

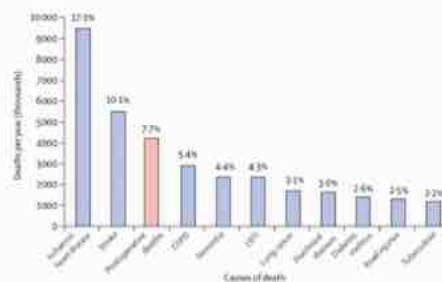
Niet-cardiale heelkunde voor de cardiale patiënt : Hoe kan ik als huisarts het cardiale risico best inschatten ?

2022 ESC Guidelines on CV assessment and management of patients undergoing non-cardiac surgery



Ernst van het probleem

- 300 10⁶ ingrepen /j
- 4.2 10⁶ periop overlijdens /j
- 3^e grootste doodsoorzaak
- +/- 50% CV
- 2030 : 20% van 75+ elk jaar hk: MACE : 9,5%



Nepogodiev N, et al, The Lancet 2019

- Doel : vroege diagnose en behandeling zal cardiale sterfte en postop complicaties verminderen.
- Meer ambulante zorg en kortere hospitalisatie -> rol huisarts



Table 1 Surgical risk estimate according to type of surgery or intervention^a according to the European Society of Cardiology and European Society of Anaesthesiology non-cardiac surgery guidelines

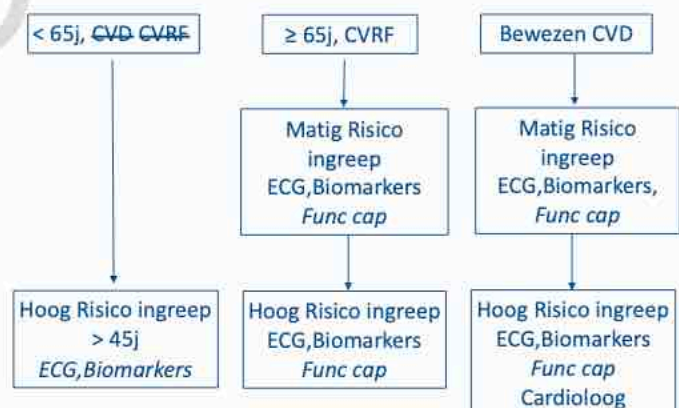
Low risk: <1%	Intermediate risk: 1–5%	High risk: >5%
Superficial surgery	• Intra-abdominal: splenectomy, hiatal hernia repair, and cholecystectomy	• Aortic and major vascular surgery
Breast	• Carotid symptomatic (CEA or CAS)	• Open lower limb revascularisation or amputation or thromboembolism
Dental	• Peripheral arterial angioplasty	• Duodeno-pancreatic surgery
Endocrine: thyroid	• Endovascular aneurysm repair	• Liver resection, bile duct surgery
Eye	• Head and neck surgery	• Oesophagectomy
Reconstructive	• Neurological or orthopaedic: major (hip and spine surgery)	• Repair of perforated bowel
Carotid asymptomatic (CEA or CAS)	• Urological or gynaecological: major	• Adrenal resection
Gynaecology: minor	• Renal transplant	• Total cystectomy
Orthopaedic: minor (meniscectomy)	• Intra-thoracic: non-major	• Pneumonectomy
Urological: minor (transurethral resection of the prostate)		• Pulmonary or liver transplant

Adapted from the European Society of Cardiology and European Society of Anaesthesiology non-cardiac surgery guidelines.¹
 CAS, carotid artery stenting; CEA, carotid endarterectomy.

^aSurgical risk estimate is a broad approximation of 30-day risk of cardiovascular death and myocardial infarction that takes into account only the specific surgical intervention without considering the patient's comorbidities.

Aanbevelingen voor preop beoordeling

- Urgent / Tijdsgevoelig / Electief
- Anamnese / KO
- Standaard Labo +/- Biomarkers
- Sympt / Kliniek CVD : Cardioloog
- Rookstop - Optimalisatie therapie
- Afweging risico/voordeel ingreep



Over welke tools beschikken we ?

- Risico [Score](#)
- ECG : vergelijken !
- [Biomarkers](#) : cTn I/T - NT-proBNP.
- TTE : prognostisch belang systolische / diastolische dysfunctie - kleplijden
- Stress test :
 - Cyclo : lage sens/spec voor CAD. Geen waarde bij BTB/PM -> aanvullen met :
 - Imaging : geen winst farma stress tov fysieke stress . Hoge NPV
- CCTA : Hoge NPV bij lage of IM probabieliteit CAD.
- Invasief bilan : cfr alg indic



CV risico score calculator

CALCULATOR 06/01/2019 EVANGELIA 1/10/2022

Age, years

Hemoglobin, g/dL

History of heart disease No Yes

e.g. history of previous myocardial infarction, coronary angioplasty, cardiac surgery, heart failure, atrial fibrillation, or myocardial infarction confirmed by echocardiography.

Anginal or dyspnea No Yes



Vascular surgery No Yes

Surgical urgency Elective Emergency

RESULT ⌵

3 points
RUB-HASC

11 %
Risk of adverse event in 30-day postoperative period



Risicoreductie maatregelen

- Interventies op CVRF + levensstijl - medicatie x
- Periop. advies antiplaatjes
 - ASA in PP : stop; postop blijvend stop bij laag/ matig risico pat voor CVD
 - ASA in SP : alleen stop bij ingrepen met zeer hoog bloedingsrisico
 - SAPT : Clo 12m post NSTEMI ACS : tijdelijk onderbreken.
 - SAPT bij deescalatie post PCI/ACS, recent stroke, PAD, Asa intol -> interdisciplinaire evaluatie
 - DAPT : Uitstel 6m(elec PCI) /12m (ACS). Tijdsgevoelig ingreep ? Min 1m / 3m uitstel bij ACS + Ingreep onder Asa. Recent PCI en nood hk ? -> overleggen met anes/ chirurg
 - DAPT longterm : stop Asa 7d , Clo/Tica 3-5d en Prasu 7d
 - Herstarten < 48h postop xx



Bleeding risk according to type of non-cardiac surgery

Surgery with minor bleeding risk	Surgery with low bleeding risk (infrequent or with low clinical impact)	Surgery with high bleeding risk (frequent or with significant clinical impact)
<ul style="list-style-type: none"> • Cataract or glaucoma procedure • Dental procedures: extractions (1–3 teeth), periodontal surgery, implant positioning, endodontic (root canal) procedures, subgingival scaling/cleaning • Endoscopy without biopsy or resection • Superficial surgery (e.g. abscess incision, small skin excisions/biopsy) 	<ul style="list-style-type: none"> • Abdominal surgery: cholecystectomy, hernia repair, colon resection • Breast surgery • Complex dental procedures (multiple tooth extractions) • Endoscopy with simple biopsy • Gastroscopy or colonoscopy with simple biopsy • Large-bore needles procedures, e.g. bone marrow or lymph node biopsy • Non-cataract ophthalmic surgery • Small orthopaedic surgery (foot, hand arthroscopy) 	<ul style="list-style-type: none"> • Abdominal surgery with liver biopsy, extracorporeal shockwave lithotripsy • Extensive cancer surgery (e.g. pancreas, liver) • Neuraxial (spinal or epidural) anaesthesia • Neurosurgery (intracranial, spinal) • Major orthopaedic surgery • Procedures with vascular organ biopsy (kidney or prostate) • Reconstructive plastic surgery • Specific interventions (colon polypectomy, lumbar puncture, endovascular aneurysm repair) • Thoracic surgery, lung resection surgery • Urological surgery (prostatectomy, bladder tumour resection) • Vascular surgery (e.g. AAA repair, vascular bypass)

Risicoreductie maatregelen 2

- Periop. advies anticocoagulanti
 - VKA : hoger bleedingsrisico bij bridging !
 - Bridging bij mech kleppen / erg hoog thrombotisch risico
 - 12h-24h postop herstarten aan onderhouds beh. + 2d 50% extra
 - Bridging : < 24u postop LMWH samen met VKA .Stop als INR >2
 - Bij hoog bleedingsrisico : LMWH pas 48h-72h na haemostase herstarten.
 - NOAC
 - Stop ifv nierfunctie en bleedingsrisico (tot $5 \times t_{1/2}$)
 - Herstarten 6-8 h postop.
 - Hoog bleedingsrisico? Eerst LMWH profyl na 48-72 NOAC
 - Riva low dose stop 24h preop



Figure 9

Peri-operative management of non-vitamin K antagonist oral anticoagulant according to the periprocedural risk of bleeding

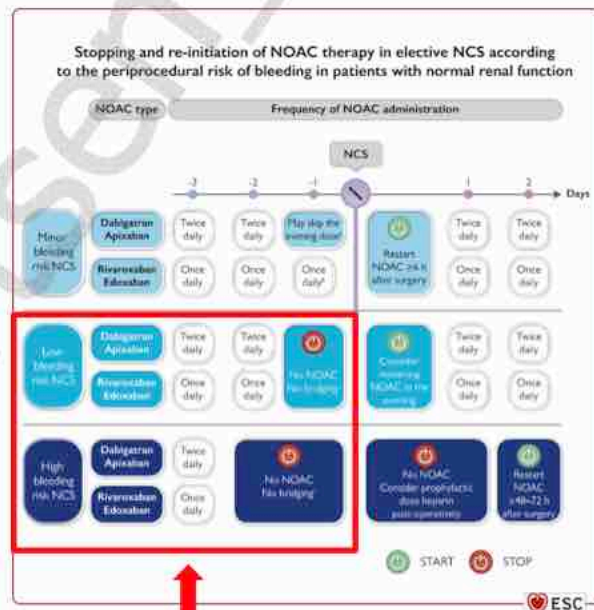
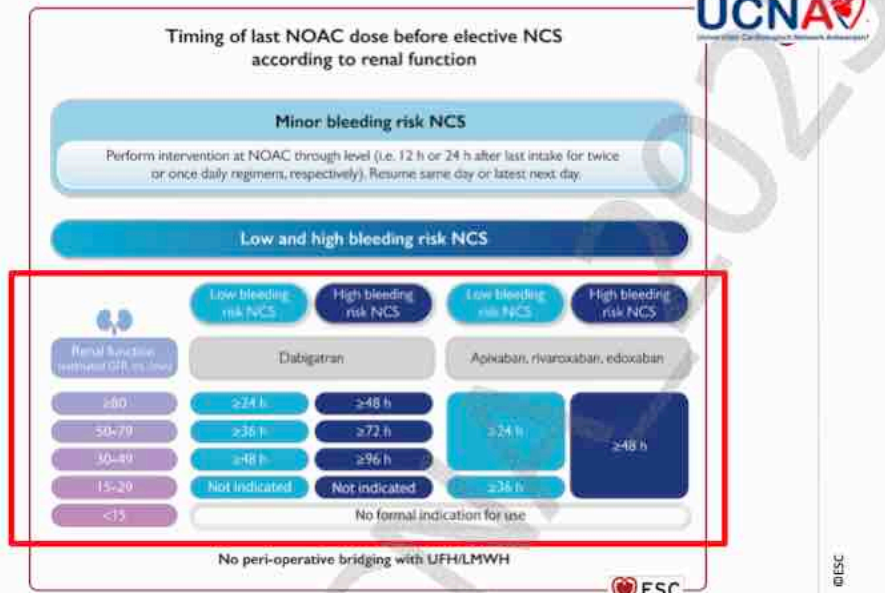


Figure 10

Timing of last NOAC dose before elective NCS according to renal function



www.escardio.org/guidelines

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

Alg risicoreductie maatregelen 3

- Perioperatieve thromboprofylaxe
 - Caprini score : <https://capriniriskscore.org/assessment/>
 - <12h preop tot voll mobilisatie / ontslag ZH 10d
 - Kanker hk : 3-4 wkn
 - Orthopedische hk : 14d-35d : LMWH = NOAC
- Anemie : Fe gebrek (50%)
 - Preop corrigeren zo Ferritine < 100 ng/ml of TF sat < 20% of Ferritine < 300 ng/ml (Inflam./HF) -> Minder transfusienood, kortere hospitalisatie



Take home messages

- Toename risico op CV complicaties door stijgend aantal majeure ingrepen bij ouder wordende bevolking met meer CVRF en comorbiditeiten.
- Belangrijke rol voor huisarts om dit risico te beperken door correcte preoperatieve risicostratificatie en aantal doeltreffende risicoreductie maatregelen:
 - Inchatten van CV risico : SCORE-2 / SCORE-OP tabellen - Comorbiditeiten
 - CV risico calculator
 - Anamnese / KO / lab + BM : vermoeden CVD ? -> preop verwijzing cardioloog
 - Optimalisatie aanpak CVRF
 - Inschatten bleedings-vs thrombotisch risico : preop antithrombotisch beleid.



Thank You

