Wenn Das Herz aus dem Takt gerät…

Moderne Möglichkeiten zur Behandlung von Herzrhythmusstörungen

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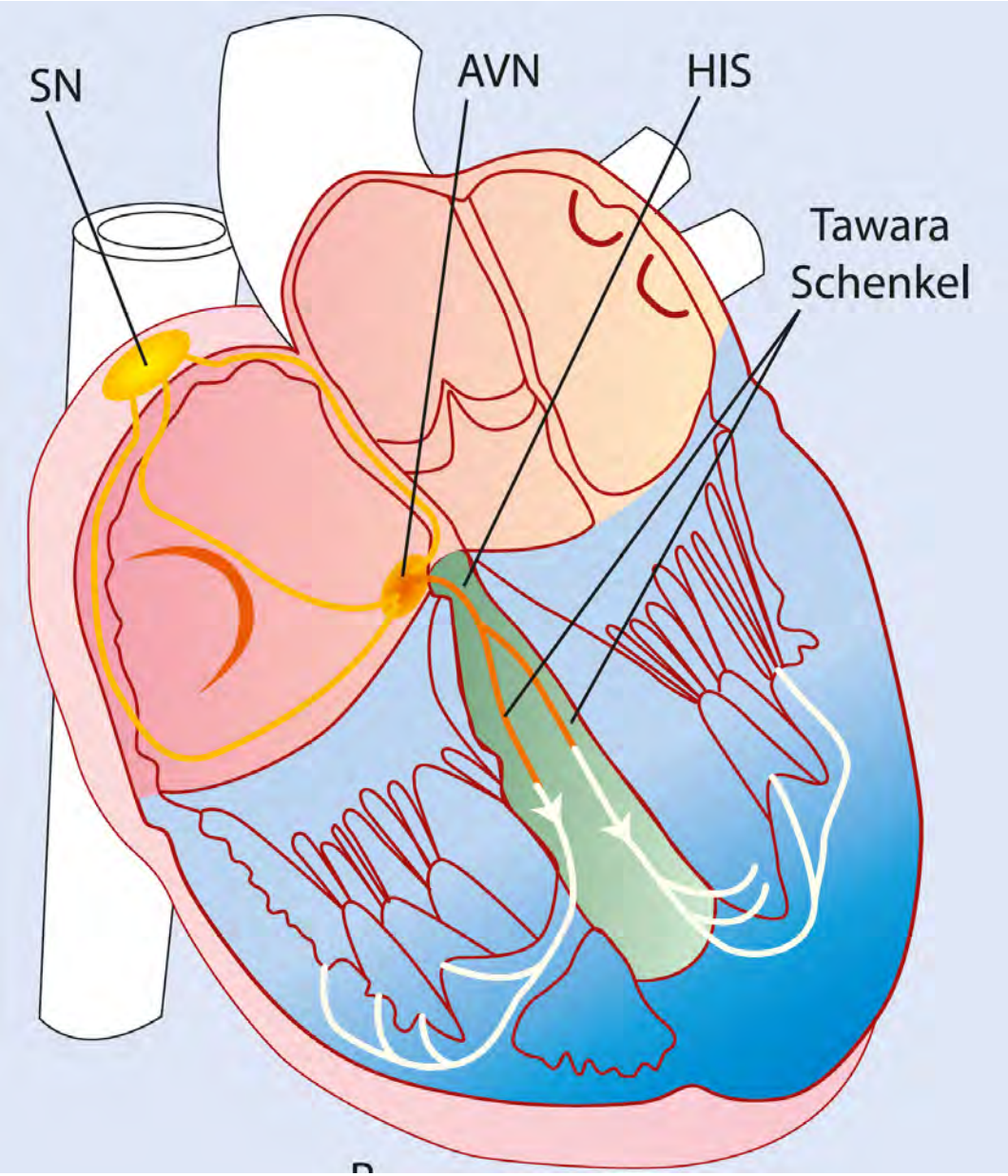
Disclosures: https://www.hirslanden.ch

Impulsbildung und -fortleitung im Herzen

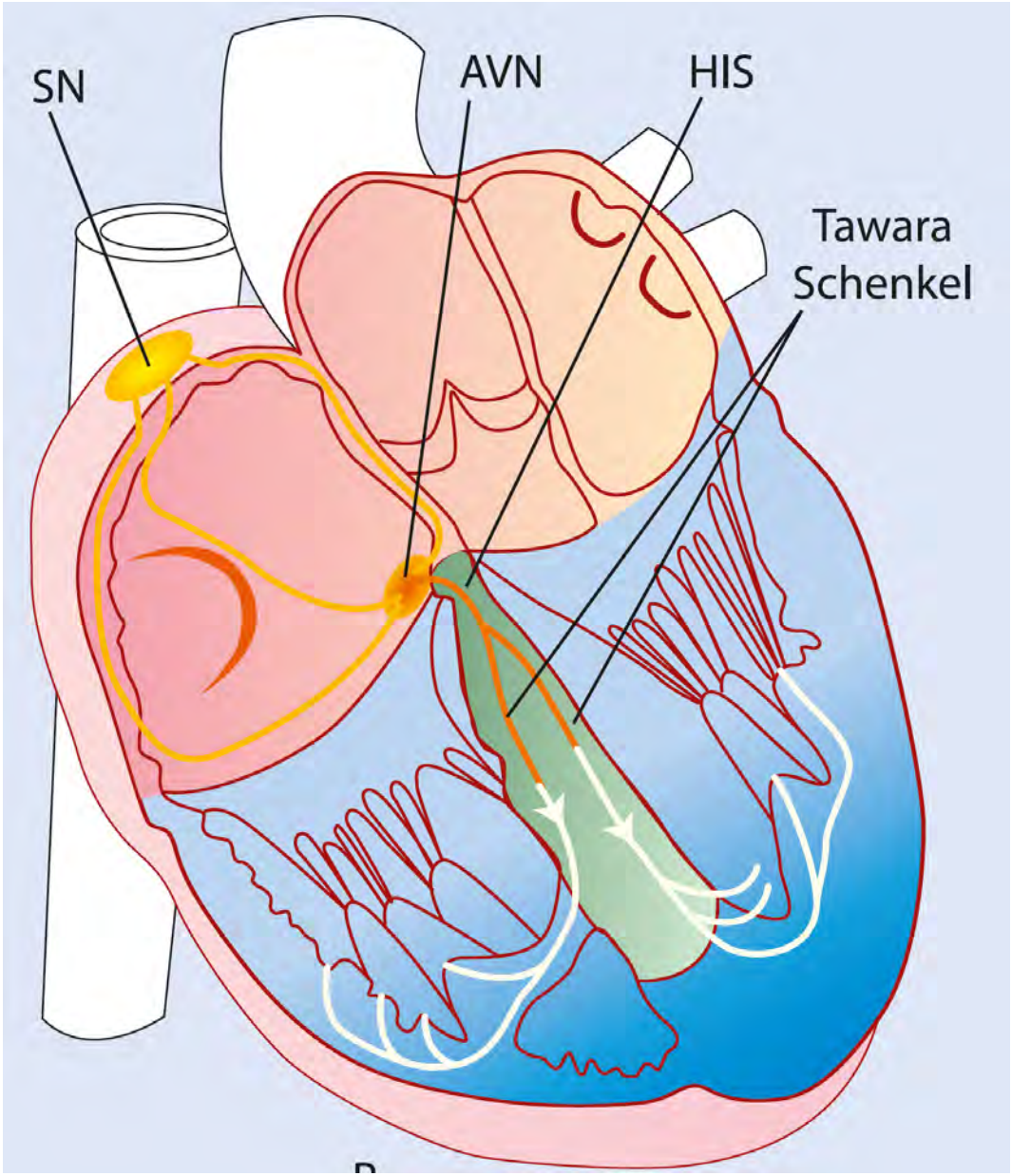


Atriale Extrasystole (Extraschlag)

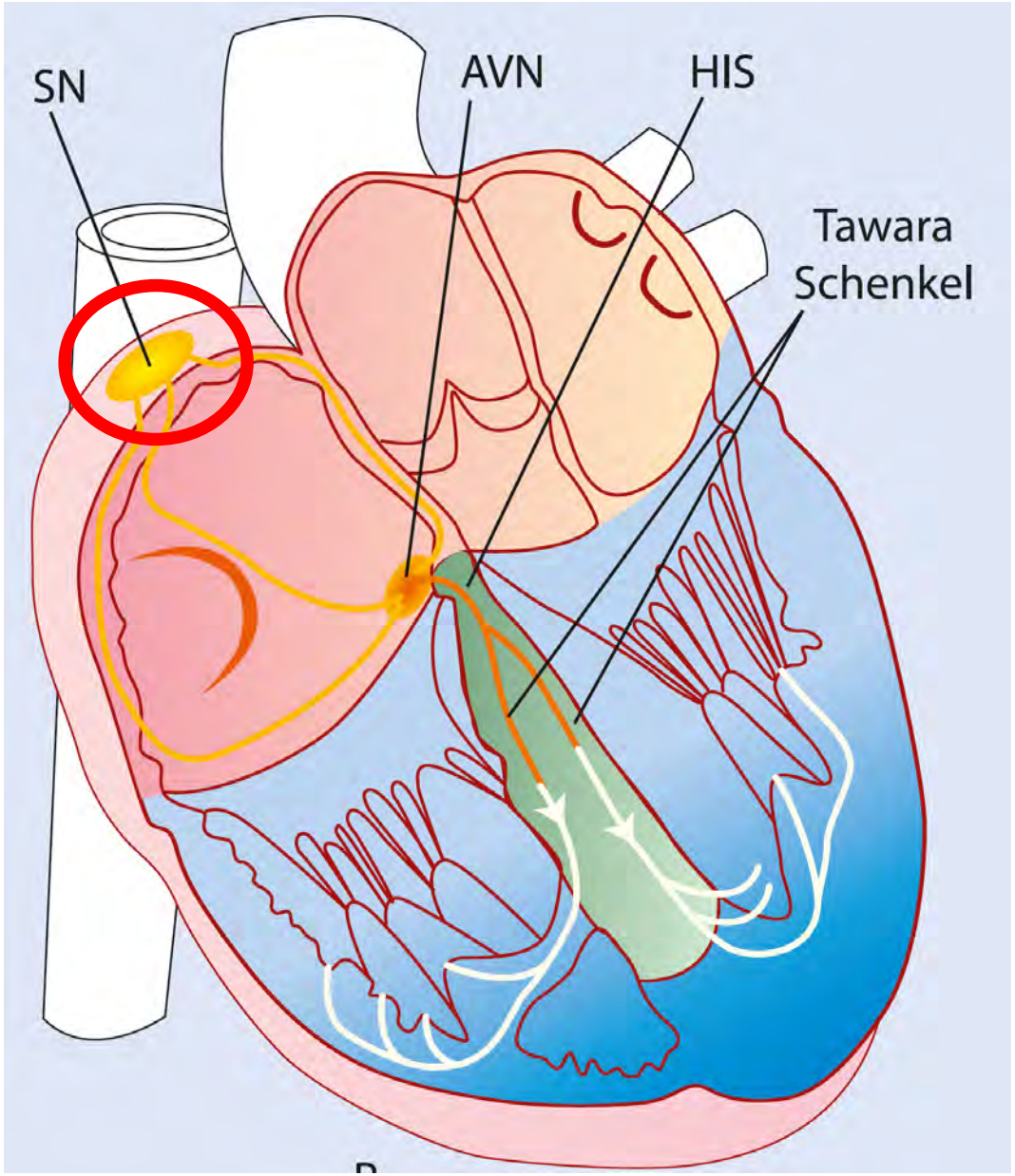
Ventrikuläre Extrasysstole (Extraschlag)

- Typisches "Stolpern", oder "Aussetzen"
- Isoliert in den allermeisten Fällen harmlos!
- Aber: Kurze Abklärung sinnvoll → Ausschluss ernsterer Problematik

Langsame Herzrhythmusstörungen



Syndrom des "kranken Sinusknotens" ("Sick Sinus Syndroms")

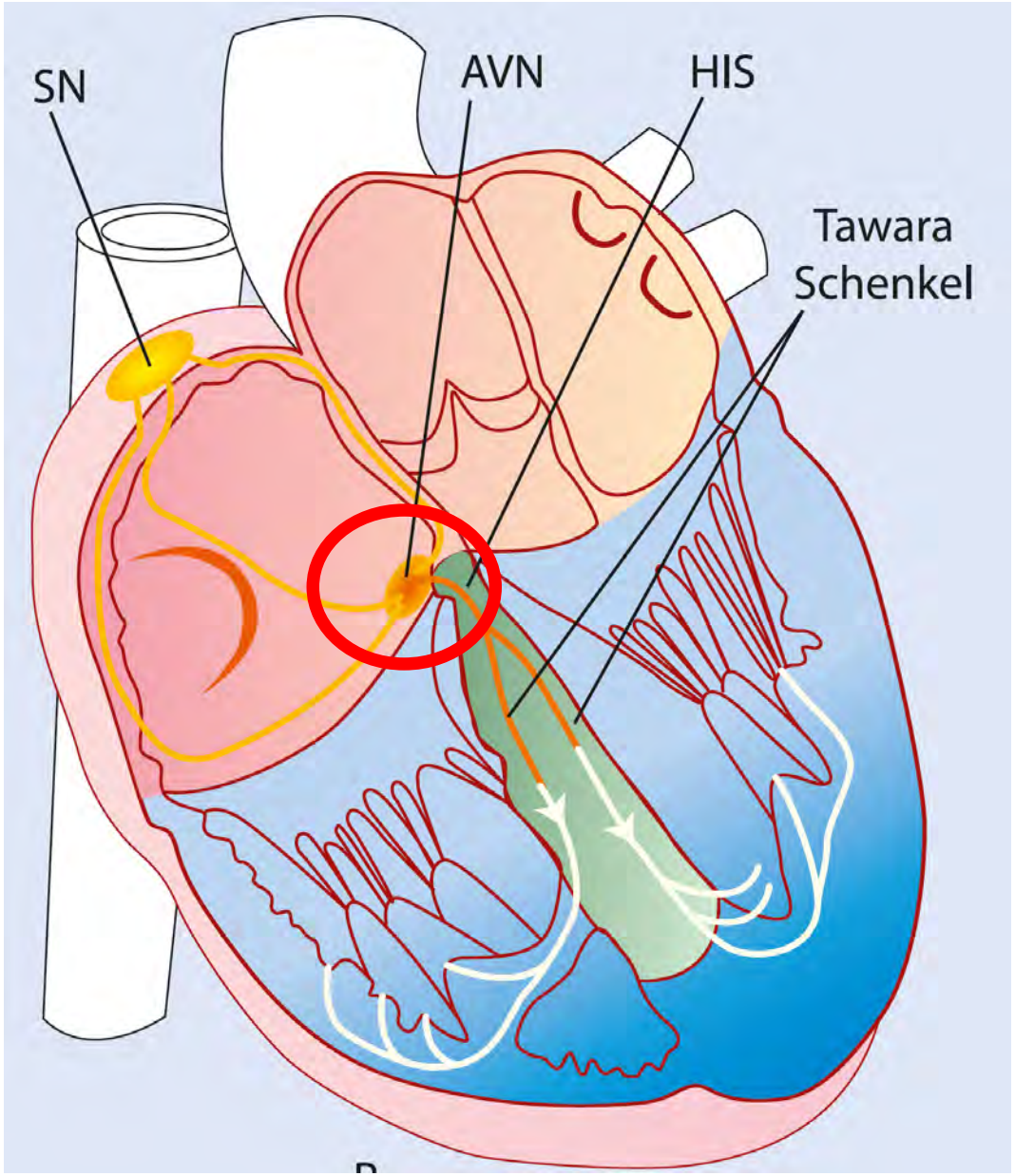


<u>Typische Präsentation:</u>

- Langsamer Puls
- "Pausen" im Herzschlag
- Fehlender Pulsanstieg unter Belastung
- Leistungsschwäche
- Schwindel, "Schwarz vor Augen"

- In der Regel nicht lebensgefährlich
- Aber: Abklärung in jedem Fall sinnvoll

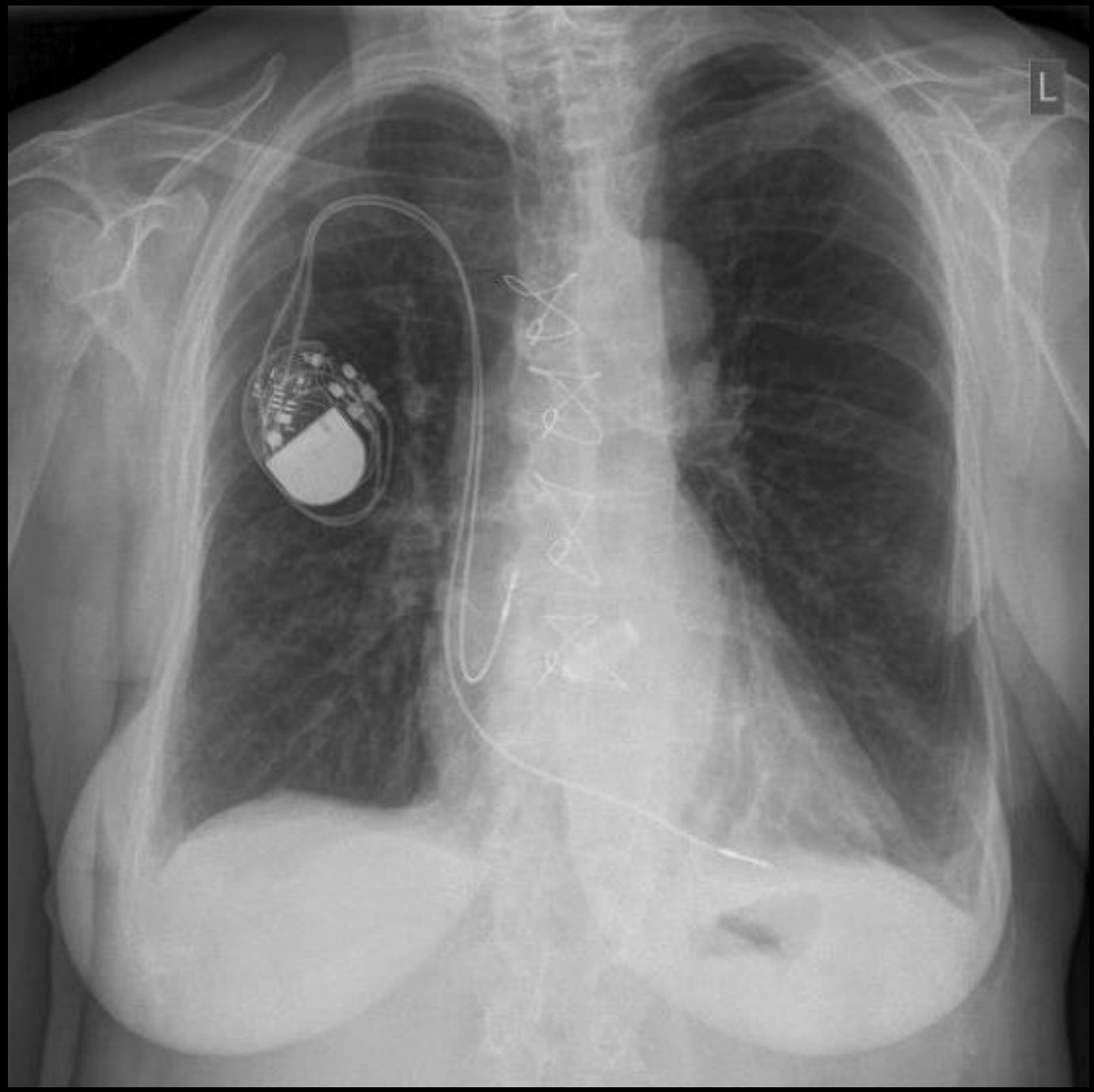
AV Block



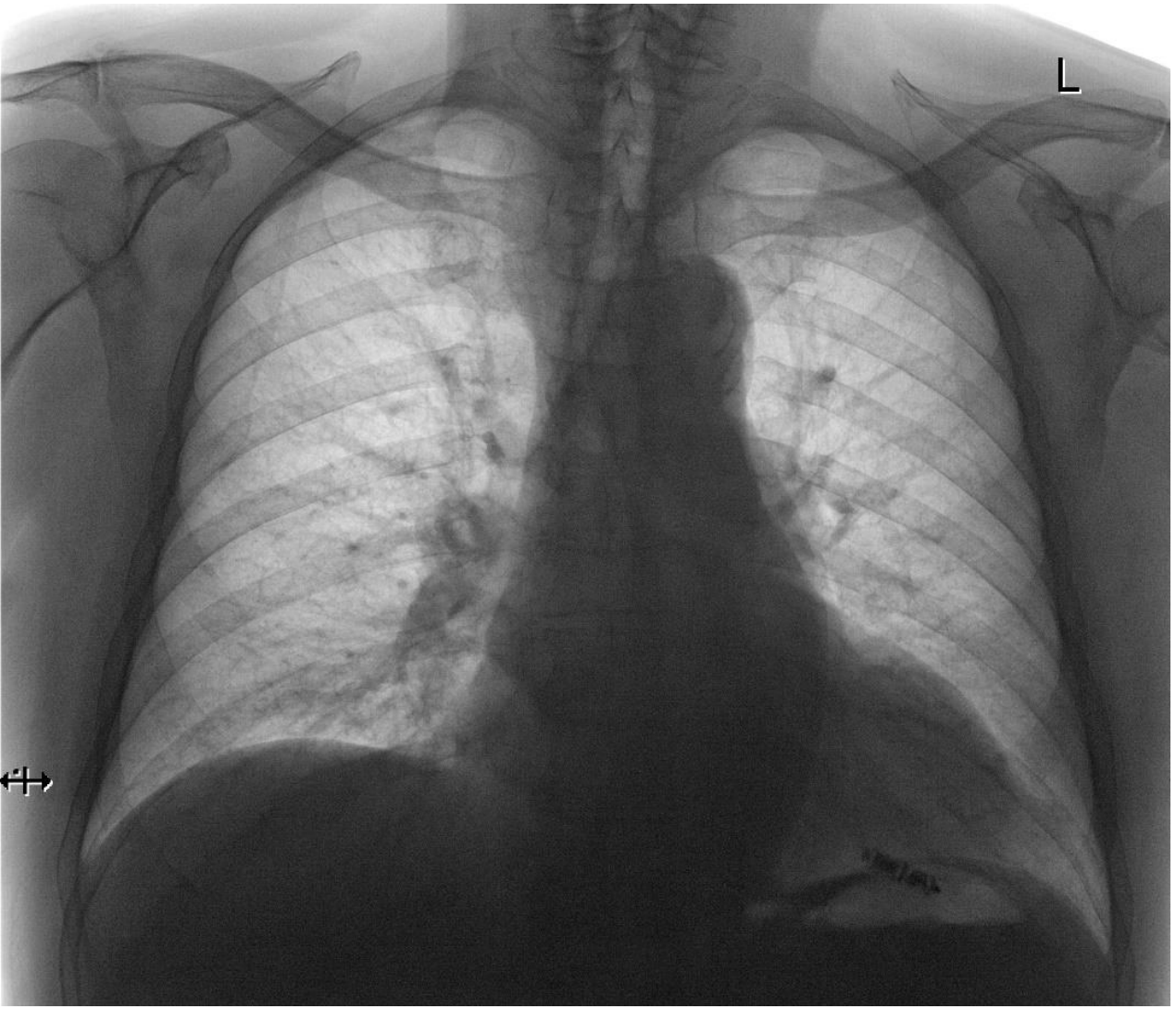
<u>Typische Präsentation:</u>

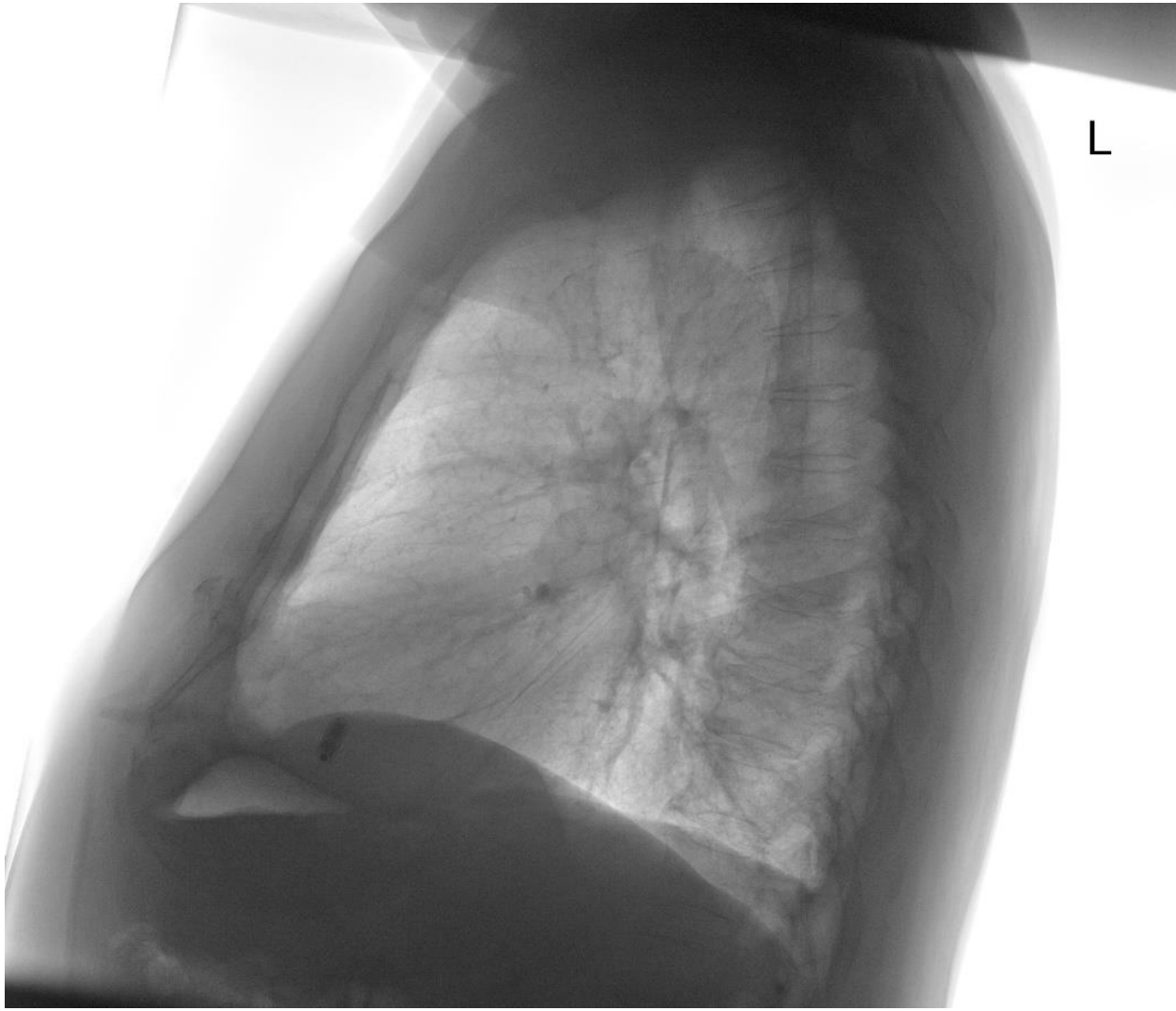
- Langsamer Puls
- "Pausen" im Herzschlag
- Fehlender Pulsanstieg unter Belastung
- Leistungsschwäche
- Schwindel, "Schwarz vor Augen"

- Potentiell lebensgefährlich
- Abklärung in jedem Fall notwendig!


L

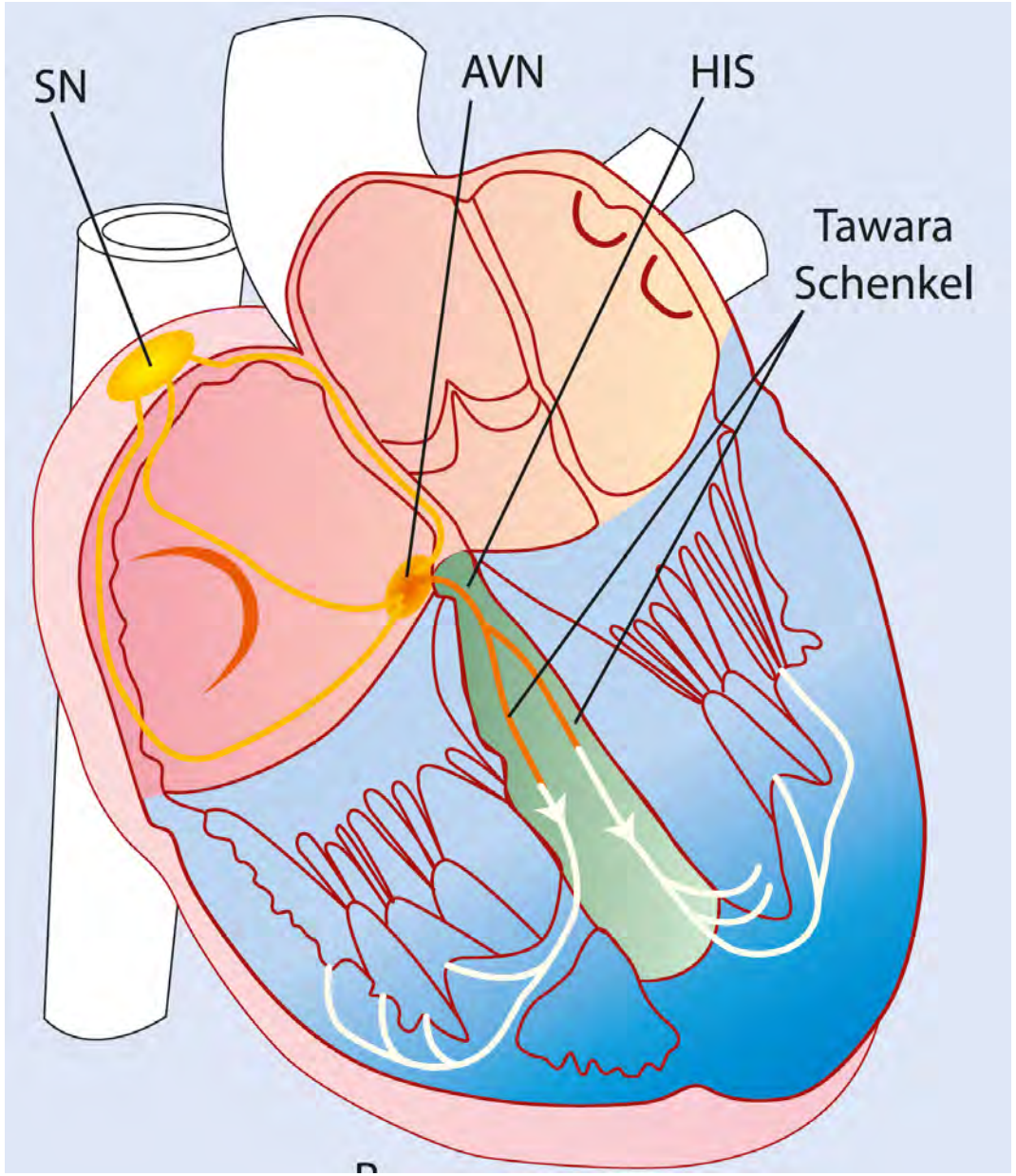
Micra Transkatheter Pacer





Steffel 2015

Schnelle Herzrhythmusstörungen



<u>Typische Präsentation:</u>

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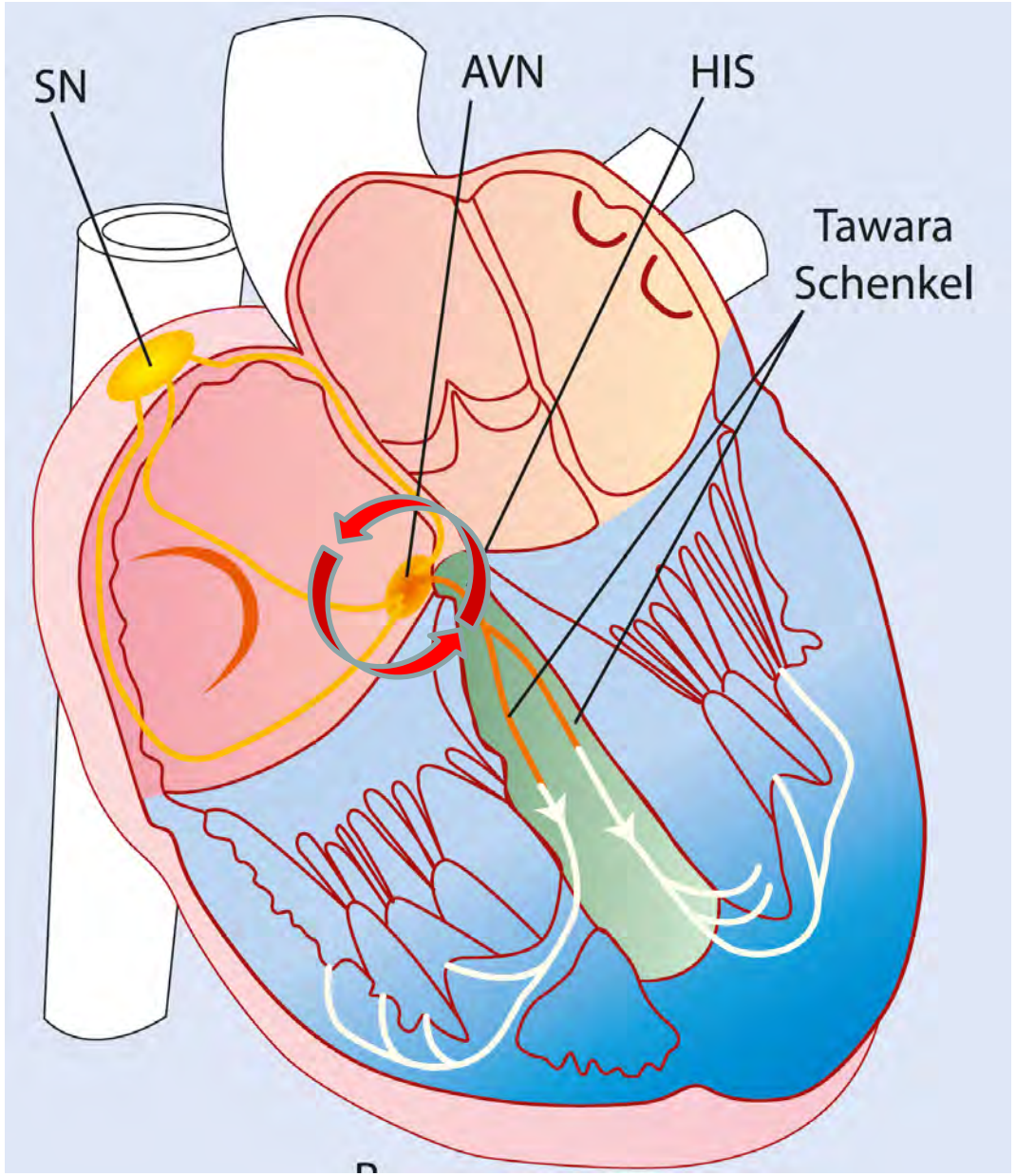
- "Schlagen in den Hals"
- Schwindel / Schwarz vor Augen

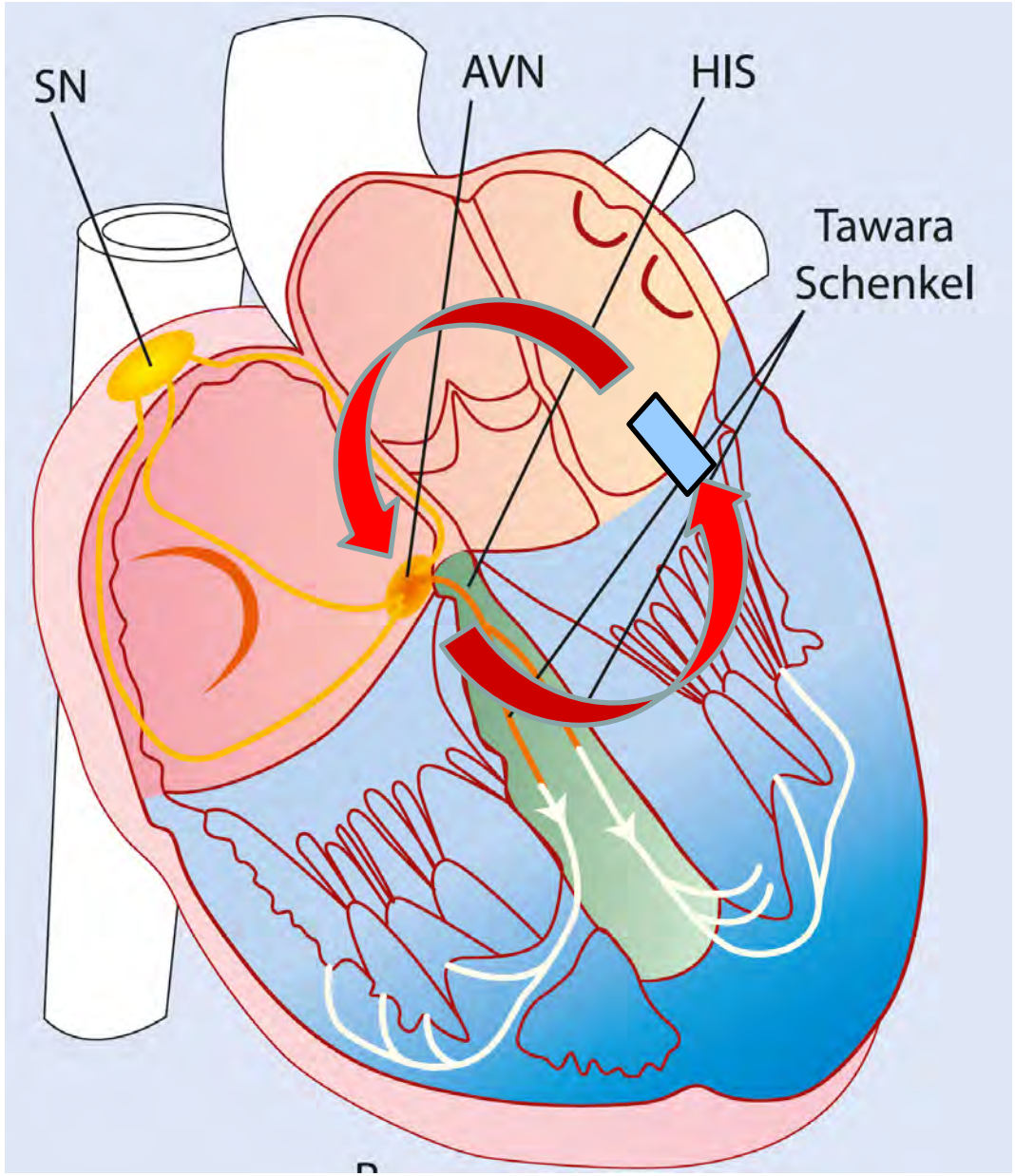
- Abklärung in jedem Fall sinnvoll!

Schnelle Herzrhythmusstörungen



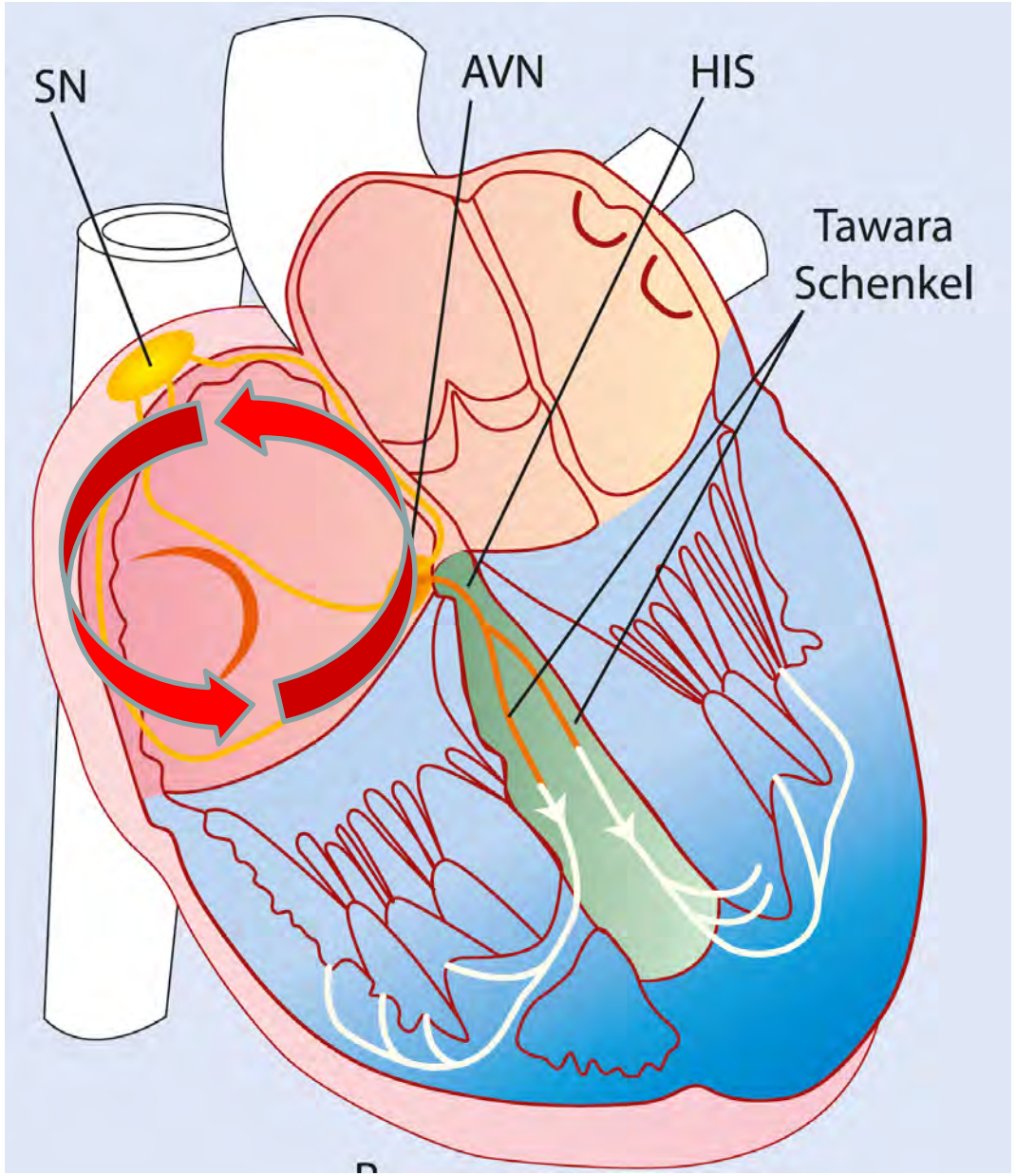
- AV Knoten Reentrytachykardie

Schnelle Herzrhythmusstörungen



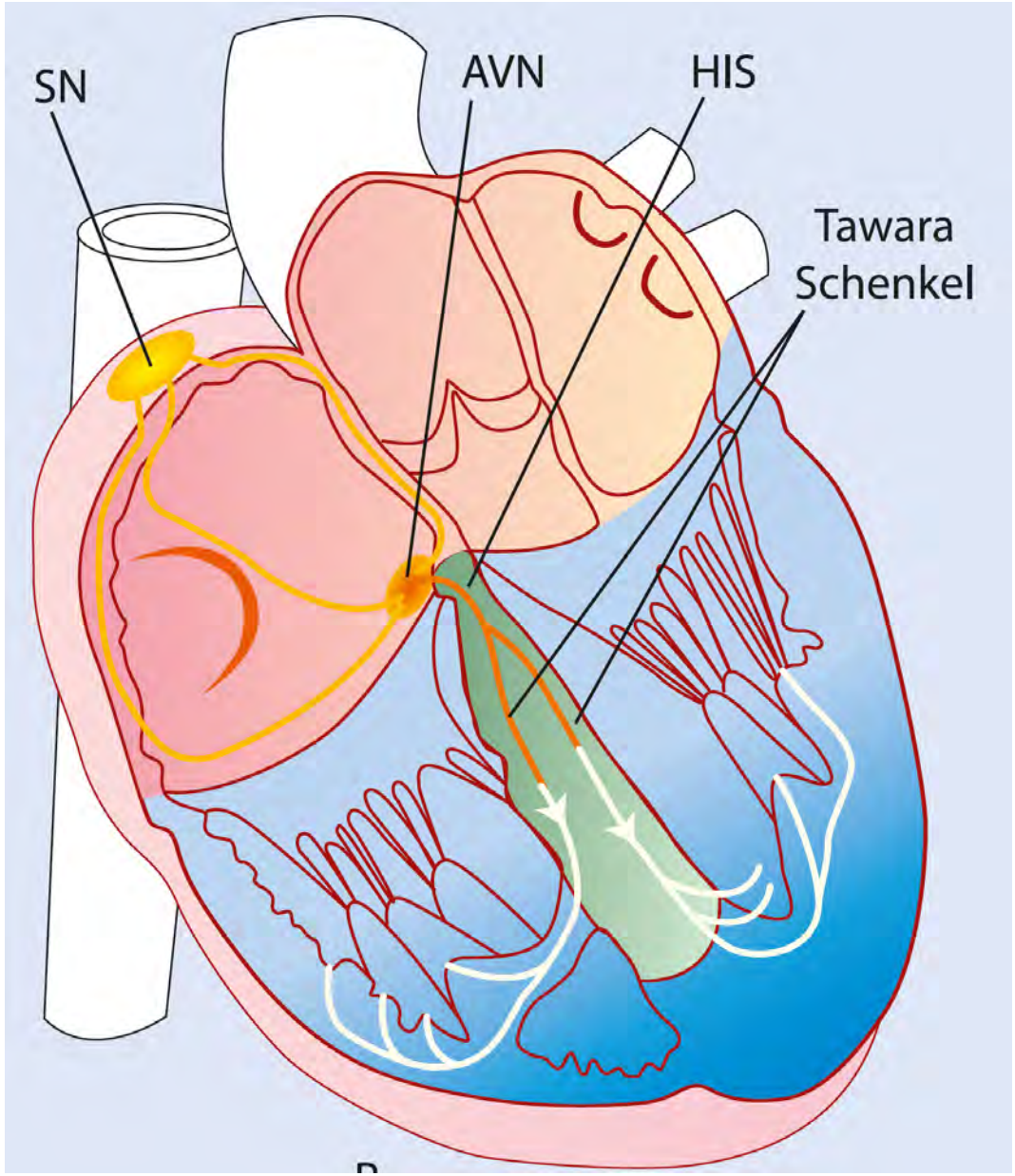
- AV Knoten Reentrytachykardie
- AV Reentrytachykardie ("WPW")

Schnelle Herzrhythmusstörungen



- AV Knoten Reentrytachykardie
- AV Reentrytachykardie ("WPW")
- Vorhofflattern

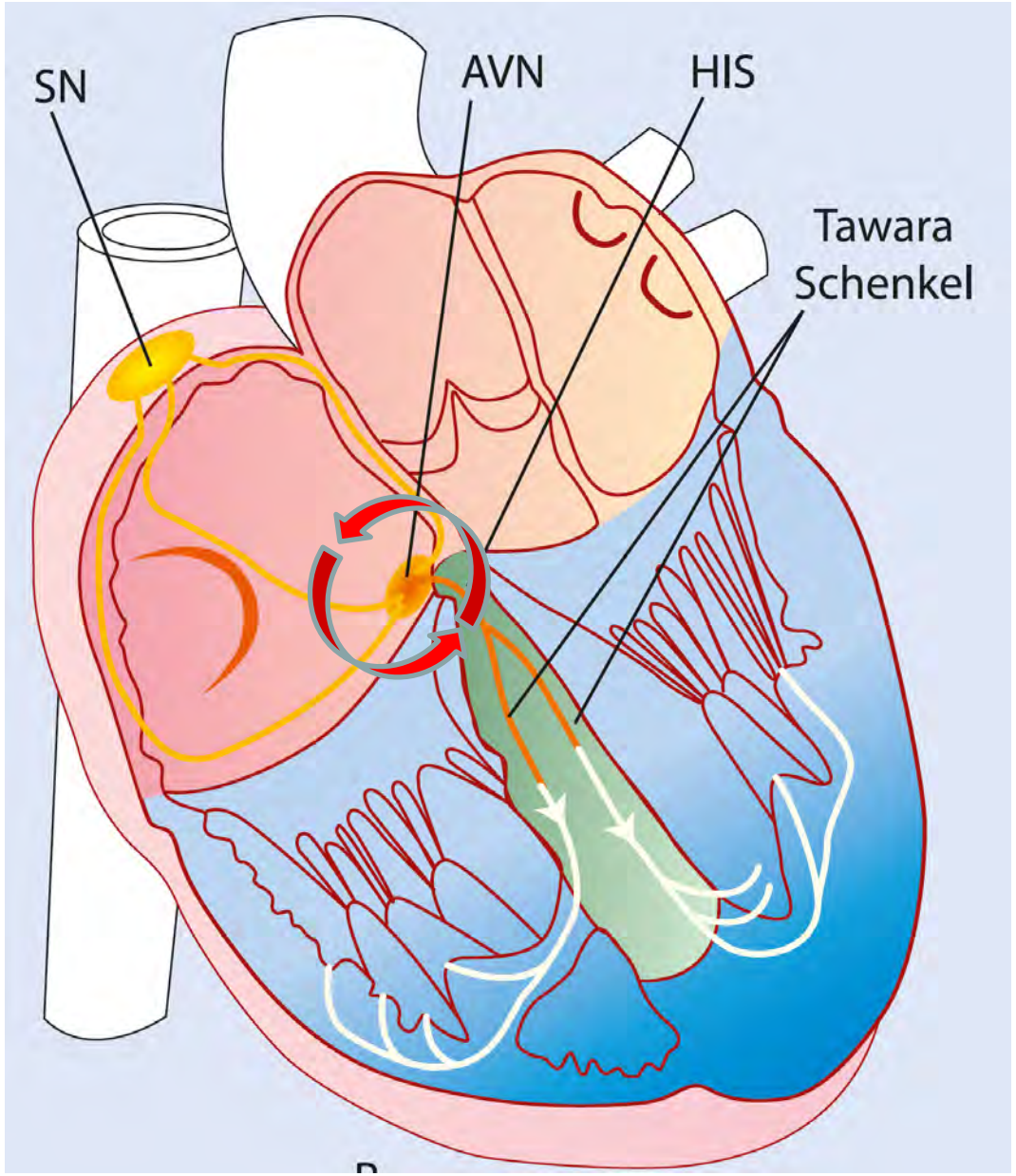
Schnelle Herzrhythmusstörungen



- AV Knoten Reentrytachykardie
- AV Reentrytachykardie ("WPW")
- Vorhofflattern

- ➢ Symptomatik sehr ähnlich
- ➢ Durch Medikamente schlecht / suboptimal beeinflussbar
- ➢ Durch Katheterablation gut behandelbar

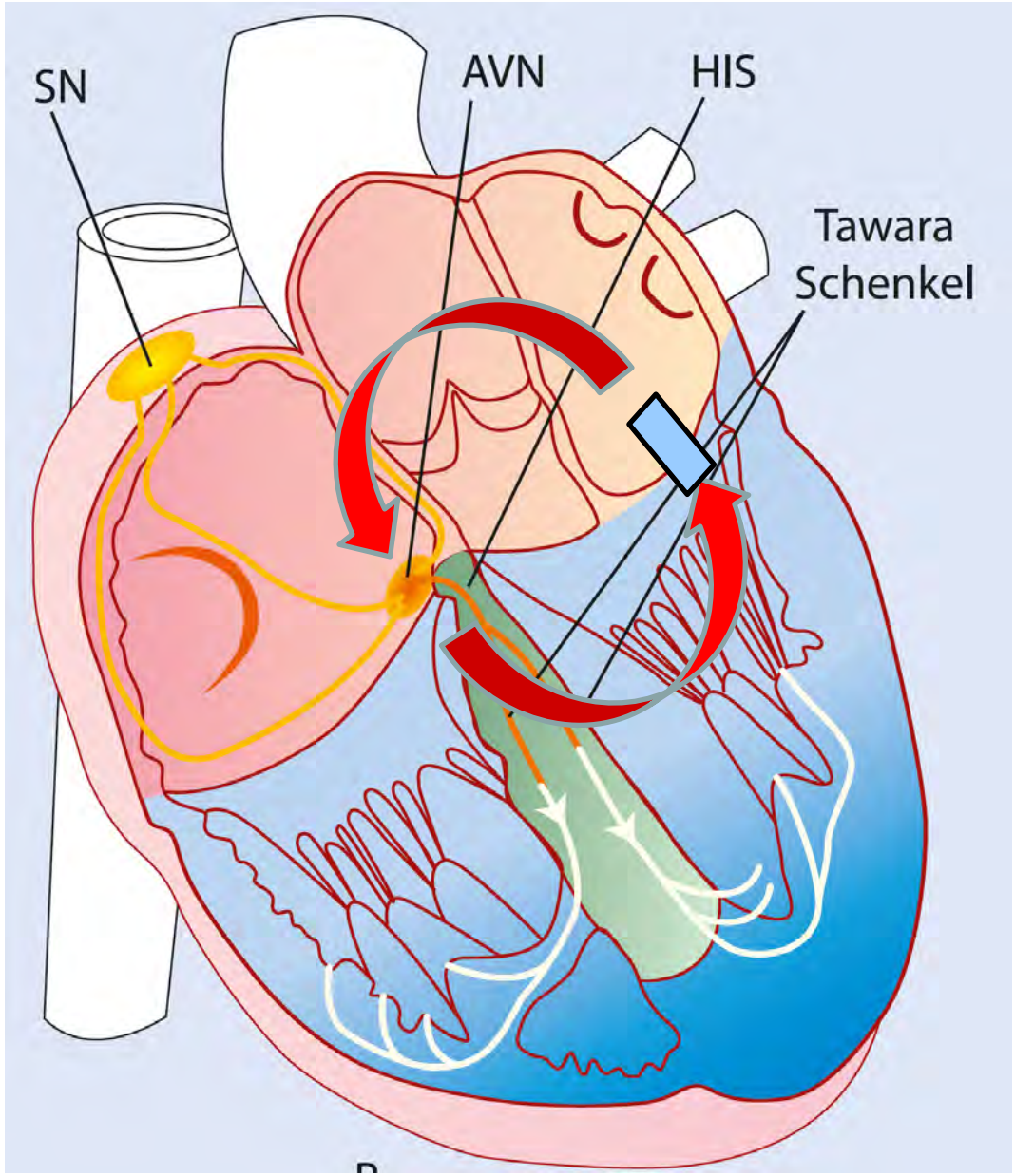
Erfolgschancen der Katheterablation



- AV Knoten Reentrytachykardie

→ 95-98%

Erfolgschancen der Katheterablation



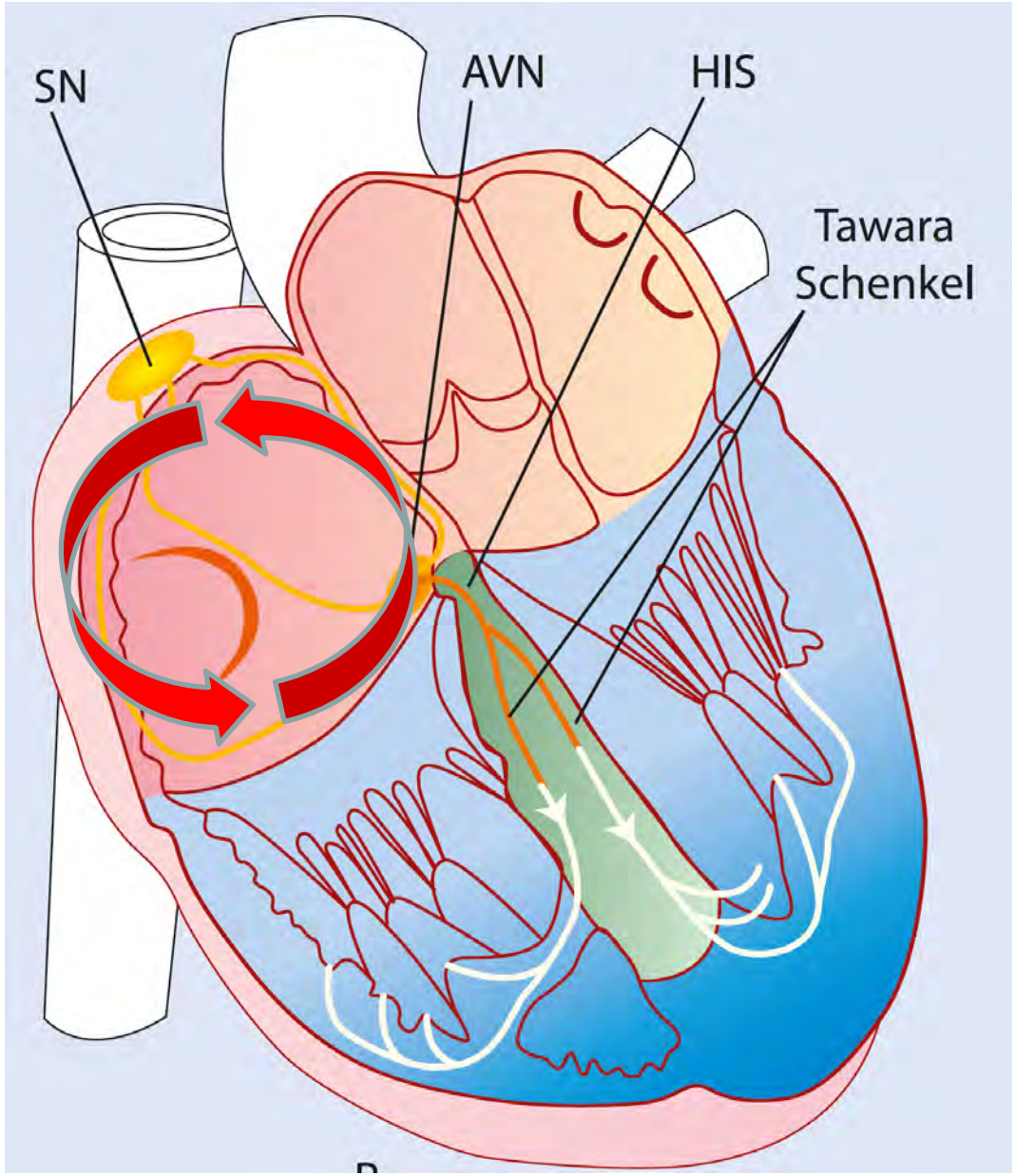
- AV Knoten Reentrytachykardie

→ 95-98%

- AV Reentrytachykardie ("WPW")

→ 90-95%

Erfolgschancen der Katheterablation



- AV Knoten Reentrytachykardie

→ 95-98%

- AV Reentrytachykardie ("WPW")

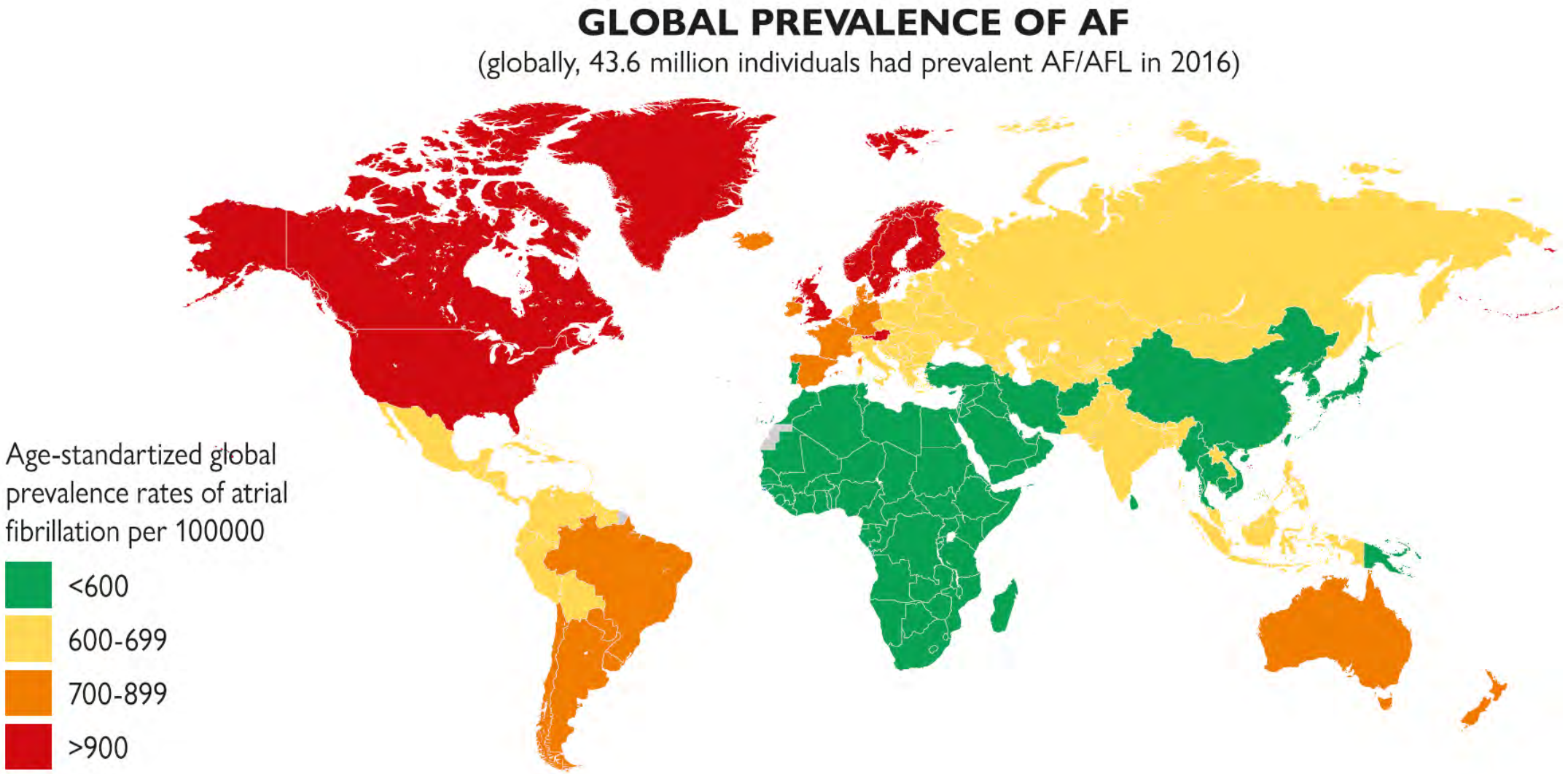
→ 90-95%

- Vorhofflattern

→ >90%

→ Katheterablation = Therapie der Wahl

Vorhofflimmern: Epidemie des 21. Jahrhunderts



Hindricks et al., European Heart Journal 2020

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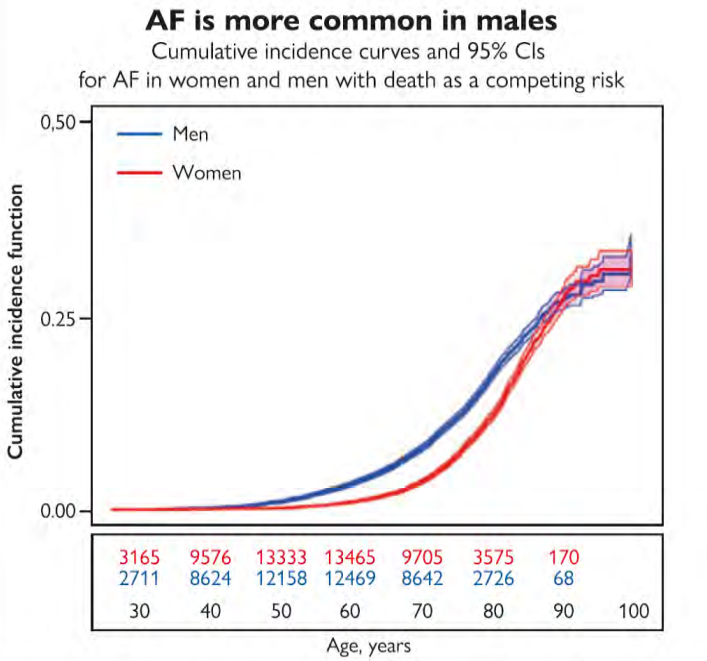
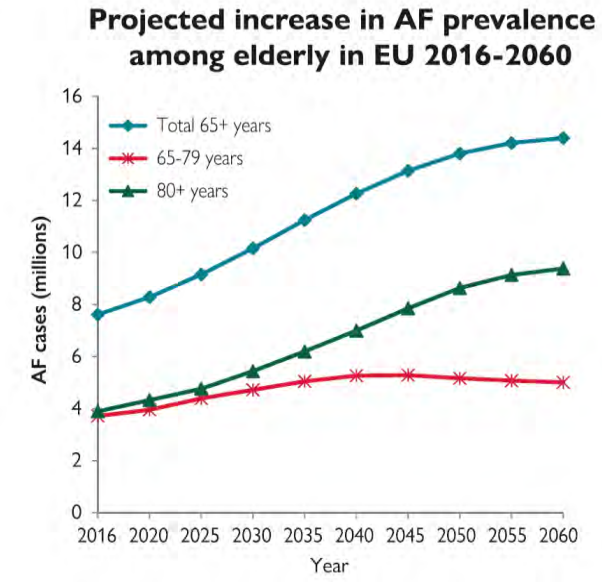
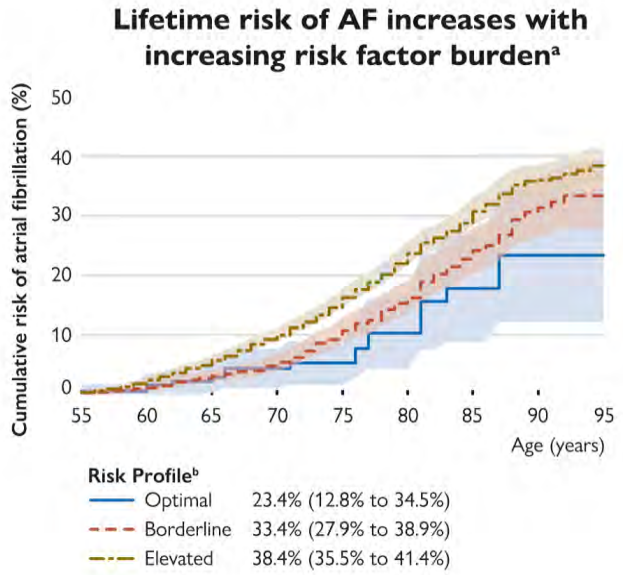
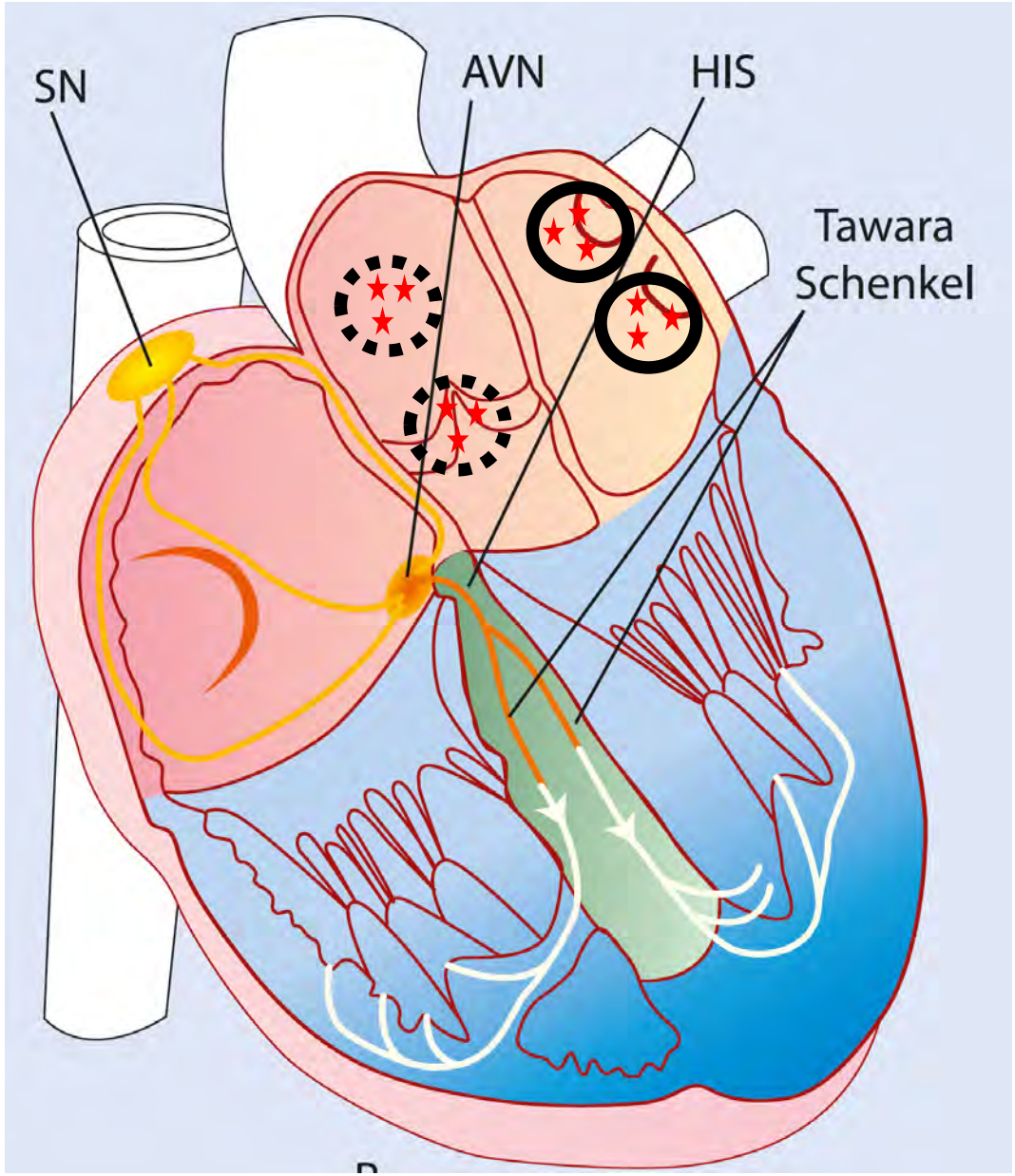






Hindricks et al., European Heart Journal 2020

Vorhofflimmern



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→ Abklärung in jedem Fall sinnvoll!

ESC European Society of Cardiology

European Heart Journal (2020) **00**, 1–126
doi:10.1093/eurheartj/ehaa612

ESC GUIDELINES

2020 ESC Guidelines for the diagnosis and management of atrial fibrillation developed in collaboration with the European Association of Cardio-Thoracic Surgery (EACTS)

The Task Force for the diagnosis and management of atrial fibrillation of the European Society of Cardiology (ESC)

Developed with the special contribution of the European Heart Rhythm Association (EHRA) of the ESC

2020 Richtlinien der Europäischen Gesellschaft für Kardiologie

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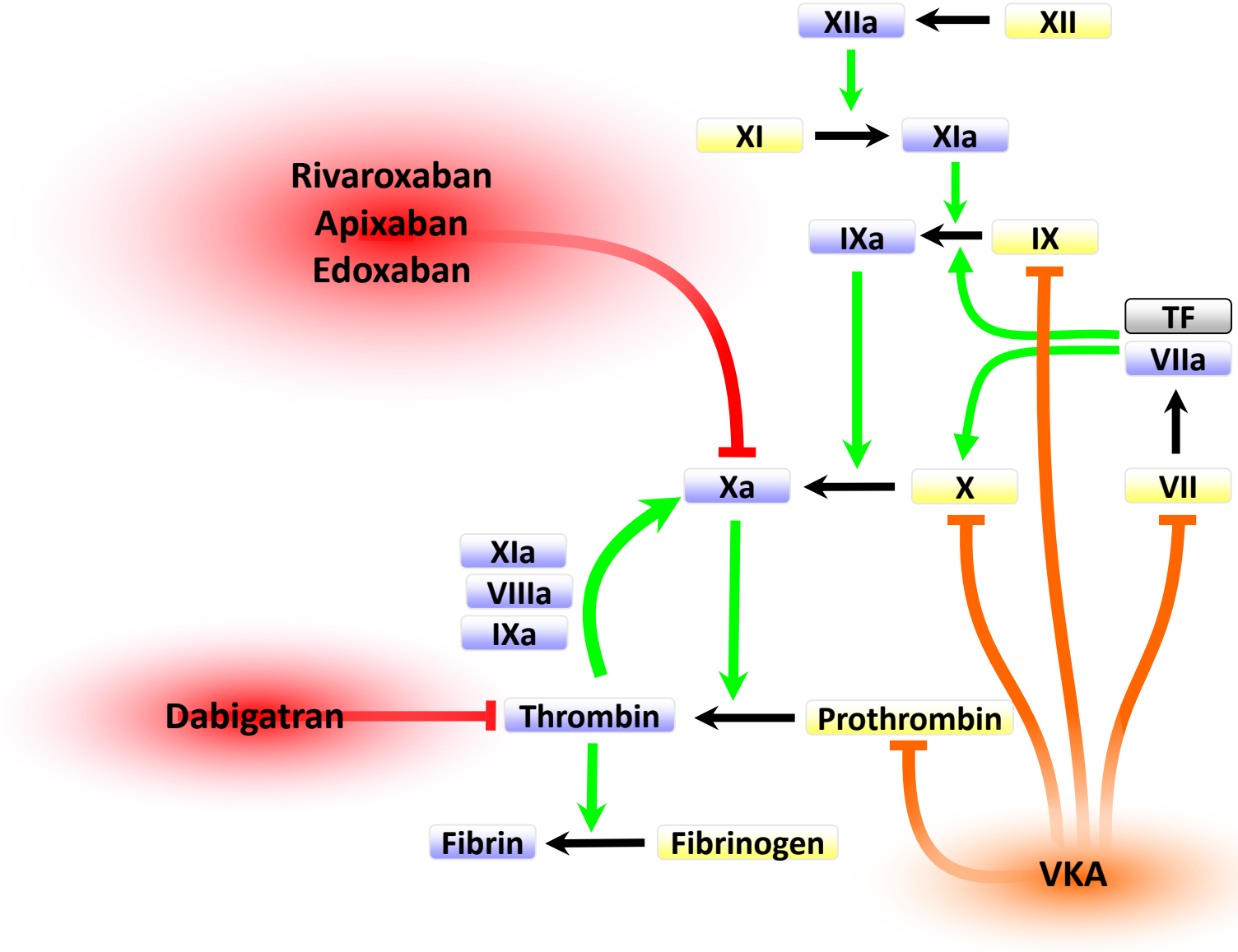
Hindricks et al., European Heart Journal 2020

Vorhofflimmern: 2 Behandlungsziele

1. Behandlung der Arrhythmie
2. Prävention des Schlaganfalls

Blutverdünnung beim Vorhofflimmern



Mod. nach Steffel & Braunwald, European Heart Journal 2011

ESC European Society of Cardiology

Europace (2021) **00**, 1–65
doi:10.1093/europace/euab065

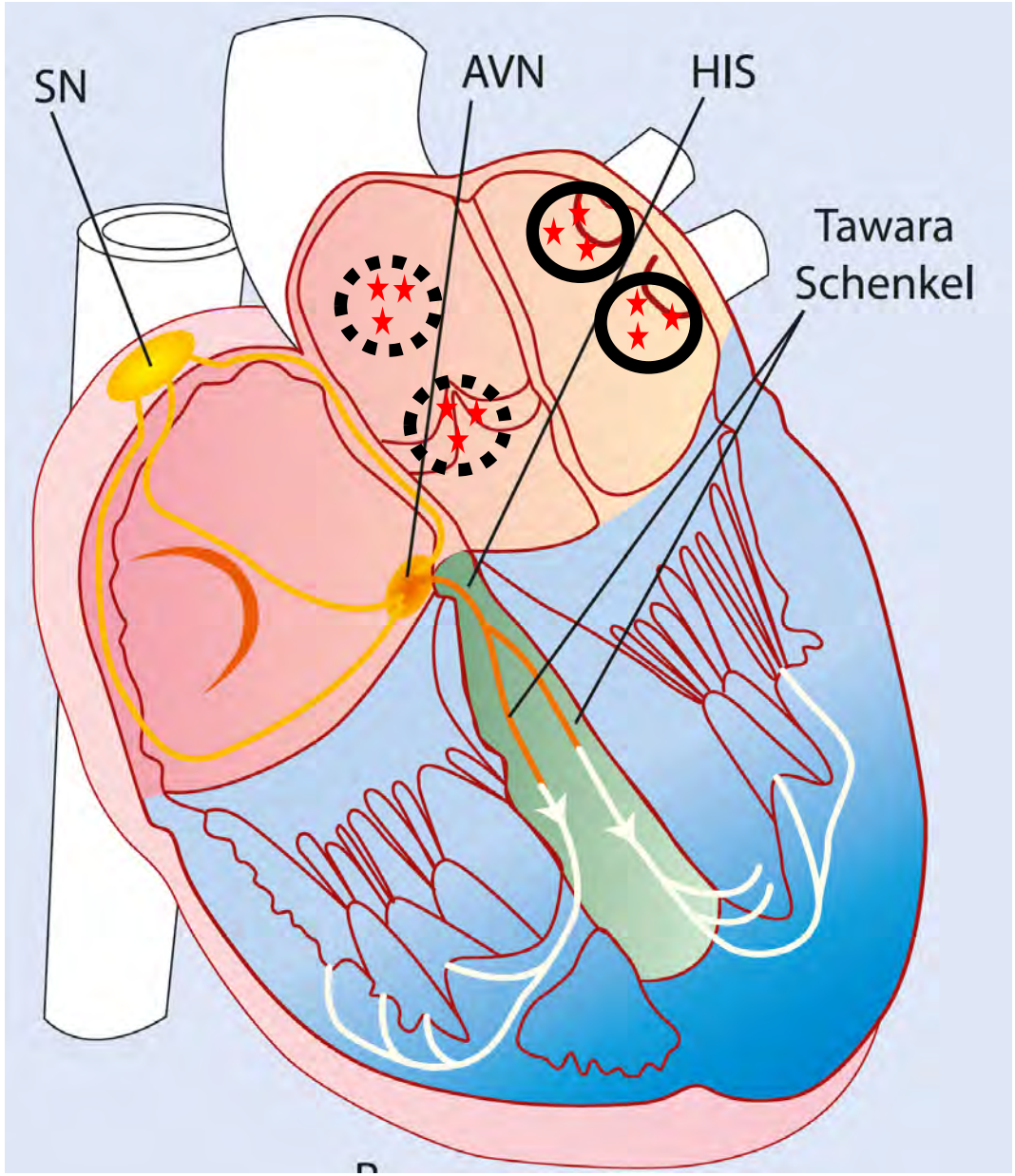
POSITION PAPER
EHRA PRACTICAL GUIDE

2021 European Heart Rhythm Association Practical Guide on the Use of Non-Vitamin K Antagonist Oral Anticoagulants in Patients with Atrial Fibrillation

Jan Steffel[1]*, Ronan Collins[2], Matthias Antz[3], Pieter Cornu[4], Lien Desteghe[5,6], Karl Georg Haeusler[7], Jonas Oldgren[8], Holger Reinecke[9], Vanessa Roldan-Schilling[10], Nigel Rowell[11], Peter Sinnaeve[12], Thomas Vanassche[12], Tatjana Potpara[13], A. John Camm[14], and Hein Heidbüchel[5,6]

www.noacforaf.eu

Vorhofflimmern



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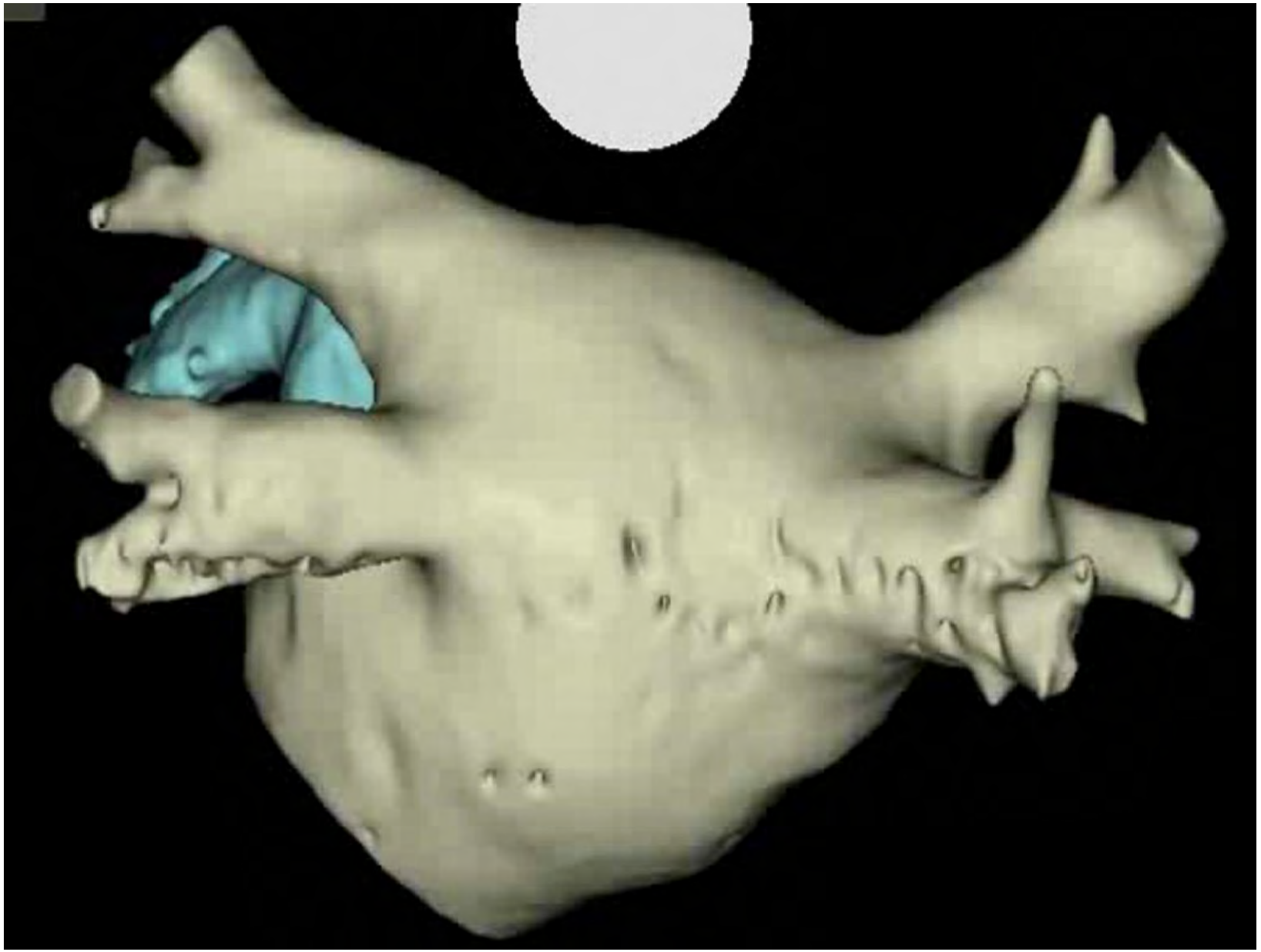
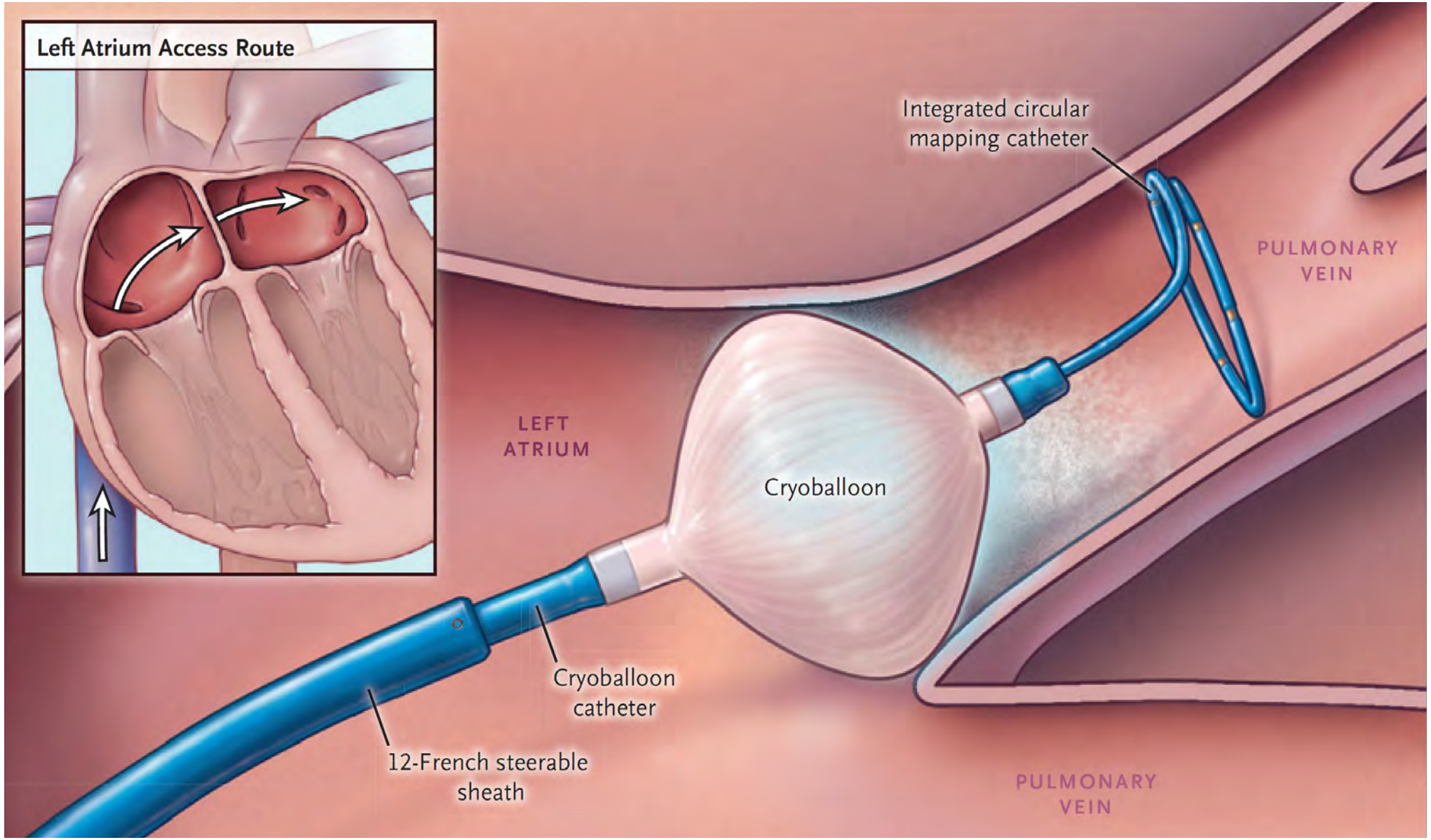
- Luftnot bei Belastung
- "Nicht mehr gut mögen"
- Nicht selten auch: Zufallsdiagnose!

→ Abklärung in jedem Fall sinnvoll!

Der linke Vorfhof (Ansicht von hinten)

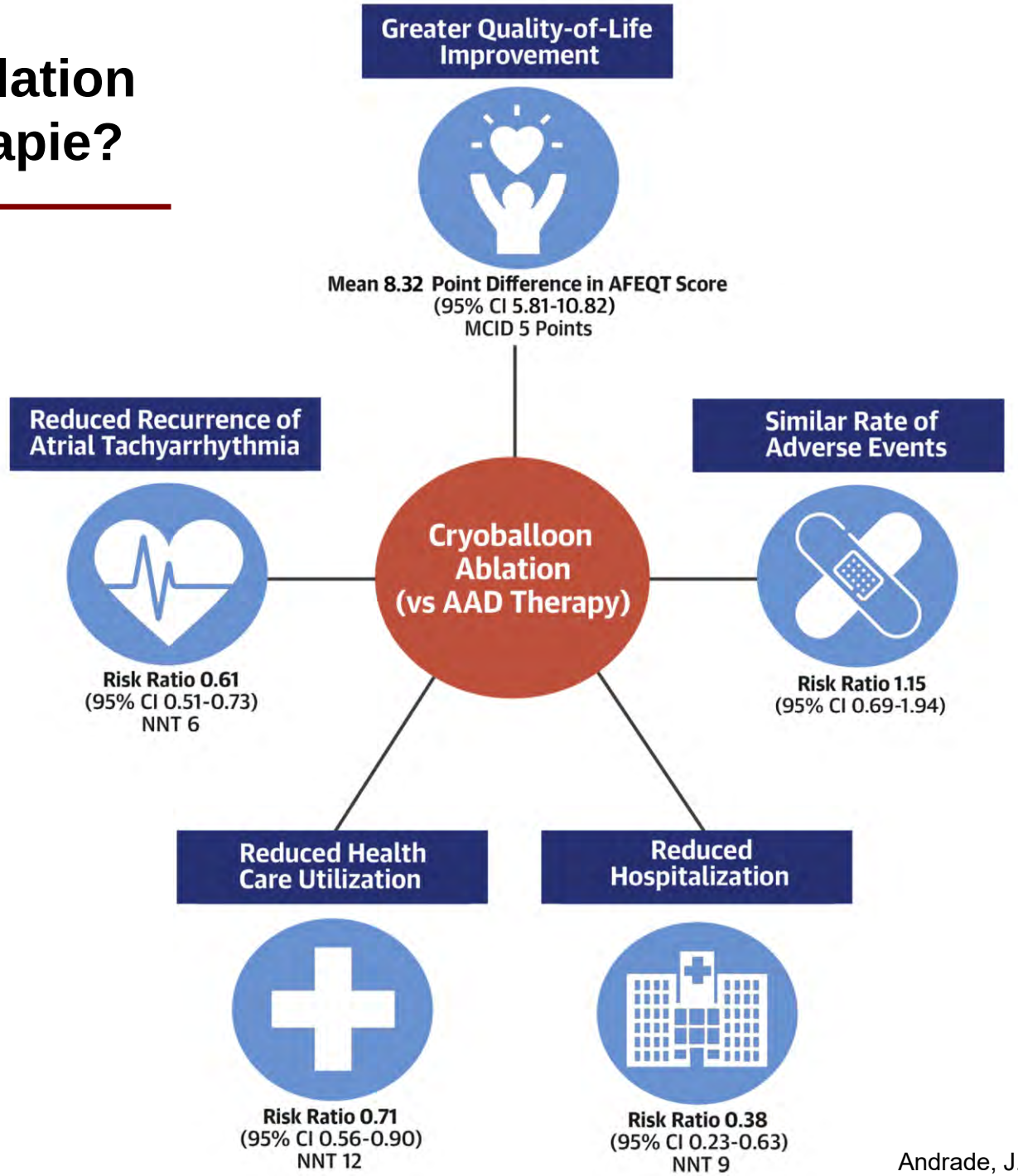


Cryo ablation for AF



Kuck et al., NEJM 2016

Vorhofflimmernablation als Erstlinientherapie?



Andrade, J.G. et al. J Am Coll Cardiol. 2021;78(9):914–930.

Schwere Komplikationen bei / nach Vorhofflimern Ablation

- Meta-analysis
- 192 studies
- 83'236 patient

	No. of Studies	% Pooled Complication Rate (95% CI)	I^2 Statistic
Acute complication rate	183	2.9 (2.60–3.22)	83.8
Type of complication			
Death	58	0.06 (0.03–0.09)	0.0
Atrioesophageal fistula	67	0.08 (0.05–0.11)	0.0
Pulmonary vein stenosis*	118	0.5 (0.34–0.60)	79.6
Vascular complications†	117	1.4 (1.02–1.79)	94.1
Arteriovenous fistula	45	0.40 (0.28–0.55)	45.5
Femoral pseudoaneurysm	49	0.5 (0.34–0.60)	41.2
Stroke/TIA‡	155	0.6 (0.50—0.67)	46.8
Stroke	111	0.4 (0.30–0.44)	34.3
TIA	94	0.4 (0.28–0.47)	37.9
Tamponade	131	1.0 (0.83–1.14)	68.5
Pericardial effusion	67	0.7 (0.56–0.88)	55.0
Phrenic nerve injury	48	0.4 (0.22–0.54)	70.2
Diaphragmatic paralysis	21	0.3 (0.15–0.43)	0.0
DVT/PE	33	0.15 (0.09–0.21)	0.0
Pneumothorax	22	0.2 (0.08–0.29)	0.0
Hemothorax	25	0.2 (0.10–0.28)	0.0
Sepsis, abscesses, or endocarditis	20	0.1 (0.06–0.24)	0.0
Valve damage	26	0.2 (0.08–0.25)	0.0

Gupta et al., Circ Arrhythm Electrophysiol. 2013;6:1082-1088

Schwere Komplikationen bei / nach medikamentöser Therapie des Vorhofflimerns

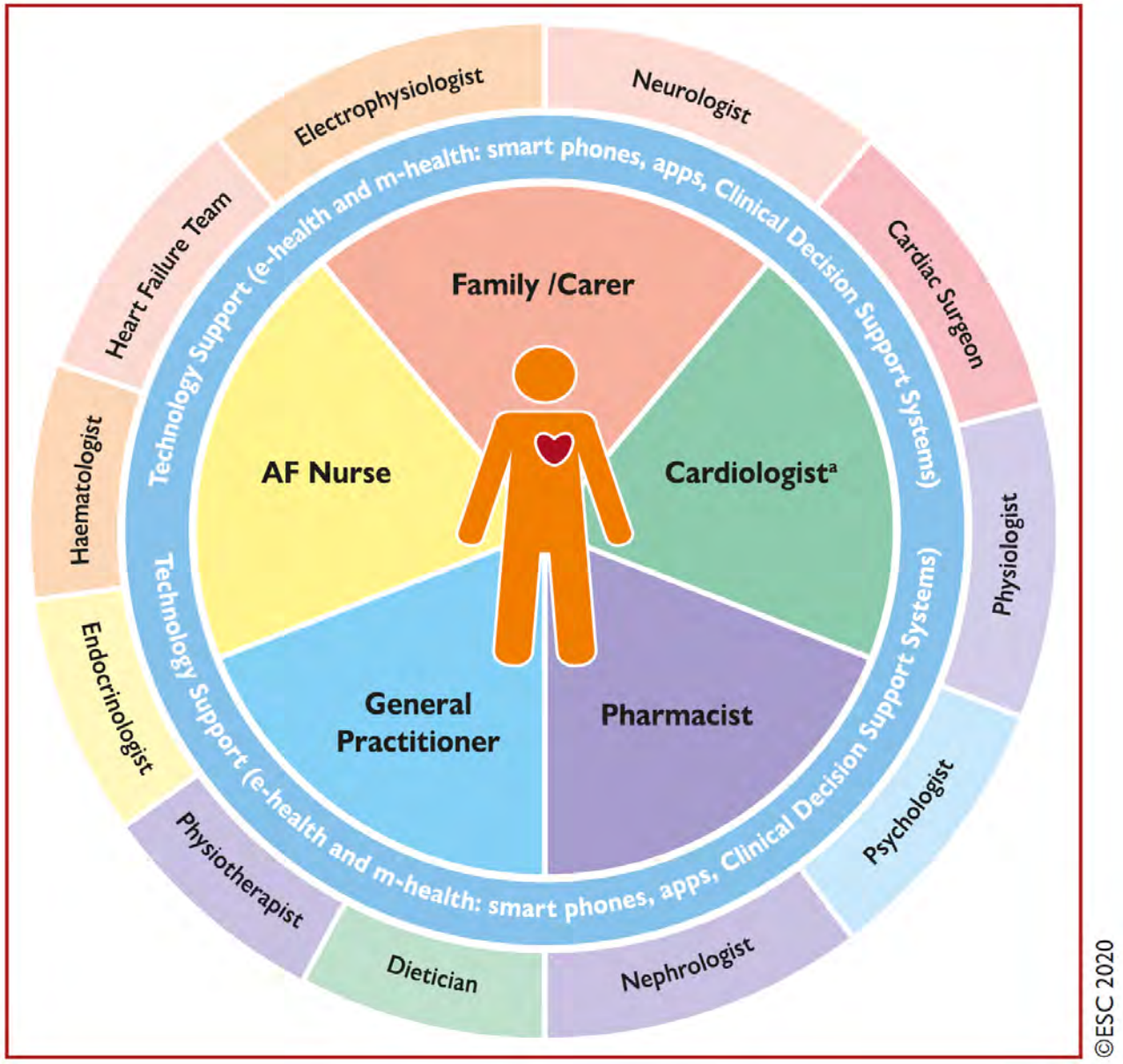
- 34 Studies from 1990 to 2007

Table 6. Safety Outcomes for Patients With AF Receiving AAD Therapy

	Overall		
Safety Outcomes	t	n/N	%
Mortality			
Death overall	33	120/4291	2.8
Sudden death	21	18/2900	0.6
Treatment-related death	22	15/3179	0.5
Not treatment-related death	20	40/3023	1.3
Adverse events			
CV events	10	58/1572	3.7
Bradycardia	19	44/2349	1.9
GI	16	97/1499	6.5
Neuropathy	4	48/969	5.0
Thyroid dysfunction	5	19/576	3.3
Torsades	12	16/2238	0.7
Q-T* prolongation	12	5/2034	0.2
Total No. of patients with events	24	989/3318	29.8
Discontinuations			
Total	32	1035/4347	23.8
Due to AE	32	384/3682	10.4
Due to inefficacy	12	229/1694	13.5
Due to noncompliance	4	19/457	4.2

Calkins Circulation Arrhythmia 2009;2:349

Integrated AF management (2020 ESC AF Guidelines)



Hindricks et al., European Heart Journal 2020

Zusammenfassung

- Herzrhythmusstörungen sind häufig…
- … und nicht selten subjektiv bedrohlich
- Moderne Katheterablationen erlauben eine Behandlung (und teilweise "Heilung") bestimmter, häufig auftretender Herzrhythmusstörungen

  → insbesondere: AVNRT, AVRT (WPW), Vorhofflattern
- Vorhofflimmern
  - Schlaganfallsprävention → Blutverdünnung (Richtlinien, grosse Studien)
  - Behandlung der Arrhythmie: Katheterablation in vielen Situationen eine eine gute Option
- Moderne Behandlung von Herzrhythmusstörungen: Immer eine "Teamarbeit"!
  - Hausarzt
  - Kardiologe
  - "Elektriker"
  - **PATIENT!**