



*The 1st European Snap Shot Survey on
Procedural Routines for Atrial Fibrillation Ablation (ESSS-PRAFA)*

European Snap Shot Survey

On

Procedural Routines for Atrial Fibrillation Ablation (ESSS-PRAFA)

Study Protocol

Coordinating centre:

Scientific Initiatives Committee (SIC) of the
European Heart Rhythm Association (EHRA),
European Society of Cardiology (ESC)
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1. COMMITTEES and BOARDS

The European Snap Shot Survey on Periprocedural Routines for Atrial Fibrillation Ablation (ESSS-PRAFA) will be conducted under the responsibility of the Scientific Initiatives Committee (SIC) of the European Heart Rhythm Association (EHRA).

The following Writing group will provide the scientific leadership for the conduct of the ESSS-PRAFA:

First author (head writer paper 1): Tatjana Potpara,

Writer 2: Torben Larsen,

Writer 3: Nikolaos Dages,

Writer 4: Jian Chen,

Writer 5: SIC member (largest volume of patients enrolled in the survey)

Writer 6: (national representative), (largest volume of patients enrolled in the survey)

Writer 7: (national representative), (largest volume of patients enrolled in the survey) and

Last author 8: Carina Blomstrom Lundqvist (chair of the EHRA-SIC).

1.1. Country participation

All European countries will be invited to participate in the ESSS-PRAFA, with particular focus on the 17 countries which performed more than 500 AF ablations during 2013 (i.e., Belgium, Check Republic, Denmark, Finland, France, Germany, Hungary, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland, UK, Russia and Italy) [1].

2. BACKGROUND and RATIONALE

The ESSS-PRAFA is the first in a series of snap shot surveys from the ESSS program launched by the EHRA-SIC in order to collect patient-based data on clinically relevant topics in electrophysiological practice.

Increasing number of patients in Europe undergoes ablation of atrial fibrillation (AF) [1]. In 2012, the focused update of the ESC guidelines for the management of AF [2] and the HRS/EHRA/ECAS Expert Consensus Statement on Catheter and Surgical ablation of AF [3] provided guidance for patient selection, procedural techniques, patient management (including antithrombotic strategies) and follow-up regarding AF ablation. Given the increasing number of AF patients treated with novel oral anticoagulants (i.e., dabigatran, rivaroxaban and apixaban) and increased availability of various AF ablation energy sources and techniques, as well as the recent insights into the potential AF ablation targets and goals, the EHRA-SIC decided that the first ESSS should be dedicated to the procedural routines for AF ablation in Europe.



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3. STUDY DESIGN and METHODS

The ESSS-PRAFA is a prospective, multicentre snap shot survey of consecutive patients undergoing AF ablation. The indications for AF ablation are completely left to the discretion of the responsible physician, and there is no specific protocol or recommendation for the ablation procedure, technique, equipment or treatment before and after the procedure, which are all to be decided by the responsible physician, according to the standards of good clinical practice.

3.1. Duration of the study

The total study inclusion period is planned to be 4 weeks, and each participating centre will be asked to enrol consecutive AF ablation patients over 10 consecutive working days. In case of insufficient patient inclusion rate (i.e., less than 10 patients per centre), the EHRA-SIC may decide to prolong the inclusion period for additional 5 to 10 working days in all participating centres. However, the survey duration will not be shortened to less than 10 working days even if the pre-specified sample size is achieved early in the course of the survey. There will be no follow-up of enrolled patients.

3.2. Primary and secondary objectives

The primary objective of the ESSS-PRAFA is to collect patient-based information on the antithrombotic strategies prior to, during and post AF ablation, in order to identify the prevailing procedural routines for AF ablation in daily clinical practice in Europe.

The main secondary objectives of the ESSS-PRAFA are to analyse:

- Patient selection criteria for AF ablation
- AF ablation procedural techniques, equipment and endpoints
- AF ablation related complications.
- The adherence to the AF ablation guidelines,
- The relationships of patient risk profile with treatment decisions regarding antithrombotic strategy,
- The relationships of patient characteristics with AF ablation procedural aspects (e.g., AF clinical type or duration versus AF ablation strategy, energy resource, equipment and technique, etc.),
- The occurrence of complications,
- The comparisons of high-volume and low-volume centres regarding the AF ablation routines and complications,
- Potential regional differences in AF ablation routines in the various parts of Europe, etc.

3.3. Potential value of the ESSS-PRAFA

By means of identifying the prevailing routines for AF ablation in daily clinical practice in Europe, this survey is expected to highlight the gaps between current recommendations and clinical practice and the



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areas of uncertainties, thus providing insights into the needs for current knowledge dissemination and suggesting the points for further research.

3.4. Population enrolled in the Survey

3.4.1. Participating Centres

Centres will be enrolled on a voluntary basis. The invitation to participate in the ESSS-PRAFA will be sent to the partners of the EHRA EP Research Network with special emphasis on the larger countries to ensure large number of included patients. In addition, the chairpersons of the national working groups on cardiac arrhythmias, pacing and electrophysiology will be approached by a letter from the SIC chair, informing them about the purpose of the survey and asking them to propose the participating centres in their country, based on the centre's clinical activity. SIC members will have direct contact with the regional coordinator for the National societies and with the chair or secretary of the National Working group in their own country in order to engage many centres.

Participating centres will be stratified according to the centre's volume (i.e., the annual number of AF ablations performed in that centre), as well as according to the proportion of enrolled patients relative to the centre's volume.

3.4.2. Inclusion criteria

All consecutive AF patients undergoing AF ablation during the survey inclusion period will be included, provided that they signed the informed consent if required. All patients are required to sign an informed consent form approved by the local ethical committee (if required by the national rules).

3.4.3. Time of inclusion

Patients will be included in the survey the day before AF ablation.

3.4.4. Exclusion criteria

Patients unwilling or unable to give informed consent to participate in the ESSS-PRAFA will be excluded from the survey.

3.4.5. Patient Log book

Each participating centre will keep the patient log book, wherein all patients scheduled for AF ablation during the survey period will be entered. The reason(s) for excluding a patient scheduled for AF ablation from the ESSS-PRAFA will be stated in the patient log book.

3.4.6. Data collection

Data on the AF ablation procedural routines will be collected via the online questionnaire prepared by the EHRA-SIC and posted on the Survey Monkey platform by the EHRA staff. The questionnaire



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contains 3 general questions on the centre's type and volume and 18 specific questions about individual patient demographics, AF characteristics, antithrombotic strategies and ablation procedure, including complications occurring during the AF ablation procedure or until discharge (the ESSS-PRAFA questionnaire is provided in a separate document). Data will be entered anonymously rendering a patient identification impossible.

Each participating centre will enter the individual patient-related data via the internet, by populating the ESSS-PRAFA questionnaire. Only the Executive committee will have access to the data during data collection. Upon the completion of the survey, data will be exported by the EHRA staff into an Excel file, which will be used for further statistical analysis.

In order to collect all pertinent data including the observed AF ablation complications, the EHRA-SIC suggests the following optional timeline of data entry:

- a) The first 17 questions – on the day of AF ablation, upon the completion of the procedure,
- b) The 18th question about complications – at discharge.

4. STATISTICAL CONSIDERATIONS and SAMPLE SIZE

All patients will be included in the analysis. Continuous variables will be presented as mean \pm standard deviation (SD), or as median with interquartile range (IQR, 25th to 75th quartile) if a skewed distribution was found. Categorical variables will be reported as counts with percentages. The Student t-test will be used for comparison of continuous variables with normal distribution, and Mann-Whitney test for those with skewed distribution. Differences in categorical variables will be tested by Chi-square test. Relationships of patient characteristics and/or AF characteristics with treatment choices regarding antithrombotic strategies (or AF ablation techniques) will be analysed using the linear regression or multiple logistic regression methods, as appropriate.

Statistical analyses will be performed using SPSS 20.0 software package (SPSS Inc., Chicago, Illinois). A value of $P < 0.05$ will be considered statistically significant in all analyses.

The sample size needed to adequately address periprocedural routines for AF ablation was calculated by the Exact (Clopper-Pearson) method for computing confidence intervals for one proportion, using the PASS (Power Analysis and Sample Size) software. Assuming that the sample proportion is 0.080 (i.e., 8%), a sample size of 1323 patients produces a two-sided 95% confidence interval with a width equal to 0.030. Taking into account the possibility of missing data in up to 10% of enrolled patients (i.e., around 132 patients), the EHRA-SIC decided to set a sample size of 1500 patients undergoing AF ablation for the ESSS-PRAFA.

5. STUDY MONITORING and AUDITING

Monitoring of centres will not be performed related to the short nature of the ESSS.



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5.1. Source data verification and on-site audits

The national coordinator (SIC member) and the national representative will be available for all questions pertinent to the ESSS-PRAFA protocol, the survey requirements and the site responsibilities.

The CRF, patient files (paper or database), tracings of investigations, and the questionnaire will serve as source documents. In 10% of participating centres, the national coordinator will verify the consecutiveness of enrolment, authenticity, accuracy and completeness of data and protection of safety and rights of subjects.

5.2. Heart House Staff

The Heart House administration will operationally coordinate the project, provide support to the EHRA-SIC, national coordinators and participating centres and guard the methodological concepts of the survey. The Heart House is in charge of the ESSS-PRAFA database management and statistical analyses.

Specifically, the Heart House and the SIC members involved in the ESSS-PRAFA Executive Committee have to assure the constant quality control and continuity necessary to ensure that the project is completed on time and within budget.

The database, to which all data are entered from the internet based data programme (Survey Monkey) will be set up at the European Heart House in Sophia Antipolis, France, according to the requirements defined by the appointed Executive Committee.

6. ETHICAL ISSUES

The regional coordinator and the national representative in conjunction with the local centre investigators will be responsible for obtaining the approval of the local and national review boards for this study, if necessary. All patients will be approached by the local centre investigator and will be asked for their written informed consent to participate in the study (if necessary, i.e. based on local standards). A template of the patient information form as well as of the form for the ethical committee application will be provided by the steering committee to the participating centres.

6.1. Protection of Human Subject

This study does not dictate the manner in which patients are evaluated or treated with application of specific procedures. Management of patients will be strictly done according to clinical practice and independently of the ESSS-PRAFA. Patient unidentifiable data will be stored on a central database, the coding for the patient ID will be kept by the local investigator

Patient data collected will be strictly anonymous. Only a code and gender will identify patients, and centres and country will be coded as well. In order to maintain strict security, each investigator/study personnel will have a unique login and password to enter patient's information. There will be no



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storage of clinical data outside the data collection instrument, which will be a secure, web-based form. The main database will be secured according to current standards to ensure both ethical and integrity requirements of the data.

7. PUBLICATION POLICY

Data will be published under the responsibility of the EHRA-SIC and the Writing Committee of the ESSS-PRAFA. Authorship will be determined by the SIC. Inclusion of national representatives and coordinators or investigators as co-authors will be assessed depending on the proportion of enrolled patients, general engagement during the ESSS-PRAFA, and contribution to data analysis and manuscript preparation. Manuscript preparation and review will be considered when determining the order of authorship. Participating centres and respective investigators will be listed in an appendix provided that the investigators have given their consent.

8. PROPOSED TIME PLAN

- Finalization of the protocol, including detailed description of the survey scope, of the CRF questions, of logistics and responsibilities: **31 March 2014**
- Final corrections of the protocol after review by SIC chair and SIC members: **9 April 2014**
- Letter sent by SIC chair and national representatives to the chairpersons of the national working groups informing them about the survey and asking them to propose centres active in AF ablation: **14 April 2014**
- Preparation of Ethics committee application template translated by SIC members: **10 April 2014**
- Preparation of the electronic CRF in a Survey Monkey compatible format: **14 April 2014**
- Testing of the electronic CRF in test patients by the SIC members: **14-21 April**
- Identification and selection of centres: **14 April – 12 May 2014**
- Application for ethical committee approval by the individual centres: **21 April – 30 May 2014**
- Update on ethical committee approval of participating centres: **30 May**
- Start of patient inclusion: **2 June 2014**
- End of patient recruitment: **August/September 2014**
- Analysis of data and review of survey results by SIC: **October 2014**
- Preparation of manuscript and submission: **October 2014**



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References:

1. Arribas F, Auricchio A, Wolpert C et al. The EHRA White Book. *Europace : European pacing, arrhythmias, and cardiac electrophysiology : journal of the working groups on cardiac pacing, arrhythmias, and cardiac cellular electrophysiology of the European Society of Cardiology* 2012; **14 Suppl 3**: iii1-55.
2. Camm AJ, Lip GY, De Caterina R et al. 2012 focused update of the ESC Guidelines for the management of atrial fibrillation: an update of the 2010 ESC Guidelines for the management of atrial fibrillation. Developed with the special contribution of the European Heart Rhythm Association. *European heart journal* 2012; **33**: 2719-47.
3. Calkins H, Kuck KH, Cappato R et al. 2012 HRS/EHRA/ECAS expert consensus statement on catheter and surgical ablation of atrial fibrillation: recommendations for patient selection, procedural techniques, patient management and follow-up, definitions, endpoints, and research trial design: a report of the Heart Rhythm Society (HRS) Task Force on Catheter and Surgical Ablation of Atrial Fibrillation. Developed in partnership with the European Heart Rhythm Association (EHRA), a registered branch of the European Society of Cardiology (ESC) and the European Cardiac Arrhythmia Society (ECAS); and in collaboration with the American College of Cardiology (ACC), American Heart Association (AHA), the Asia Pacific Heart Rhythm Society (APHRS), and the Society of Thoracic Surgeons (STS). Endorsed by the governing bodies of the American College of Cardiology Foundation, the American Heart Association, the European Cardiac Arrhythmia Society, the European Heart Rhythm Association, the Society of Thoracic Surgeons, the Asia Pacific Heart Rhythm Society, and the Heart Rhythm Society. *Heart rhythm : the official journal of the Heart Rhythm Society* 2012; **9**: 632-96 e21.