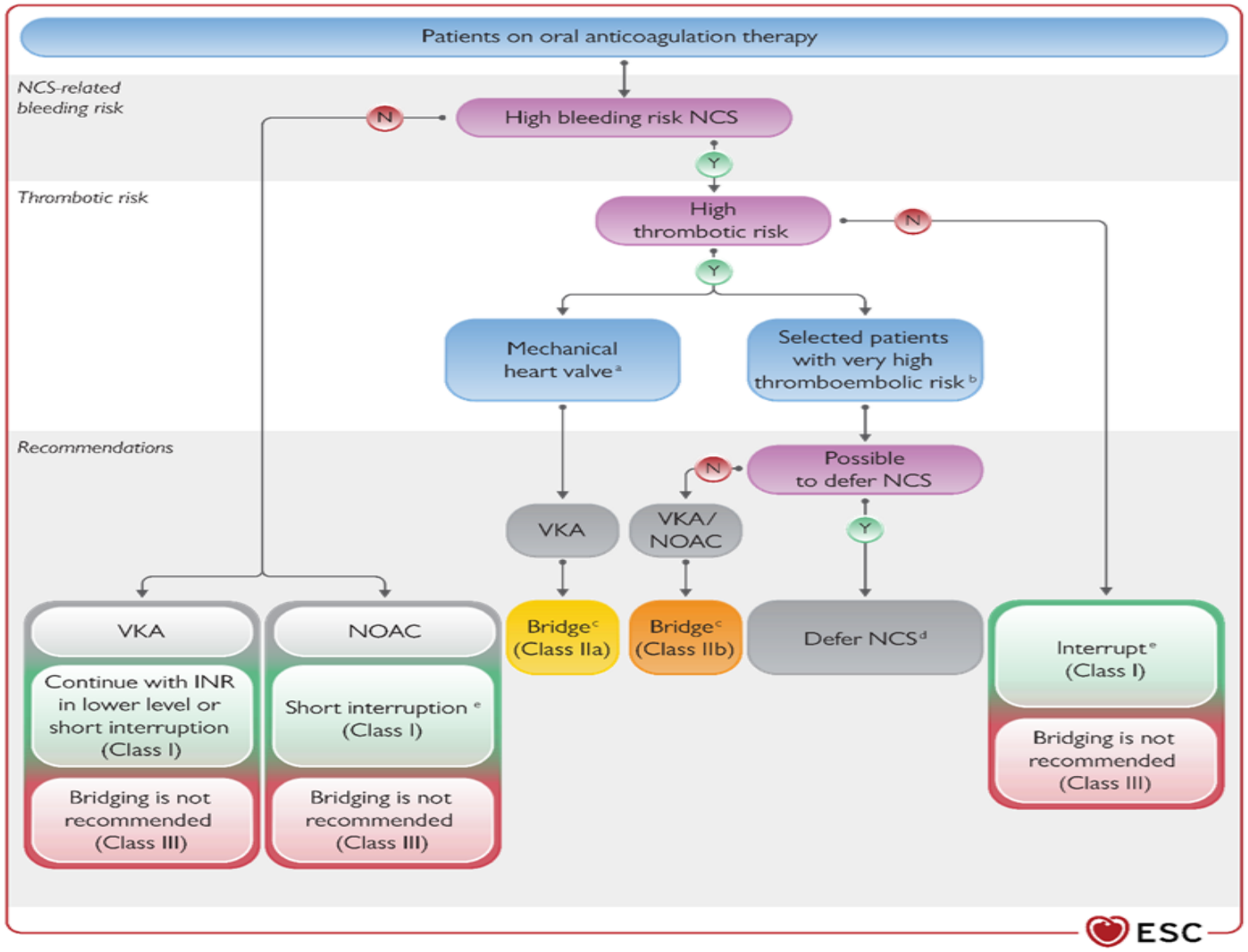
2022 ESC Guidelines on cardio-oncology
(*European Heart Journal*; 2022 – doi: 10.1093/eurheartj/ehac244)

Kalp dışı cerrahi planlanırken YOAK'lar

- Acil cerrahi girişim gerektiğinde YOAK tedavisi kesilmelidir (Sınıf I, Düzey C).
- Minör kanama riski olan veya kanam kontrolü kolaylıkla sağlanabilecek cerrahi işlemlerde YOAK'ların kesilmemesi önerilebilir (Sınıf I, Düzey B).
- Minör kanama riski dışındaki kanama risklerinde, hangi YOAK kullanıldığı, renal fonksiyon ve kanama riskine göre ara verme rejimi planlanmalıdır (Sınıf I, Düzey B),
- YOAK kullanan hastalarda kanama riski düşük olan prosedürler tercih edilmelidir. Bu durumda en son YOAK dozundan 12-24 saat sonra cerrahi işlem planlanabilir (Sınıf I, Düzey C).
- Düşük-orta trombotik riski içeren cerrahi işlemlerde YOAK tedavisi için köprü antikoagülan önerilmemektedir (Sınıf III, Düzey B). Operasyon sonrası kanama riskini azaltmak amacı ile YOAK dozunun azaltılması önerilmemektedir (Sınıf III, Düzey C)

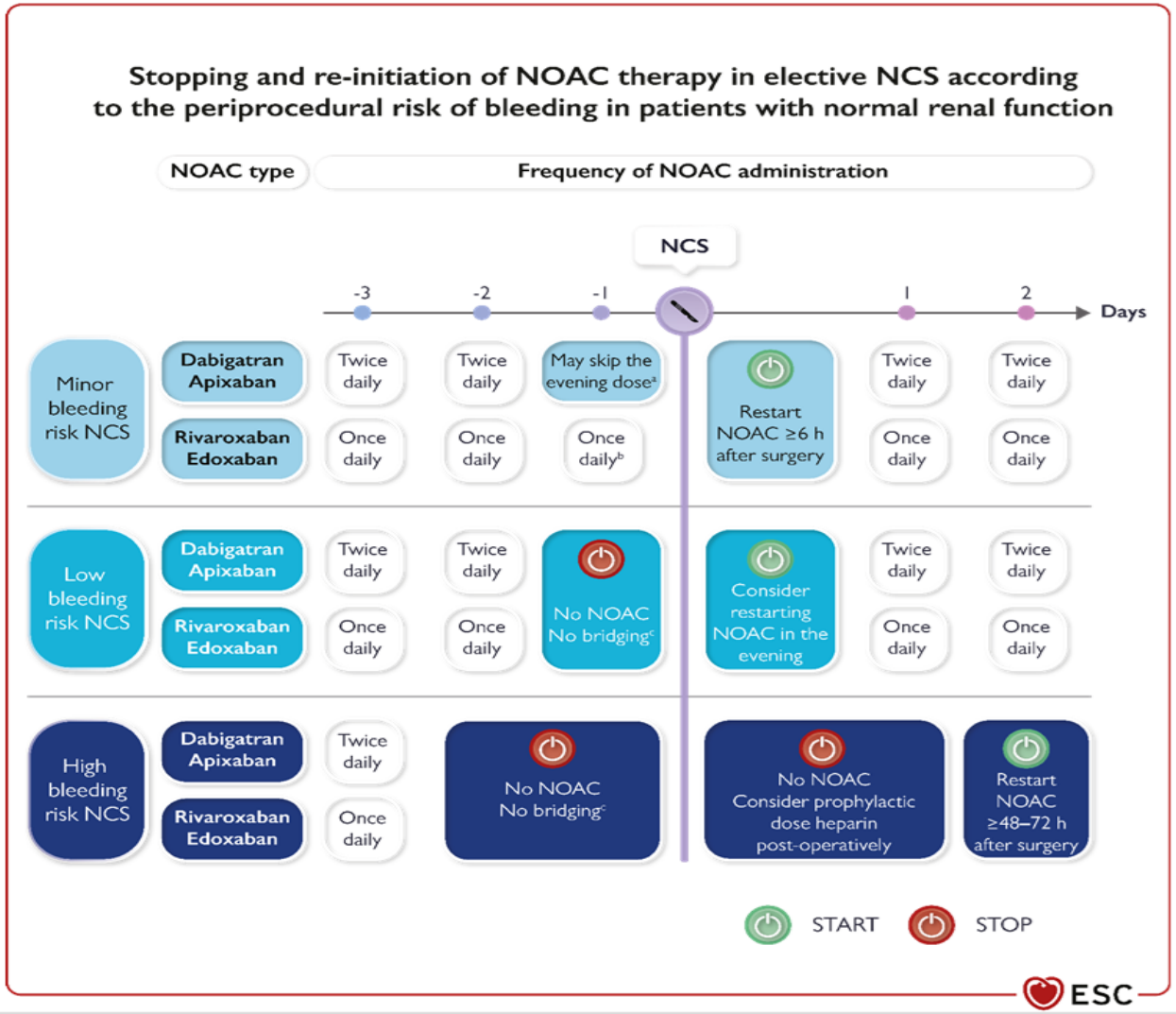
2022 ESC Guidelines on cardiovascular assessment and management of patients undergoing non-cardiac surgery
(European Heart Journal; 2022 – doi:10.1093/eurheartj/ehac270)

Kalp dışı cerrahi planı ve YOAK kullanımı



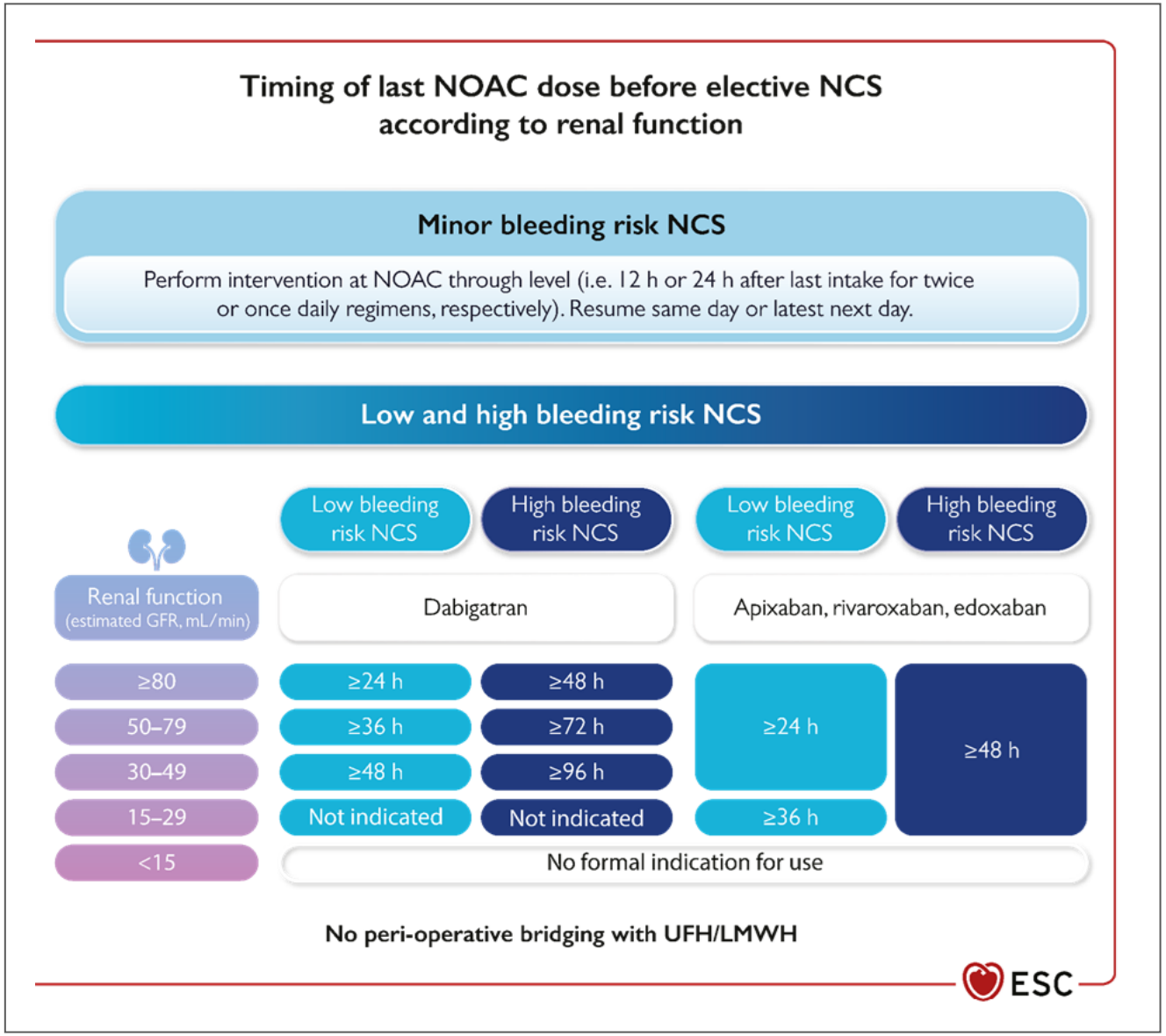
2022 ESC Guidelines on cardiovascular assessment and management of patients undergoing non-cardiac surgery (European Heart Journal; 2022 – doi:10.1093/eurheartj/ehac270)

Kalp dışı cerrahide YOAK tedavi planı



2022 ESC Guidelines on cardiovascular assessment and management of patients undergoing non-cardiac surgery (European Heart Journal; 2022 – doi:10.1093/eurheartj/ehac270)

Elektif cerrahi planında YOAK tedavi planı



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(European Heart Journal; 2022 – doi:10.1093/eurheartj/ehac270)

Kalp dışı cerrahi planlanırken YOAK'lar

Interruption of anticoagulation		
When an urgent surgical intervention is required, it is recommended that NOAC therapy is immediately interrupted.	I	C
Idarucizumab should be considered in patients on dabigatran and requiring urgent surgical intervention with intermediate to high bleeding risk.	IIa	B
In non-minor bleeding risk procedures in patients using a NOAC, it is recommended to use an interruption regimen based on the NOAC compound, renal function, and bleeding risk.	I	B
For interventions with a very high risk of bleeding, such as spinal or epidural anaesthesia, interruption of NOACs for up to five half-lives and re-initiation after 24 h should be considered.	IIa	C
When specific reversal agents are not available, PCC or activated PCC should be considered for reversing NOAC effects.	IIa	C
If an urgent surgical intervention is required, specific coagulation tests and assessment of NOAC plasma levels should be considered to interpret routine coagulation tests and waning of anticoagulant effect.	IIa	C

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Perioperatif trombofilaksi ve YOAK'lar

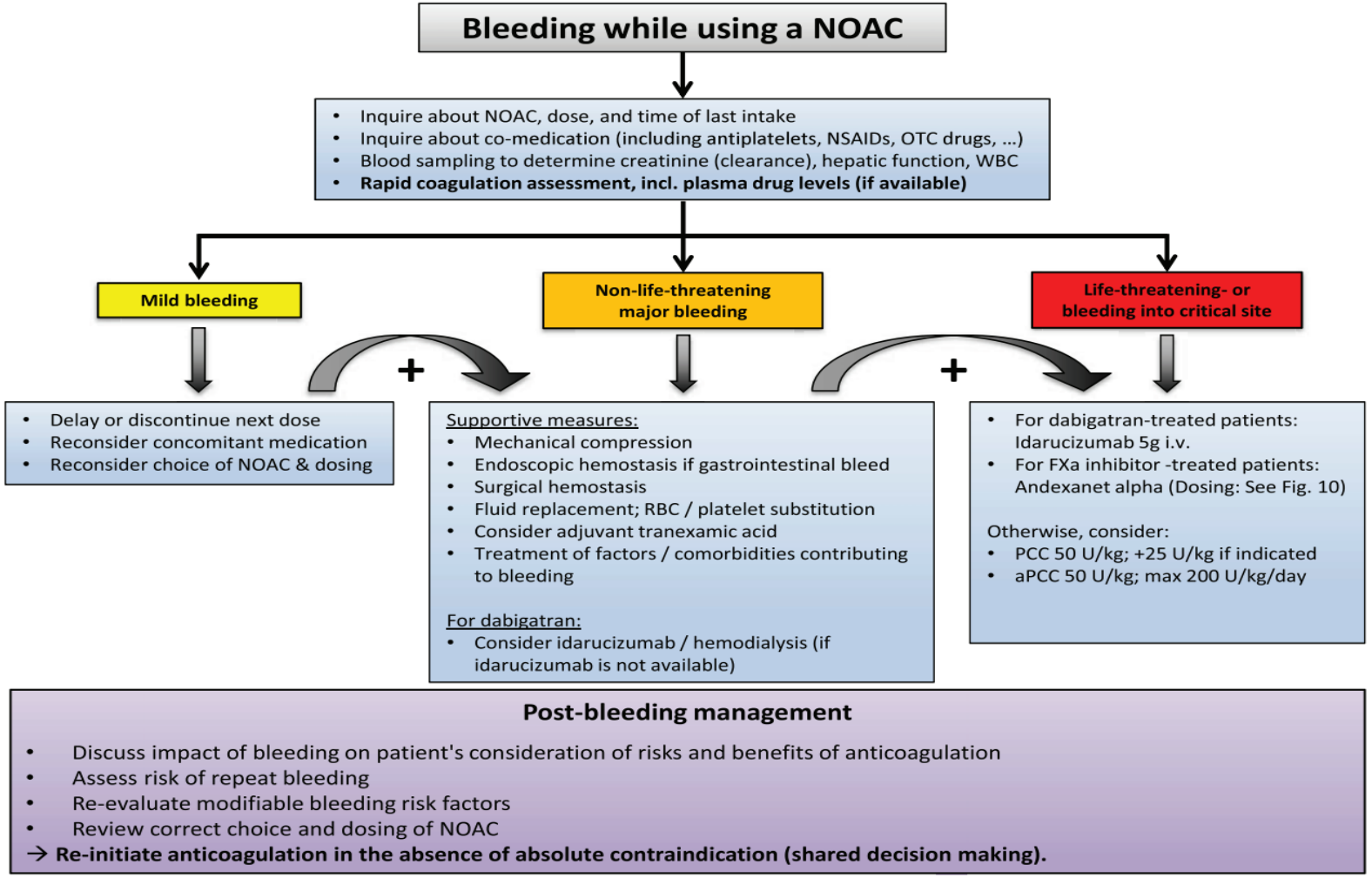
- Perioperatif trombofilaksi cerrahinin şekline ve hastaya göre karar verilmelidir. Sınıf I, Düzey A.
- Trombofilaksi gerektiği düşünülüyorsa cerrahi prosedür, immobilizasyon süresi ve hasta ilişkili faktörler değerlendirilerek antikoagülan tercih edilmelidir (DMAH, YOAK veya fondaparinuks) (Sınıf I, Düzey A)
- Postoperatif dönemde oral antikoagülan kullanımı gereken hastalarda YOAK genellikle VKA'ya tercih edilmesi önerilir (Sınıf I, Düzey A).

2022 ESC Guidelines on cardiovascular assessment and management of patients undergoing non-cardiac surgery
(European Heart Journal; 2022 – doi:10.1093/eurheartj/ehac270)

YOAK kullanımında klinisyeni zorlayan durumlar

- KANAMA
- TROMBOSİTOPENİ

YOAK kullanımı sırasında kanama



2021 European Heart Rhythm Association Practical Guide on the Use of Non-Vitamin K Antagonist Oral Anticoagulants in Patients with Atrial Fibrillation. Europace. 2021 Oct 9;23(10):1612-1676. doi: 10.1093/europace/euab065.

YOAK ve Trombositopeni

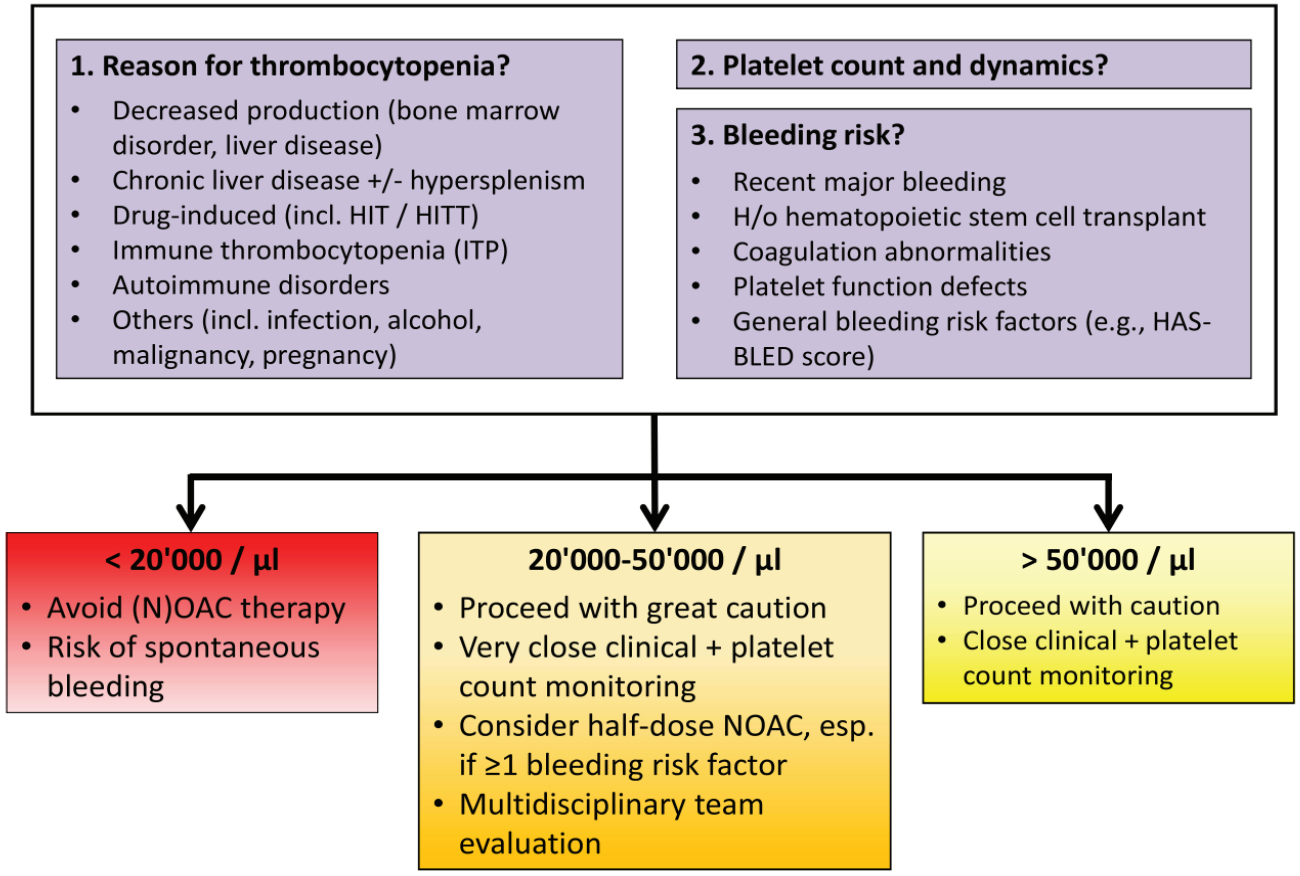


Figure 24 NOACs in patients with thrombocytopenia. NOAC, non-vitamin K antagonist oral anticoagulant.

COVID-19 pandemisinde YOAK kullanımı

- YOAK'ların monitörizasyon gerektirmemesi pandemi sırasında avantaj sağlamıştır.
- Fakat bununla birlikte atrial fibrilasyonlu hastalar COVID-19 enfeksiyonu varlığında yüksek risk grubunda oldukları unutulmamalıdır. Bu nedenle YOAK dozu ve takip aralığı hastaya göre planlanmalı ve hastaların takip şemasına uyumu sağlanmalıdır.
- YOAK kullanmakta olan hastaların COVID-19 enfeksiyonu nedeni ile hastane yatışı gerekmesi durumunda antikoagülan tedavinin devamı önerilir. Fakat klinik bozulma (özellikle renal disfonksiyon) ve beraberinde verilen tedaviler göz önünde bulundurularak tedavi devamı değerlendirilmelidir.
- YOAK kullanan hastalarda COVID-19 aşısı yapılması durumunda ise, enjeksiyon öncesi dozun enjeksiyondan 3 saat sonrasına ertelenmesi, günde iki sefer kullanılan YOAK'larda bir sonraki dozun zamanında alınması önerilmektedir.

2021 European Heart Rhythm Association Practical Guide on the Use of Non-Vitamin K Antagonist Oral Anticoagulants in Patients with Atrial Fibrillation. Europace. 2021 Oct 9;23(10):1612-1676. doi: 10.1093/europace/euab065.

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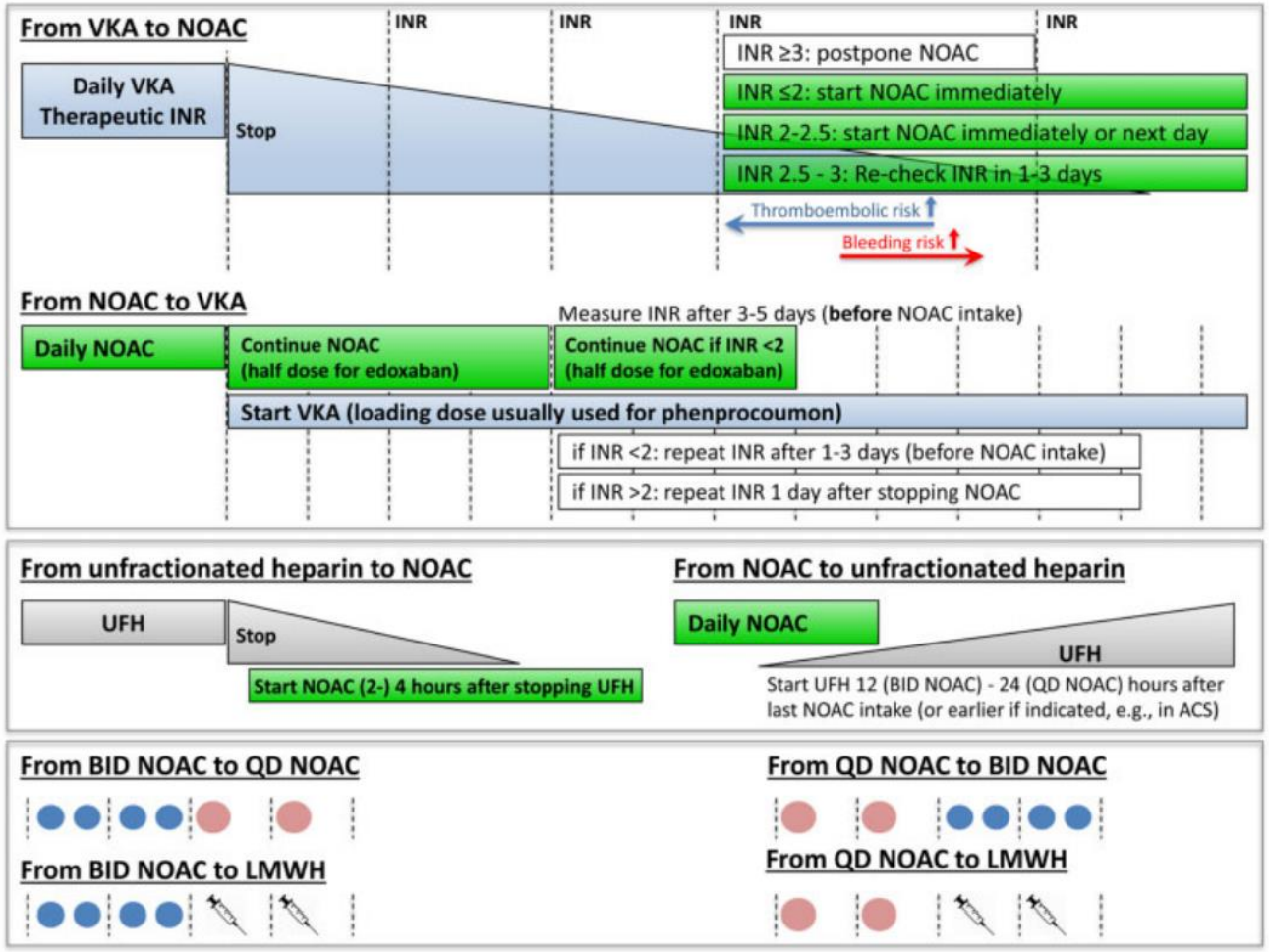
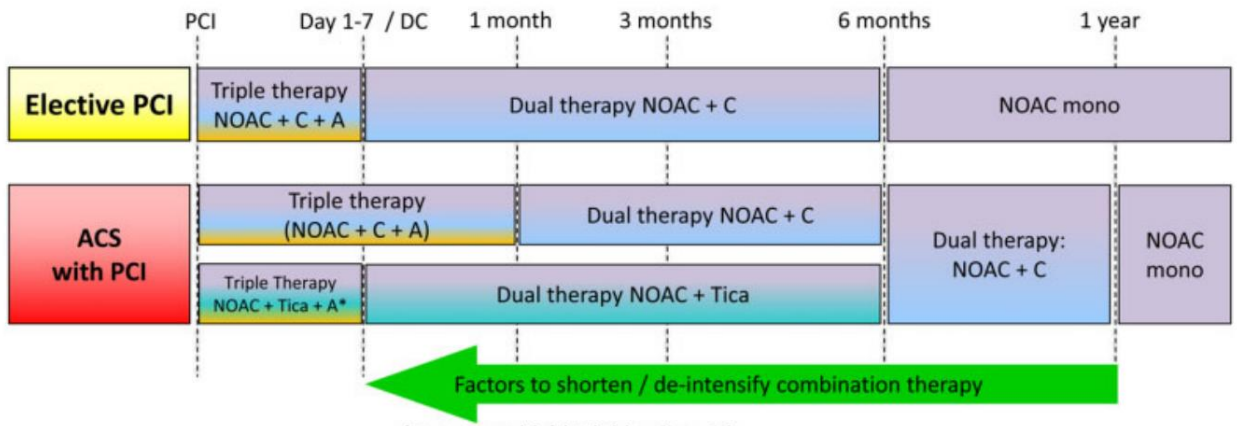


Figure 4 Switching between NOACs and other anticoagulants. ACS, acute coronary syndrome; BID, twice daily; INR, international normalized ratio; LMWH, low molecular weight heparin; NOAC, non-vitamin K antagonist oral anticoagulant; QD, once daily; UFH, unfractionated heparin; VKA, vitamin K antagonist.



In all patients:

- Avoid use of BMS / first generation DES
- Use PPI if on triple / dual therapy
- Minimize bleeding risk by assessing and treating modifiable bleeding risk factors (e.g., hypertension, etc.)
- Close follow-up; check for signs of (occult) bleeding

Table 1

Doses of the different NOACs in the four large comparative trials in AF patients

NOAC	Dose
Dabigatran (RELY)	150 mg twice daily 110 mg twice daily
Rivaroxaban (ROCKAT-AF)	20 mg once daily, protocol-mandated dose reduction to15 mg
Apixaban (ARISTOTLE)	5 mg twice daily, protocol-mandated dose reduction to 2.5 mg
Edoxaban (ENGAGE-AF)	60 mg once daily, protocol-mandated dose reduction to 30 mg 30 mg once daily, protocol-mandated dose reduction to15 mg

Open in a separate window

Study acronyms in brackets.