# - Medicine - Atrial Fibrillation

Types			
Paroxysmal spo	nal spontaneous termination within 7 days		
Persistent requ	requires cardioversion to restore sinus rhythm		
Permanent sinu	nus rhythm cannot be restored		
Treatment			
Freq. control	goal <110/min		
	T Bisoprolol 2.5-5 mg		
	T Digoxin 0.13-0.25 mg if heart failure		
Rhythm control	if symtomatic		
Paroxysmal	T flekainid (Tambocor) 50-100 mg x2		
Persistent	Electrical cardioversion		
	AF <48 h $\rightarrow$ no anticoagulants needed		
	AF >48 h → anticoagulants > 3 weeks before procedure (alternative: TEE)		
Anticoagulants	If CHA₂DS₂-VASc > 2		
	1. NOAK, ex. dabigatran (Pradaxa)		
	2. Warfarin (Waran)		
	3. Long-term treatment with LMH		

## - Medicine - NYHA

	Mortality % (untreated) after 1 resp. 5 years		
NYHA	Symptoms	1 y	5 y
I	Impaired heart function without symptoms	5	20
II	Shortness of breath and fatigue only during strenuous exercise	10	30
III a	Shortness of breath and fatigue during light to medium exercise	25	60
III b	III a, and cannot walk >200m	Sam III	
IV	Shortness of breath and fatigue at rest. Often confined to bed.	50	80

New York Heart Association (NYHA) Functional Classification

#### Diagnostics modalities for heart failure (HF)

**Heart ultrasound** (confirms the diagnosis)

ECG (normal ECG speaks strongly against HF)

Plain film X-ray (heart/lung, to exclude other conditions)

**NT-proBNP** (if low + ok ECG, rules out HF w. high certainty)

Lab tests (Hb, Na, K, Crea., PK, B-glucose, TSH, CRP, iron)

### - Medicine - CHA2DS2VAS

С	Cardiac - Heart failure	
Н	Hypertension	1
A	Age ≥ 75 years	2
D	Diabetes	1
S	Stroke / TIA / Embolism	2
V	Vascular Atherosclerotic disease	
A	Age 65-74	1
S	Sex - Female*	1

<sup>\*</sup>No indication for antithrombotic treatment if only risk factor

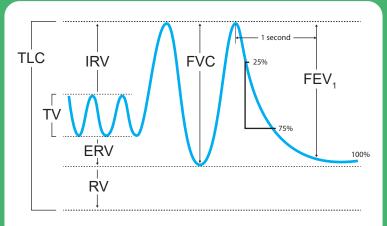
AF and score ≥2 → Antithrombotic treatment *IF* low-medium risk of bleeding (HAS-BLED <3)

See local guidelines for specific antithrombotic drugs

Example of initial Warfarin treatment, 2.5mgx1 p.o.

Day 1: 2-4 | Day 2: 2-3 | Day 3: 1-4 (dep. on INR)

# - Medicine - Spirometry



### - Medicine - HAS-BLED

Н	Hypertension >160 mmHg	
A	Abnormal liver or kidney*	1-2
S	Stroke	1
В	Bleeding Previous tendency or anaemia	1
L	Labile INR High / Unstable INR or <60% time in therapeutic range	1
Ε	Elderly (>65 years)	1
D	Drugs E.g. ASA, NSAID or high alcohol consumption	1-2
	* Kidney: Creatinine >200, dialysis, or transpla	ant

Liver: Chronic liver disease, Bilirubin 2x ref, or ALAT/ASAT/ALP 3x ref.

High risk of bleeding if ≥3 points

- Medicine -

- Medicine -

#### **Heart Failure Treatment**

#### NYHA Treatment when EF <45%

**ACE inhibitor\*** 

I If symptomatic oedema
Diuretic

Beta-blocker (slow increase in dose)

If EF <35%

II Aldosterone receptor antagonist

If EF <35% and QRS >120 ms

Assess need for CRT and/or ICD

**III + IV** Advanced treatment/palliative care.

\*If not tolerated → Angiotensin II receptor antagonist, EF = Ejection Fraction

Drug class	Example	Start (mg)	Target (mg)
ACE-Inhibitor	Enalapril	2.5 x 2	10-20 x 2
Diuretic	Furix	20 - 40	40 - 240
Beta-blocker	Bisoprolol	1.25 x 1	10 x 1
Aldosterone antagonist	Spironolakton	25 x 1	25-50 x 1
Angiotensin II antagonist	Candesartan	4-8 x 1	32 x 1

#### Acute heart failure (left ventricle)

**Heart position** 

Oxygen (target SaO2 >90%) or CPAP if severe lung oedema

Furosemid (10 mg/ml 2-4 ml i.v.)

Nitroglycerin i.v. (0.25-0.5 mg) or

**spray** (0.4 mg) sublingually *if systolic BP* >100