

# Hungarian Atrial fibrillation and flutter Registry

Kezelőorvos: .....

## Page 1 – Personal data

Name: .....

Race:  Indian  Asian  White  Black

Patient mail: .....

Patient post address: .....

Patient telephone: .....

## Page 2 – Atrial fibrillation diagnosis

Date of inclusion: .....

Is the patient hospitalized:  Yes  No

Diagnosis of atrial fibrillation:  Newly established  Previously known

1. Newly established

Date of diagnosis: .....

2: “Previously known

Date of first diagnosis: .....

Type of atrial fibrillation:  New-onset  Paroxysmal  Persistent

Permanent

Suspected duration of present episode:

< 48 hours

48 hours – 1 week

1 week – 1 month

1 month – 1 year

> 1 year

unknown

How was the present episode detected:

Accidental (not complaint-triggered diagnostics)

Patient self-screening (e.g. pulse, blood pressure measurement, smartwatch etc.)

Medical screening for other reasons (e.g. GP)

Follow-up screening for arrhythmia (e.g. Holter ECG, event recorder, pacemaker reading)”

Other, please specify: .....

Diagnostics because of AF related complaints

Known disease

**Is there a suspected triggering factor for the present episode?**  Yes  No

If yes

- Electrolyte disorder  Non-cardiac infection  Carditis  Hypoxia  
 Pulmonary embolism  Acute coronary syndrome  Acute heart failure  
 Physical exertion  Emotional stress  Drug/caffeine/alcohol abuse  
 Hyperthyroidism  Other: .....

### **Page 3 - Comorbidities, risk factors**

#### **Atherosclerotic diseases**

**Coronary artery disease**  No  Yes  Suspected

If yes

- Myocardial infarction  No  Previous  Current  
Unstable angina  No  Yes  
Stable angina  No  Yes  
PCI  No  Previous  Current  
CABG  No  Previous  Current  
Coronary artery stenosis  No  Not significant  Significant  
 Unknown

**Cerebrovascular disease**  No  Yes  Suspected

If yes

- Stroke  No  Previous  Current  
Transient ischemic attack  No  Previous  Current  
Carotid artery surgery or intervention  No  Previous  Current  
Carotid artery stenosis  No  Not significant  Significant  Unknown

**Peripheral artery disease**  No  Yes  Suspected

If yes

- Amputation due to PAD  No  Previous  Current  
Complaints of claudication  No  Yes  
Peripheral artery surgery or intervention  No  Yes  
Peripheral artery stenosis  No  Not significant  Significant  Unknown

**Atherosclerosis of aorta or other vessels**     No     Yes     Unknown

**Familiar history of early ischemic vascular events**     No     Yes     Unknown

**Structural cardiac diseases (see also echocardiography section)**

**Dilated cardiomyopathy**     Yes     No

If yes

***Possible etiology (multiple):***

Unknown     Ischemic heart disease     Hypertension

Valvular disease     Toxic     Tachycardiomyopathy

Primary/genetic/familiar

**Hypertrophic cardiomyopathy**     Yes     No

If yes

LV outflow tract obstruction     Yes     No

Genetic test available     Yes     No

**Resrtictive cardiomyopathy**     Yes     No

If yes

***Possible etiology (multiple):***

Infiltrative     Stogare disease     Non-infiltrative

Endomyocardial     Other

**Myocardial noncompaction**     Yes     No

**Arrhythmogenic right ventricular cardiomyopathy**     Yes     No

**Family history of cardiomyopathy**     No     Yes     Unknown

**Prosthetic heart valve**     Yes     No

If yes

Arteficial     Biological

**Congenital heart defect**     Yes     No     Corrected

**Any heart surgery**     No     Previous     Current

**Catheter ablation**     No     Previous     Current

**Percutaneous coronary intervention**     No     Previous     Current

**Left atrial appendage closure**     No     Previous     Current

**Open chest surgery**     No     Previous     Current

**Pacemaker implantation**  Yes  No

**Family history of early atrial fibrillation, sudden cardiac death, long/short QT syndrome, channelopathies**  No  Yes  Unknown

**Venous thrombembolic diseases**

**Deep vein thrombosis**  No  Previous  Current

**Pulmonary embolism**  No  Previous  Current

**Hypertension**  Yes  No

If yes

Date of diagnosis: .....

**Diabetes mellitus**  Yes  No

If yes

Type I  Type II  Type III  Mody

If Type II

Insulin-dependent?  Yes  No

If no

Date of diagnosis: .....

**Hyperlipidaemia/dyslipidaemia**  Yes  No

**Gout/hyperuricaemia**  Yes  No

**Obesity**  Yes  No

**Renal impairment**  Yes  No

**Chronic obstructive pulmonary disease**  Yes  No

**Sleep Apnea**  Yes  No

**Liver disease**  Yes  No

**Hyperthyroidism**  Yes  No

**Hypothyroidism**  Yes  No

**Anemia**  Yes  No

**Iron deficiency**  Yes  No

**Malignancy**  Yes  No

**Dementia**  Yes  No

**History of bleeding**  Yes  No

**Smoking**  Yes  No

If yes

Amount ..... (cigarettes/ day)

How many years have you started?

Pack year:

If no

Did the patient smoke earlier?  Yes  No

If yes

Amount ..... (cigarettes/ day)

For how many years?

Pack year:

How long ago did the patient stops smoking?

**Alcohol consumption**  Yes  No

If yes

Frequency:  Occasionally  Mouthly  Weekly  Daily

Amount (per occasion): g

*(1 dl beer (4.5 vol. %) = ~3.5 g alcohol/ 1 dl wine (12.5 vol. %) = ~10 g alcohol/1 dl hard drink (50 vol. %) = ~40 g alcohol)*

For how many years?

Total alcohol consumption in the last two week?

If no

Did the patient drink alcohol earlier?  Yes  No

If yes

Frequency:  Occasionally  Mouthly  Weekly  Daily

Amount (per occasion): g

*(1 dl beer (4.5 vol. %) = ~3.5 g alcohol/ 1 dl wine (12.5 vol. %) = ~10 g alcohol/1 dl hard drink (50 vol. %) = ~40 g alcohol)*

For how many years?

How long ago did the patient stops drinking alcohol?

**Drug use**  Yes  No

If yes

Type of drug: .....

Amount: .....

For how many years?

**Physical activity**

None (no exercise or exercise for < 3 hours/week for <2 years)

- Occasionally (< 3 hours/week for  $\geq 2$  years)
- Regularly (> 3 hours/week for  $\geq 2$  years)
- Intensely (> 7 hours/week for  $\geq 2$  years)

**Page 4 - Complaints**

- Palpitation**  No  New  Worsening
- Irregular pulse**  No  New  Worsening
- Chest pain**  No  New  Worsening
- Sweating**  No  New  Worsening
- Reduced exercise tolerance**  No  New  Worsening
- Shortness of breath**  No  New  Worsening
- NYHA functional class**  N/A  I  II  III  IV

If "I" or "II" or "III" or "IV"

NYHA functional class prior to worsening of shortness of breath  I  II  III  
 IV  N/A

- Orthopnea**  No  New  Worsening
- Paroxysmal nocturnal dyspnea**  No  New  Worsening
- Ankle edema**  No  New  Worsening
- Extreme lethargy**  No  New  Worsening
- Dizziness**  No  New  Worsening
- Fainting**  No  New  Worsening

**EHRA score**

- EHRA I - No symptoms
- EHRA II - Mild symptoms; normal daily activity not affected
- EHRA III - Severe symptoms; normal daily activity affected
- EHRA IV - Disabling symptoms; normal daily activity discontinued

**Page 5 – Physical status**

- Height:** ..... cm
- Body weight:** ..... kg
- Body Mass Index (BMI):** ..... kg/m<sup>2</sup>
- Body surface area:** ..... m<sup>2</sup>
- Systolic blood pressure:** ..... Hgmm
- Diastolic blood pressure:** ..... Hgmm

**Heart rate:** ..... cm

**Pulmonary Congestion**  Yes  No

**Ankle oedema**  Yes  No

**Pleural effusion**  Yes  No

**Ascites**  Yes  No

**Jugular vein distension**  Yes  No

**Peripheral hypoperfusion**  Yes  No

**Cardiac murmurs**  Yes  No

## **Page 6 – ECG analysis**

### *ECG analysis 1*

**Date of ECG** .....

**Heart rate** ..... / min

**Is it normally conducted sinus rhythm**  Yes  No

If yes

Heart rate ..... / min

PQ..... ms

QRS..... ms

QRS axis ..... degrees

If no

Atrial activation

Sinus rhythm

Atrial fibrillation

Atrial flutter

Type I

atypical

Atrial tachycardia

Ectopic atrial rhythm

Paced atrial beats

None/retrograde

N/A because of other major arrhythmia

AVRT

orthodromic  antidromic

AVNRT

Pacemaker mediated tachycardia

Accelerated junctional rhythm

Idioventricular rhythm

Ventricular tachycardia

Ventricular fibrillation

Atrial rate (0 if not applicable) .....

Premature atrial complexes:  Yes  No  N/A

AV conduction

Normal

PQ ..... ms

N/A (atrial fibrillation, absolute arrhythmia)

1st degree AV block

PQ ..... ms

2nd degree AV block

Mobitz I  Mobitz II  Occasional blocked SVES

3rd degree AV block

AV sequential pacing

PQ ..... ms

Retrograde

Preexcitation via accessory bundle"

PQ .....ms

QRS duration ..... ms

QRS axis ..... degrees

Ventricular conduction

Normal  Right bundle branch block  Left bundle branch block

Left anterior fascicular block  Left posterior fascicular block

Non specific intraventricular conduction delay

Preexcitation via accessory bundle



- N/A (ventricle originated beats)
  - Paced
  - Escape rhythm (applies for junctional escape rhythm as well)
  - Accelerated ventricular rhythm     Parasystolia
  - Ventricular tachycardia
    - monomorphic     polymorphic

- Pathological Q waves:     Yes     No     N/A
- Premature ventricular complexes:     Yes     No     N/A

QT ..... ms

Repolarization

- Normal
- Secondary repolarization disorder
- Abnormal

- ST segment deviation:

- Normal
- Secondary repolarization disorder

➤ Suspected reason:

- Unknown     Normal variant (e.g. early repolarization)
- Strain     Pericarditis     Ischaemia
- Other: .....

Abnormal

➤ Suspected reason:

- Unknown     Normal variant (e.g. early repolarization)
- Strain     Pericarditis     Ischaemia
- Other: .....

- T waves

- Normal     Negative T waves     Other: .....

*ECG analysis 2*

**Date of ECG** .....

**Heart rate** ..... / min

**Is it normally conducted sinus rhythm**     Yes     No

If yes

Heart rate ..... / min  
PQ.....ms  
QRS.....ms  
QRS axis ..... degrees

If no

Atrial activation

- Sinus rhythm
- Atrial fibrillation
- Atrial flutter
  - Type I
  - atypical
- Atrial tachycardia
- Ectopic atrial rhythm
- Paced atrial beats
- None/retrograde
- N/A because of other major arrhythmia
  - AVRT
    - orthodromic
    - antidromic
  - AVNRT
  - Pacemaker mediated tachycardia
  - Accelerated junctional rhythm
  - Idioventricular rhythm
  - Ventricular tachycardia
  - Ventricular fibrillation
- Atrial rate (0 if not applicable) .....
- Premature atrial complexes:  Yes  No  N/A
- AV conduction
  - Normal
    - PQ ..... ms
  - N/A (atrial fibrillation, absolute arrhythmia)
  - 1st degree AV block

PQ ..... ms

2nd degree AV block

Mobitz I  Mobitz II  Occasional blocked SVES

3rd degree AV block

AV sequential pacing

PQ ..... ms

Retrograde

Preexcitation via accessory bundle"

PQ .....ms

QRS duration ..... ms

QRS axis ..... degrees

Ventricular conduction

Normal  Right bundle branch block  Left bundle branch block

Left anterior fascicular block  Left posterior fascicular block

Non specific intraventricular conduction delay

Preexcitation via accessory bundle

N/A (ventricle originated beats)

Paced

Escape rhythm (applies for junctional escape rhythm as well)

Accelerated ventricular rhythm  Parasystolia

Ventricular tachycardia

monomorphic  polymorphic

Pathological Q waves:  Yes  No  N/A

Premature ventricular complexes:  Yes  No  N/A

QT ..... ms

Repolarization

Normal

Secondary repolarization disorder

Abnormal

- ST segment deviation:

Normal

Secondary repolarization disorder

➤ Suspected reason:

Unknown    Normal variant (e.g. early repolarization)    Strain    Pericarditis    Ischaemia

Other: .....

Abnormal

➤ Suspected reason:

Unknown    Normal variant (e.g. early repolarization)    Strain    Pericarditis    Ischaemia

Other: .....

- T waves

Normal    Negative T waves    Other: .....

## **Page 7 – Echocardiography**

**Date of Echocardiography:** .....

**LVEDD** .....mm

**LVESD** .....mm

**LV ejection fraction (preferably Simpson's biplane):** ..... %

**LVEDV (LV End Diastolic Volume):**..... ml

**LVESV (LV end systolic volume):** .....ml

**LV septal thickness diastole:** ..... mm

**LV posterior wall thickness diastole:** .....mm

**Left atrial area:** ..... cm<sup>2</sup>

**Size of left atrium-diameter:** mm

**Left atrial area volume index (LAVI):** ..... cm<sup>2</sup>/m<sup>2</sup>

**Right atrium diameter:** .....mm

**Right atrial area:** ..... cm<sup>2</sup>

**Right ventricle dilation**   Yes    No

**Right ventricle hypertrophy**   Yes    No

**TAPSE:** ..... mm

**Wall motion abnormality**   Yes    No

**Pericardial effusion**   Yes    No

**Intracardiac thrombus**   Yes    No

**Mitral E-wave:** ..... m/s

**E-wave deceleration time:** .....m/s

**Mitral A-wave:** ..... m/s

**TDI lateral mitral annulus peak E velocity:** ..... m/s

**E/Ea:** .....

**Diastolic dysfunction**

- Normal    Grade I (impaired relaxation)    Grade II (pseudo normal)  
 Restrictive

**Valve replacement**    Yes    No

If yes

- Aortic:    None    Mechanical    Biological  
 Mitral:    None    Mechanical    Biological  
 Tricuspid:    None    Mechanical    Biological  
 Pulmonary:    None    Mechanical    Biological

**Aortic regurgitation:**

- None    Mild    Moderate    Severe

**Aortic stenosis:**

- None    Mild    Moderate    Severe

**Mitral regurgitation:**

- None    Mild    Moderate    Severe

**Mitral stenosis:**

- None    Mild    Moderate    Severe

**Tricuspid regurgitation:**

- None    Mild    Moderate    Severe

**Pulmonary regurgitation:**

- None    Mild    Moderate    Severe

**Calculated Systolic Pulmonary Artery pressure:** ..... mmHg

**IVC diameter:**..... mm

**Detailed echocardiography description, if necessary:** .....

**Page 8 – Laboratory markers**

**Sodium:** ..... mmol/l

**Potassium:** ..... mmol/l  
**Blood Urea nitrogen:** ..... mmol/l  
**Creatinine:** ..... umol/l  
**GFR:** ..... ml/min/1.72m<sup>2</sup>  
**SGOT:** ..... IU/l  
**SGPT:** ..... IU/l  
**ALP:** ..... IU/l  
**GGT:** .....IU/l  
**Total bilirubin:** ..... umol/l  
**Total protein:** ..... g/l  
**Albumin:** ..... g/l  
**White blood cell (WBC) count:** ..... G/L  
**Hemoglobin:** ..... g/l  
**MCV:** ..... fl  
**Platelet:** ..... G/l  
**Fasting glucose:** ..... mmol/l  
**HbA1c:** ..... %  
**Total cholesterol:** ..... mmol/l  
**LDL-cholesterol:** ..... mmol/l  
**HDL-cholesterol:** ..... mmol/l  
**Triglyceride:** ..... mmol/l  
**Uric acid:** ..... umol/l  
**Iron:** ..... umol/l  
**BNP:** ..... pg/ml  
**NT-proBNP:** ..... pg/ml  
**Troponin I:** ..... ng/ml  
**Troponin T:** ..... ng/ml  
**TSH:** ..... mU/l  
**ft4:** ..... pmol/l  
**CRP:** ..... pmol/l

**Page 9 – Additional diagnostic tests**

Was any of the following tests performed?

**Holter ECG**    Yes    No

**Exercise test**    Yes    No

Isotope diagnostics  Yes  No

Coronary CT angiography  Yes  No

Coronary angiography (PCI)  Yes  No

Cardiac MRI  Yes  No

**Page 10 – Holter ECG** (disabled by default)

**Date of Holter:** .....

**Recording time:** .....

**Total number of beats:** .....

**Mean heart rate:** .....

**Atrial arrhythmia:**

Significant amount of premature atrial complexes

PAC..... %

Episodes of PAC bigeminy/trigemini  Atrial couplets/triplets

Atrial salvos, atrial runs  Atrial pacing  Atrial tachycardia (longer than 30 s)

Atrial fibrillation (longer than 30 s)

Single AF episode, duration shorter than 1 hour

Holter starts or ends with atrial fibrillation

More separate episodes on Holter

Atrial fibrillation throughout

Atrial flutter (longer than 30 s)

Single AF episode, duration shorter than 1 hour

Holter starts or ends with atrial fibrillation

More separate episodes on Holter

Atrial fibrillation throughout

**AV block” [checkbox]**

1st degree  2nd degree  3rd degree

**Ventricular arrhythmia:**

Significant amount of premature ventricular complexes

PAC ..... %

Episodes of PVC bigeminy/trigemini  Ventricular couplets/triplets

Ventricular salvos, nsVT  Ventricular tachycardia/fibrillation

- Ventricular pacing
  - VVI
  - AV sequential
  - Conducted AF

**Other comment on Holter:** .....

**Page 11 – Exercise test** (disabled by default)

**Date of exercise test:** .....

**Exercise type:**

- Treadmill
- Bicycle

***Antianginal medication:***

**Beta-blocker**  None  Partial  Full  Unknown

**Non-dihydropyridine CCB**  None  Partial  Full  Unknown

**Dihydropyridine CCB**  None  Partial  Full  Unknown

**Nitrate**  None  Partial  Full  Unknown

**Trimetazidine**  None  Partial  Full  Unknown

**Other:** .....

**Systolic blood pressure at baseline:** ..... mmHg

**Systolic blood pressure, max achieved:** ..... mmHg

**Heart rate at baseline:** .....

**Heart rate max achieved:** .....

**Heart rate at peak exercise:** .....

**Absolute workload achieved:** ..... Watts

**Absolute workload achieved:** ..... METS

**Atrial arrhythmia:**

- Premature atrial complexes  PAC bigeminy/trigemini
- Atrial couplets/triplets  Atrial salvos, atrial runs  Atrial fibrillation/flutter
- Premature ventricular complexes  PVC bigeminy/trigemini
- Ventricular couplets/triplets  Ventricular salvos, nsVT
- Ventricular tachycardia/fibrillation

**Induced significant repolarization abnormality**

- No
- Yes
- Not interpretable"

**Other comment on stress test:** .....



**Page 12 – Isotope diagnostics** (disabled by default)

**Date of exercise test:** .....

**Ventriculography performed?**  No  Yes

If yes

Left ventricular ejection fraction: .....

Wall motion abnormality  No  Yes

**Myocardium perfusion scintigraphy performed?**  No  Yes

If yes

Permanent perfusion defect?

Not present  Small (area  $\leq 10\%$ )  Large (area  $> 10\%$ )

Transient perfusion defect?

Not present  Small (area  $\leq 10\%$ )  Large (area  $> 10\%$ )

Not applicable

**Page 13 – Coronary CT angiography** (disabled by default)

**Date of exercise test:** .....

**Atherosclerotic lesions**

Not present  Mild  Moderate

Significant

Single vessel disease  Multiple vessel disease

Post PCI/CABG

Significant stenosis present  Significant stenosis not present

**Signs of small vessel disease?**  No  Yes

**Signs of spastic coronary arteries?**  No  Yes

**Page 14 – Coronary angiography, PCI** (disabled by default)

**Date of exercise test:** .....

**Atherosclerotic lesions**

Not present  Mild  Moderate

Significant

Single vessel disease  Multiple vessel disease

Post PCI/CABG

Significant stenosis present  Significant stenosis not present

Signs of small vessel disease?  No  Yes

Signs of spastic coronary arteries?  No  Yes

Was PCI performed?

Not required  Required, but not possible

PCI performed

Complete revascularization  Significant lesion(s) remaining

**Page 15 – Cardiac MRI** (disabled by default)

**Date of the MRI:**.....

**LVEDV (LV End Diastolic Volume):**.....ml

**LVESV (LV end systolic volume):**.....ml

**LV ejection fraction:**..... %

**LV mass:** .....g

**Left atrium volume:** ..... ml

**Right atrium volume:** ..... ml

**Right ventricle dilation:**  yes  no

**Right ventricle hypertrophy:**  yes  no

**Wall motion abnormality:**  yes  no

**Pericardial effusion:**  yes  no

**Intracardiac thrombus:**  yes  no

**Aortic regurgitation:**  none  mild  moderate  severe  not evaluated

**Aortic stenosis:**  none  mild  moderate  severe  not evaluated

**Mitral regurgitation:**  none  mild  moderate  severe  not evaluated

**Tricuspid regurgitation:**  none  mild  moderate  severe  not evaluated

**Pulmonary regurgitation:**  none  mild  moderate  severe  not evaluated

**IVC diameter:**.....mm

**Late enhancement:**  yes  no

**Detailed MRI description, if necessary:** .....

**Page 16 - Arrhythmia treatment strategy**

Did the patient have atrial fibrillation/flutter at the time of assessment?  yes  no

If yes

**Initial strategy for treatment of atrial fibrillation:**

- Intention for cardioversion
- Cardioversion strategy was rejected due to readily present information

**Reason for rejecting cardioversion:**

- Arrhythmia was declared permanent previously  Elder age
- Patient was free of complaints  Patient preference
- Poor predicted chance to maintain sinus rhythm
  - Adverse echocardiography status/structural heart disease
  - Frequent relapse of arrhythmia
  - Adequate antiarrhythmic treatment is not possible
    - Contraindication of necessary antiarrhythmic drugs
    - Bradycardia
    - Other: .....
- Definite/probable intracardiac thrombus
  - On echocardiography  On other imaging
  - According to stroke/systemic thromboembolism
- Unsuccessful cardioversion  Early relapse of arrhythmia

**Reason for reinitiating rhythm control strategy:**

- Spontaneous cardioversion  Ineffective rate control
- Complaints or symptoms due to arrhythmia
  - Myocardial ischemia  Heart failure
- Change of reasons for previous rejection

Cardioversion was proposed but was rejected due secondarily obtained information

**Reason for rejecting cardioversion:**

- Arrhythmia was declared permanent previously  Elder age
- Patient was free of complaints  Patient preference
- Poor predicted chance to maintain sinus rhythm
  - Adverse echocardiography status/structural heart disease
  - Frequent relapse of arrhythmia

- Adequate antiarrhythmic treatment is not possible
  - Contraindication of necessary antiarrhythmic drugs
  - Bradycardia
  - Other: .....
- Definite/probable intracardiac thrombus
  - On echocardiography     On other imaging
  - According to stroke/systemic thromboembolism
- Unsuccessful cardioversion     Early relapse of arrhythmia
- Cardioversion strategy was rejected, but at some point rhythm control strategy was reinitiated

**Reason for rejecting cardioversion:**

- Arrhythmia was declared permanent previously     Elder age
- Patient was free of complaints     Patient preference
- Poor predicted chance to maintain sinus rhythm
  - Adverse echocardiography status/structural heart disease
  - Frequent relapse of arrhythmia
  - Adequate antiarrhythmic treatment is not possible
    - Contraindication of necessary antiarrhythmic drugs
    - Bradycardia
    - Other: .....
- Definite/probable intracardiac thrombus
  - On echocardiography     On other imaging
  - According to stroke/systemic thromboembolism
- Unsuccessful cardioversion     Early relapse of arrhythmia

**Was transesophageal echocardiography performed**     Yes     No

If yes

Did TEE prove intracardiac thrombus     Yes     No

**Did the patient have atrial fibrillation/flutter at the end of treatment**     Yes     No

If yes

Is there a plan to restore normal rhythm in the future?     Yes     No

**Page 17 – Antiarrhythmic treatment**

**Medication applied for heart rate control**

- Medication was not necessary     Medication was contraindicated  
 Beta blocker     Digitalis     Non-dihidropyridin calcium channel blocker  
(verpamil/diltiazem)     Amiodarone     Other: .....

**Was rate control successful?**

- Yes     No     Not forced due to planned cardioversion

**Was cardioversion attempted?**

- Yes     No     Spontaneous cardioversion before attempt

If yes

**Drug used for cardioversion**

- None     Beta blocker     Propafenon     Amiodarone     Sotalol  
 Flecainid/Encainid     Other: .....

**Was DC cardioversion performed**     Yes     No

If yes

Number of shocks: .....

Energy of last shock (J): .....

Was cardioversion successful?  Yes     No

**Was there any complication during cardioversion?**     Yes     No

If yes

- Asystolia, pause     Significant bradycardia     Significant hypotension  
 Acute heart failure/cardiogenic shock     Complications with anesthesia  
 Ventricular arrhythmia     Patient died     Other: .....

**Intervention needed:**

- Resolved spontaneously     Drug withdrawal  
 Need for catecholamine/anticholinergic drug treatment  
 Need for temporary pacing     Need for resuscitation  
 Other: .....

If Spontaneous cardioversion before attempt

**Was there any complication during cardioversion?**     Yes     No

If yes

- Asystolia, pause     Significant bradycardia     Significant hypotension  
 Acute heart failure/cardiogenic shock     Complications with anesthesia  
 Ventricular arrhythmia     Patient died     Other: .....



**Prior major bleeding or predisposition to bleeding**  Yes  No

**Labile INR** (unstable/high INRs, time in therapeutic range <60%)  Yes  No

**Age >65**  Yes  No

**Medication usage predisposing to bleeding** (antiplatelet agents, NSAIDs)  Yes  No

**Alcohol use** ( $\geq 8$  drinks/week)  Yes  No

**HAS-BLED score:** .....

## Page 19 – Anticoagulation

**Is the patient on anticoagulation?**  Yes  No

If yes

**Is NOAC applied for anticoagulation?**  Yes  No

If yes

***Which agent was used?***

dabigatran  rivaroxaban  apixaban  edoxaban  other: .....

***Was dose reduction applied?***  Yes  No

If yes

Per prescription

Renal failure  Elder age  Low weight

Individual decision

If no

***Reason for not applying NOAC***

Vitamin K Antagonist therapy

Medical contraindication

Valvular atrial fibrillation  Allergy/intolerance  Renal failure

Other medical contraindication

Financial reason  Patient's preference  Other: .....

***Is Vitamin K Antagonist applied***  Yes  No

If yes

***Which agent was used?***

Warfarin  Acenocumarol

**Is patient in therapeutical INR range?**  Yes  No

**Approximate Time in Therapeutical Range, if possible:** .....%

If no

***Reason for not applying VKA***

- High bleeding risk    Probable need for cessation of anticoagulation  
 Non-compliance    Cannot follow-up INR    Patient preference  
 Other: .. .. .

***Is LMWH applied?***    Yes    No

If yes

***Which agent was used?***

- Enoxaparin    Dalteprain    Nadroprain    Bemiparin  
 Parnaparin    Other: .. .

Was dose reduction applied?    Yes    No

If yes

- Renal failure    Individual decision

If no

- Reason for no anticoagulation?    Low thromboembolic risk  
 Left atrial appendage closure    Bleeding risk outweighs thromboembolic risk    Patient unsuitable for any anticoagulation  
 Temporary discontinuation of anticoagulation    Patient's preference  
 Other: .. .

**Is the patient taking antiplatelet agents?**    Yes    No

If yes

***Single/dual antiplatelet therapy?***

- Single    Dual

***Reason for antiplatelet agent?***

- Atrial fibrillation    Vascular stent    Myocardial infarction  
 Stroke    Peripheral arterial disease

**Page 20 – Electrophysiology study, catheter ablation, antiarrhythmic surgery**

**Was procedure performed**    Yes    No

If yes

Date of intervention: .. .

***Procedure performed:***

- Cavo-tricuspidal isthmus ablation    Pulmonary vein isolation  
 AV node modification    Surgical treatment



Left atrial appendage closure  Other:.....

**Was procedure performed during arrhythmia**  Yes  No

Did it terminate arrhythmia?  Yes  No

**Is the procedure considered technically successful**  Yes  No

**Page 21 - Pacemaker implantation**

**Was procedure performed**  Yes  No

If yes

Date of pacemaker implantation: .....

***Pacemaker capability***

AAI  VVI  VDD  DDD

***Additional functions***

Rate responsive function  ICD function  CRT function

**Page 22 – Medication** (daily dose)

**Antiarrhythmic medication:**

**Beta blockers**  Yes  No

If yes

Metoprolol .. ..... mg

Bisoprolol ..... mg

Nebivolol .....mg

Carvedilol ..... mg

Betaxolol .....mg

Atenolol ..... mg

Other: .....mg

**Propafenon** ..... mg

**Flecainide**..... mg

**Amiodaron**..... mg

**Sotalol**..... mg

**Non-dihydropyridine calcium channel blocker**  Yes  No

If yes

Verapamil ..... mg

Diltiazem..... mg

**Digitalis**  Yes  No

If yes

Digoxin .....mg

Digitoxin..... mg

**Ivabradine**..... mg

**Other:**

**Heart failure medication**

**Beta blockers**  Yes  No

If yes

Metoprolol .. ..... mg

Bisoprolol ..... mg

Nebivolol .....mg

Carvedilol .....mg

Betaxolol .....mg

Atenolol ..... mg

Other: .....mg

**ACE inhibitor**  Yes  No

If yes

Enalapril ..... mg

Ramipril .....mg

Perindopril .....mg

Captopril .....mg

Lisinopril .....mg

Fosinopril .....mg

Quinapril .....mg

Other: .....mg

**Angiotensin II Receptor blocker**  Yes  No

If yes

Candesartan ..... mg

Losartan .....mg

Valsartan .....mg

Telmisartan .....mg

Other: ..... mg

**Mineralocorticoid receptor antagonist**  Yes  No

If yes

Spironolactone ..... mg

Eplerenone ..... mg

**Digitalis**  Yes  No

If yes

Digoxin ..... mg

Digitoxin..... mg

**Ivabradine**..... mg

**Sacbutril**..... mg

**Antihypertensive medication**

**ACE inhibitor**  Yes  No

If yes

Enalapril ..... mg

Ramipril ..... mg

Perindopril ..... mg

Captopril ..... mg

Lisinopril ..... mg

Fosinopril ..... mg

Quinapril ..... mg

Other: .....mg

**Angiotensin II Receptor blocker**  Yes  No

If yes

Candesartan ..... mg

Losartan ..... mg

Valsartan ..... mg

Telmisartan .....mg

Other: ..... mg

**Dihydropyridine calcium channel blocker**  Yes  No

If yes

Amlodipine ..... mg

Nifedipine ..... mg

- Felodipine ..... mg
- Lercanidipine .....mg
- Lacidipine ..... mg
- Other ..... mg

**Non-dihydropyridine calcium channel blocker**  Yes  No

If yes

- Verapamil ..... mg
- Diltiazem..... mg

**Beta blocker Beta blockers**  Yes  No

If yes

- Metoprolol .. ..... mg
- Bisoprolol ..... mg
- Nebivolol .....mg
- Carvedilol .....mg
- Betaxolol .....mg
- Atenolol ..... mg
- Other: .....mg

**Alpha receptor blocker**  Yes  No

If yes

- Prazosin .....mg
- Doxazosin .....mg
- Urapidil ..... mg
- Other ..... mg

**Other:**

**Diuretics**

**Loop diuretics**  Yes  No

If yes

- Furosemide .....mg
- Torasemide .....mg
- Ethacrynic acid .....mg
- Other ..... mg

**Thiazide diuretics**  Yes  No

If yes

- Hydrochlorothiazide .....mg
- Chlorothiazide.....mg
- Chlortalidone .....mg
- Indapamide .....mg
- Other: .....mg

**Mineralocorticoid receptor antagonist**  Yes  No

If yes

- Spironolactone .....mg
- Eplerenone .....mg

**Amiloride** ..... mg

**Other:**

**Anti anginal medication**

**Beta blocker Beta blockers**  Yes  No

If yes

- Metoprolol .. ..... mg
- Bisoprolol ..... mg
- Nebivolol .....mg
- Carvedilol .....mg
- Betaxolol .....mg
- Atenolol ..... mg
- Other: .....mg

**Calcium channel blocker**  Yes  No

If yes

- Amlodipine . ..... mg
- Nifedipine ..... mg
- Felodipine ..... mg
- Lercanidipine .....mg
- Lacidipine .....mg
- Other: ..... mg

Nitrates, NO donors  Yes  No

If yes

- Nitroglycerin..... mg
- Isosorbide mononitrate ..... mg
- Isosorbide dinitrate ..... mg
- Molsidomine ..... mg
- Other: ..... mg

Trimetazidine ..... mg

Other:

**Lipid lowering drugs:**

Statines  Yes  No

If yes

- Simvastatin..... mg
- Atorvastatin ..... mg
- Rosuvastatin ..... mg
- Fluvastatin ..... mg
- Pravastatin ..... mg
- Other: ..... mg

Fibrates  Yes  No

If yes

- Fenofibrate ..... mg
- Other: ..... mg

Ezetimibe ..... mg

Other:

**Antiplatelet agents**

Aspirin..... mg

ADP receptor blocker  Yes  No

If yes

- Ticlopidine ..... mg
- Clopidogrel..... mg
- Prasugrel ..... mg
- Ticagrelor ..... mg

**Other:**

**Anticoagulants**

**Vitamin K antagonists**  Yes  No

If yes

Acenocumarol ..... mg

Warfarin .....mg

Other: .....mg

**Direct oral anticoagulants**  Yes  No

If yes

Dabigatran ..... mg

Rivaroxaban .....mg

Apixaban .....mg

Edoxaban .....mg

Other: .....mg

**Heparins**  Yes  No

If yes

Enoxaparin ..... mg

Nadroparin .....mg

Dalteparin .....mg

Other: .....mg

**Other:**

**Other relevant medication**

**Page 23 – Complications and clinical outcomes**

**Ischemic stroke**  Yes  No

**Transient ischemic attack**  Yes  No

**Peripheral/non-central nervous system embolism**  Yes  No

**Pulmonary embolism**  Yes  No

**Hemorrhagic stroke**  Yes  No

**Gastrointestinal bleeding**  Yes  No

**Other bleeding event**  Yes  No

- Heart failure  Yes  No
- Myocardial ischemia  Yes  No
- Myocardial infarction  Yes  No
- Sudden cardiac death  Yes  No
- Non-cardiovascular death  Yes  No
- Hospitalization  Yes  No

**Page 24 – Thromboembolic event**

Date of event” [date]

**Anticoagulation at the time of event:**

- Vitamin K antagonist  
INR:
- NOAC  
 Normal dose  Reduced dose per protocol  Reduced dose for other reason
- LMWH  
 Normal dose  Reduced dose per protocol  Reduced dose for other reason
- Single antiplatelet therapy
- Dual antiplatelet therapy

**Thromboembolic event:**

- TIA / Stroke  Peripheral/non-central nervous system embolism
- Pulmonary embolism

**Outcome of thrombo-embolic event**

- Resolved  Resulted in disability  Resulted in death

**Page 25 - Bleeding complication**

Date of event: .....

**Bleeding site**

- Unknown  Oral and nasal  Skin, soft tissue, musculoskeletal
- Gastrointestinal  Genitourinary  Pulmonary  Body cavity
- Central nervous system  Intraocular  Conjunctival  Invasive sites

**Severity assessment 1**

- Did not require medical attention  Required medical attention



- Required/prolonged hospital treatment    Life threatening    Fatal

**Severity assessment 2**

- Minor    Clinically relevant non-major    Major

**Action taken**    Yes    No

If yes

- Discontinue anticoagulant medication    Antidote, antifibrinolytic medication  
 Non-invasive imaging    Local compression, bandage  
 Local injection, surgery    Invasive treatment (endoscopy, surgery)  
 Transfusion  
    Units of blood transfused.....  
 Vasoactive agents for hemodynamic instability

**Outcome of bleeding event**

- Resolved    Resulted in disability    Resulted in death

**Anticoagulation before bleeding:**

- Vitamin K antagonist

    INR:

- NOAC

- Normal dose    Reduced dose per protocol    Reduced dose for other reason

- LMWH

- Normal dose    Reduced dose per protocol    Reduced dose for other reason

- Single antiplatelet therapy

- Dual antiplatelet therapy

**Change in anticoagulant medication**  Yes    No

If yes

- Dose reduction of anticoagulant    Change of anticoagulant agent  
 Temporary withdrawal of anticoagulation, continuation reassessed later  
 Permanent withdrawal of anticoagulation    Withdrawal of antiplatelet agent

**Page 26 - Heart failure**

**Date of event:** .....

**Current NYHA functional class**    I    II    III    IV

NYHA functional class prior to worsening of heart failure  N/A  I  II  
 III  IV

Is worsening of heart failure suspected to be AF related?  Yes  No

If yes

Bradycardia  Tachyarrhythmia  Other:.....

Acute myocardial ischemia (please review Clinical outcomes and Myocardial ischemia page)  Yes  No

Did the patient need the use of inotropes  Yes  No

Did the patient need the use of mechanical ventilation  Yes  No

Did the patient need the use of renal replacement therapy  Yes  No

Did the patient need the use of ECMO or ventricular assist device  Yes  No

Outcome of heart failure

Resolved to previous functional class  Improved, but did not reach previous functional class  Resulted in death

### **Page 27 - Myocardial ischemia**

Date of event: .....

Angina complaints" [yes/no]

ECG changes denoting to myocardial ischemia  Yes  No

Myocardial infarction / significant elevation of necroenzymes  Yes  No

Is myocardial ischemia suspected to be AF related?  Yes  No

If yes

Bradycardia  Tachyarrhythmia  Other:

Did the patient need coronary angiography/PCI (please review Coronary angiography, PCI page)  Yes  No

Was myocardial ischemia associated with acute heart failure (please review Heart failure and Clinical outcomes pages)  Yes  No

Outcome of myocardial ischemia

Resolved  Resolved with necrosis or worsened echocardiography finding  
 Resulted in death

### **Page 28 – Death event** (disabled by default)

Date of event: .....

Reason of death

- Acute heart failure     Myocardial infarction     Tachyarrhythmia  
 Bradyarrhythmia     Malignant ventricular arrhythmia  
 Pulmonary embolism     Non-cardiac cause: .....

Is death suspected to be AF related?     Yes     No

**Page 29 – Hospitalization summary** (disabled by default)

**Reason for hospital admission:** .....

**AF or arrhythmia related complication**

AF was not present during hospitalization

AF coexisted at the time of hospitalization

Did AF increase the length of hospitalization?     Yes     No

AF occurred during hospitalization

Did AF increase the length of hospitalization?     Yes     No

**Thromboembolic event**

**Bleeding complication**

**Heart failure**

**Myocardial ischaemia**

**Other reason**

**Comment on hospitalization:** .....

**Length of hospital care** ..... days

**Anticoagulation follow-up or change**

**Date:** .....

**Anticoagulation:**     None     VKA     NOAC     LMWH

**Agent** [listbox according to anticoagulation listbox]

**Dose** [Long]

**Dose reduction**     Normal dose     Reduced, per protocol     Reduced, individual decision

**INR if applicable**

**Antiplatelet therapy**     None     Single     Dual

**Action taken**     None     Change of agent     Withdrawal of anticoagulant or antiplatelet agent     Dose reduction     Dose increase

If None

Reason  Dose titration (INR)  Per protocol  Per individual decision  
 Bleeding complication  Invasive procedure  Other

Comment [string]

Updated therapy

Anticoagulation  None  VKA  NOAC  LMWH

Agent [listbox according to anticoagulation listbox]

Dose" [Long]

Dose reduction  Normal dose  Reduced, per protocol  Reduced,  
individual decision

Antiplatelet therapy  None  Single  Dual