UTILITY OF THE IMPLANTABLE LOOP RECORDER

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Contemporary Practices in Cardiology
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DISCLOSURES

SPECTRANETICS  CONSULTANT, SPEAKER, PROCTOR
# CARDIAC RHYTHM MONITORING OPTIONS

- Multiple monitoring options are available
- Choice of technology is based on:
  - Frequency of arrhythmias and symptoms
  - Indication
  - Patient and physician preference

## SHORT-TERM/INTERMITTENT MONITORING

<table>
<thead>
<tr>
<th></th>
<th>Holter Monitor</th>
<th>External Loop Event Recorder (ELR)</th>
<th>Mobile Cardiac Telemetry</th>
<th>Insertable Cardiac Monitor (ICM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Holter</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Extended Holter</td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

Short-term wear and send in | Records every heartbeat | Records over itself; saves events only | Records every heartbeat; 24/7 monitor | Saves events only; automatically transmits arrhythmic ECG; 24/7 monitor |

## LONG-TERM MONITORING
CURRENT FDA APPROVED ICM’S

Medtronic LINQ

SJM CONFIRM
COMPARISON OF ICM WITH HOLTER
ICM USABILITY: SANDERS, HEART RHYTHM¹

- ICM Usability Study: N=151 patients
- 24h-Holter data were compared to ICM data at 1 month follow-up
- 38 subjects had 112 true AF episodes
- The overall accuracy of the ICM was 99.4%
- High correlation between AF burden measured with the ICM and the Holter (Pearson Coefficient = 0.995)

<table>
<thead>
<tr>
<th>Metrics</th>
<th>Value (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient-based results</strong></td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td>97.4</td>
</tr>
<tr>
<td>Specificity</td>
<td>97.0</td>
</tr>
<tr>
<td>Positive Predictive Value</td>
<td>92.5</td>
</tr>
<tr>
<td>Negative Predictive Value</td>
<td>99.0</td>
</tr>
<tr>
<td>Accuracy</td>
<td>97.1</td>
</tr>
<tr>
<td><strong>Main Implanting Physicians</strong></td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td>98.4</td>
</tr>
<tr>
<td>Specificity</td>
<td>99.5</td>
</tr>
<tr>
<td>Positive Predictive Value</td>
<td>97.2</td>
</tr>
<tr>
<td>Negative Predictive Value</td>
<td>99.7</td>
</tr>
<tr>
<td>Accuracy</td>
<td>99.4</td>
</tr>
<tr>
<td><strong>Episode-based results</strong></td>
<td></td>
</tr>
<tr>
<td>Sensitivity</td>
<td>97.1 (97.1-97.2)</td>
</tr>
<tr>
<td>Positive Predictive Value</td>
<td>90.4 (77.6-96.2)</td>
</tr>
</tbody>
</table>

SYNCOPE
SYNCOPE: OCCURRENCE & IMPACT

- Syncope accounts for 3-5% of emergency department visits and 1-3% of all hospital admissions\(^1,2\)
- Cardiac syncope carries a 6-month mortality rate of greater than 10% and doubles the risk of death\(^3\)

Overall Survival of Participants with Syncope According to Cause\(^3\)

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YIELD OF DIAGNOSTIC TESTS IN EVALUATING SYNCOPE PATIENTS
YALE SYNCOPE STUDY, ARCH INTERN MED 2009

- Review of 2,106 patients presenting with syncope at the ER and admitted to a hospital

- In nearly half of the patients, a diagnosis or etiology remained unknown despite extensive testing

“Perhaps the finding in this study that causes the most concern is the extent to which unhelpful, and presumably unnecessary, testing in the evaluation of syncope continues to be performed.”

<table>
<thead>
<tr>
<th>Test</th>
<th># of Tests Performed</th>
<th>Helped Determine Etiology</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head CT Scan</td>
<td>1,327</td>
<td>7 (0.5%)</td>
<td>$696,675</td>
</tr>
<tr>
<td>Carotid Ultrasonography</td>
<td>267</td>
<td>2 (1.0%)</td>
<td>$117,480</td>
</tr>
<tr>
<td>EEG</td>
<td>174</td>
<td>1 (0.6%)</td>
<td>$65,946</td>
</tr>
<tr>
<td>Head MRI</td>
<td>154</td>
<td>3 (2.0%)</td>
<td>$173,558</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td></td>
<td></td>
<td><strong>$1,053,659</strong></td>
</tr>
</tbody>
</table>
### SYNCOPE DIAGNOSIS
TESTING OPTIONS AND THEIR DIAGNOSTIC YIELDS

<table>
<thead>
<tr>
<th>Test/Procedure</th>
<th>Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECG</td>
<td>2–11%(^1)</td>
</tr>
<tr>
<td>Holter Monitoring</td>
<td>2%(^2)</td>
</tr>
<tr>
<td>External Loop Recorder</td>
<td>20%(^3)</td>
</tr>
<tr>
<td>Tilt Table</td>
<td>11–87%(^4,5)</td>
</tr>
<tr>
<td>EP Study without structural heart disease</td>
<td>11%(^6)</td>
</tr>
<tr>
<td>Neurological (CT scan, carotid doppler)</td>
<td>0–4%(^5)</td>
</tr>
<tr>
<td>Reveal ICM</td>
<td>43–88%(^3,7,8)</td>
</tr>
</tbody>
</table>

 Patients with unexplained syncope and without a pacing indication following basic clinical work-up, tilt-test and 24-h Holter

Randomized to Reveal™ Plus (n=103) or conventional testing (n=98)

Median follow-up: 17 months

More ICM patients received an ECG diagnosis than by conventional testing (43% vs 6%; HR 6.53 [95% CI 3.73-11.4]; p<0.001)

Time to ECG directed therapy was 6.5x quicker for ILR group (P<0.001)

SUPERIOR DIAGNOSTIC YIELD THAN CONVENTIONAL TESTS

DA COSTA, *ARCH CARDIOVASC DIS* 2013

- Multi-center, randomized to Reveal ICM (n=41) or conventional follow-up (n=37)
- Patients with bundle branch block, unexplained syncope and negative EPS
- During 2.5-y follow-up, more recurrent significant arrhythmias were detected in the ICM group (37% vs 11%; p=0.01)
- ICM time to diagnosis: 6 mo (IQR 1-23 mo)
- AV Block was the mechanism for syncope recurrence in 75% of patients
- 24% of all patients received an IPG/ICD

ICM strategy was largely superior in detecting recurrent arrhythmic events

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**Table 2: Comparison between the ILR and conventional groups.**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Group 1 (n = 41)</th>
<th>Group 2 (n = 37)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Events</td>
<td>15 (36.6)</td>
<td>4 (10.8)</td>
<td>0.01</td>
</tr>
<tr>
<td>AV block III</td>
<td>11 (26.8)</td>
<td>3 (8.1)</td>
<td></td>
</tr>
<tr>
<td>Sick sinus syndrome</td>
<td>5 (7.3)</td>
<td>1 (2.7)</td>
<td></td>
</tr>
<tr>
<td>Ventricular tachycardia</td>
<td>1 (2.4)</td>
<td>0 (0)</td>
<td></td>
</tr>
</tbody>
</table>

Data are mean ± standard deviation or number (%).
AV: atrioventricular; BBB: bundle branch block; HV: His to ventricular; ILR: implantable loop recorder; LVEF: left ventricular ejection fraction.

ICM GUIDES EFFECTIVE PACEMAKER THERAPY

ISSUE 3: BRIGNOLE, CIRCULATION 2012

- N=511 patients with neurally mediated syncope (NMS) received an ICM to screen for asystolic neurally mediated syncope
- 89 patients had asystolic syncope identified by ICM within 12 months
  - 77 patients were randomized (1:1) and received IPG (ON vs OFF)
- 2-year syncope recurrence rate was:
  - 57% with IPG OFF
  - 25% with IPG ON (HR 57%, p=0.039)
- ICM is effective in stratifying patients, driving specific interventions that improve outcomes in neurally mediated syncope

32% absolute reduction in syncope recurrence with IPG therapy

---

During follow-up, 38% of patients had a recurrence of syncope within 1 year.

Reveal™ ICMs guided diagnosis in 78% of patients with recurrence.

1. Edvardsson N, et al. Use of an implantable loop recorder to increase the diagnostic yield in unexplained syncope: results from the PICTURE registry Europace 2011;13:262-269
ESC SYNCOPE GUIDELINES, *EUROPEAN HEART JOURNAL* 2009

RECOMMENDATIONS FOR THE USE OF ICM MONITORING

<table>
<thead>
<tr>
<th>Class I ICM Guidelines</th>
<th>Indicated in early phase of evaluation in patients with recurrent syncope of uncertain origin, absence of high risk criteria and a high likelihood of recurrence within battery longevity of the device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class IIa ICM Guidelines</td>
<td>Indicated in high risk individuals in whom comprehensive evaluation did not demonstrate a cause of syncope or lead to a specific treatment</td>
</tr>
<tr>
<td></td>
<td>Consider to assess the contribution of bradycardia before embarking on cardiac pacing in patients with suspected or certain reflex syncope presenting with frequent or traumatic syncopal episodes</td>
</tr>
</tbody>
</table>

### ESC GUIDELINES ON CARDIAC PACING AND CRT, *EUR HEART J* 2013

**DIAGNOSTIC TESTING ACCORDING TO FREQUENCY OF SYMPTOMS**

<table>
<thead>
<tr>
<th>Frequency of symptoms</th>
<th>Suggested ECG monitoring technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>24 h Holter, in-hospital telemetric monitoring</td>
</tr>
<tr>
<td>Every 2–3 days</td>
<td>48–72 h Holter, in-hospital telemetric monitoring</td>
</tr>
<tr>
<td>Every week</td>
<td>7 day Holter or external loop recorder</td>
</tr>
<tr>
<td>Every month</td>
<td>14–30 days external loop recorder</td>
</tr>
<tr>
<td>Less than once per month</td>
<td>Implantable loop recorder</td>
</tr>
</tbody>
</table>

ECG = electrocardiogram

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PALPITATIONS
DIAGNOSIS OF UNEXPLAINED PALPITATIONS
TESTING OPTIONS AND THEIR DIAGNOSTIC YIELDS

Wide range of diagnostic yield is mainly due to differences in the frequency of symptoms

<table>
<thead>
<tr>
<th>Test/Procedure</th>
<th>Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holter Monitoring</td>
<td>0^1-57%^2</td>
</tr>
<tr>
<td>External Loop Recorder</td>
<td>19^1-36%^3</td>
</tr>
<tr>
<td>Reveal™ ICM</td>
<td>73^4-81%^5</td>
</tr>
</tbody>
</table>

ICM has higher diagnostic yield and is more cost-effective than conventional tests


- N=50 patients with infrequent palpitations (≤1 episode/month)

- After negative complete initial evaluation, randomized (1:1):
  - 1-year ICM monitoring
  - Conventional strategy (24h Holter + 4-week ELR + EP study)

- Cost per diagnosis was lower in the ICM group, despite higher initial cost

- ICM is a safe and more cost-effective diagnostic approach in patients with infrequent palpitations

### Diagnostic Yield

**CONV: 21% vs. ICM: 73%**

<table>
<thead>
<tr>
<th>Diagnostic Outcome</th>
<th>Conventional Diagnostic Strategy (n = 24)</th>
<th>Implantable Loop Recorder (n = 26)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis, n (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supraventricular tachycardia</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Atrial fibrillation/atrial flutter</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Sinus tachycardia</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Sinus bradycardia</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Paroxysmal AV block</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>No diagnosis, n (%)</td>
<td>19 (79)</td>
<td>7 (27)</td>
</tr>
<tr>
<td>No palpitation recurrence during monitoring</td>
<td>15</td>
<td>6</td>
</tr>
<tr>
<td>Patient error in activating</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Recorder malfunctioning</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Negative EPS</td>
<td>19</td>
<td>—</td>
</tr>
</tbody>
</table>

ICM GUIDES PHYSICIANS TO RULE OUT OR IDENTIFY ARRHYTHMIAS IN PATIENTS WITH PALPITATIONS
FABER, EUR HEART J. ESC POSTER 2015

- **N=68 patients with unexplained palpitations received a ICM and were followed for 15 months**
- Arrhythmias were identified or ruled out in 94% of patients:
  - 55 patients (81%) had detected arrhythmia(s)
  - 9 patients (13%) experienced symptoms without detected arrhythmias (ruled out)
- This resulted in significant therapeutic and clinical actions

ICM identified arrhythmias in the majority of patients with unexplained palpitations

ICMs are indicated in:

- Monthly to yearly palpitations associated with hemodynamic compromise
- When all the other examinations prove inconclusive
- Non-compliant patients without hemodynamic compromise when a clinically significant arrhythmic cause is likely or must be ruled out


* Indicated only in selected cases
§ Refers to ECG–symptom correlation available
CRYPTOGENIC STROKE
BACKGROUND: CRYPTOGENIC STROKE

- 15 million people suffer a stroke each year worldwide, 80% of which are ischemic in origin\(^1\)
- 25% of ischemic strokes are considered cryptogenic despite intense work-up\(^2\)

- At least 1/3 of patients with AF are asymptomatic\(^3\)
- Paroxysmal AF may be the cause of cryptogenic stroke but is also an important risk factor for recurrent stroke

- Cardioembolism caused by AF accounts for at least 15-20% of all ischemic strokes\(^4\)

- Detection of AF in stroke patients informs treatment decisions on changing from antiplatelet agents to OAC\(^5\)

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On average every 40 seconds someone has a stroke in the US;
- 77% are first-ever attacks and 23% are recurrent
- Recurrent stroke is devastating and carries a high morbidity and mortality

Proportion of patients with recurrent stroke in 5 years after first stroke (US)

Chart source: Pooled data from the Framingham Heart Study, Atherosclerosis Risk in Communities study, and Cardiovascular Health Study of the National Heart, Lung, and Blood Institute.

INTERMITTENT MONITORING IS HIGHLY INACCURATE

ZIEGLER, HEART RHYTHM 2006¹

- N = 574 pacemaker patients
- All known to have AF
- 12-month retrospective analysis
- Intermittent monitoring was simulated at randomly selected days

Intermittent and symptom-based monitoring is highly inaccurate for identifying patients with any or long-duration AT/AF and for assessing AT/AF burden

LIMITATIONS OF SHORT-TERM MONITORING

- N = 163 patients with previous ischemic stroke/TIA, no known AF, implanted with a pacemaker or ICD
- Newly detected AT/AF (NDAF) ≥ 5 minute was found in 28% patients during 1 year follow-up
- 73% of patients experienced episodes of AT/AF on <10% of follow-up days

Most episodes would not have been detected by standard monitoring

OBJECTIVES:

- Assess ICM vs. standard care for detection of AF in cryptogenic stroke patients
  - 6 month endpoint (primary)
  - 12 month endpoint (secondary)
- Determine proportion of patients with underlying AF
- Record actions taken after AF diagnosis

Patient inclusion criteria:

- ≥40 years of age
- Cryptogenic stroke (or clinical TIA), with infarct seen on MRI or CT, within the previous 90 days; and no mechanism (including AF) determined after:
  - 12-lead ECG
  - 24-hour ECG monitoring (e.g. Holter)
  - Transesophageal echocardiography (TEE)
  - CTA or MRA of head and neck to rule out arterial source
  - Screening for hypercoagulable states in patients <55 years old
CRYSTAL AF STUDY: PRIMARY & SECONDARY ENDPOINTS

Detection of AF at 6 months
ICM finds 6x more patients with AF

Detection of AF at 12 months
ICM finds 7x more patients with AF

CRYSTAL AF STUDY: 36 MONTHS\textsuperscript{1}

8.8x more AF detected than standard follow-up arm

Hazard Ratio (95% CI) = 8.78 (3.47, 22.19)
log-rank p-value < 0.0001

<table>
<thead>
<tr>
<th>Number at risk</th>
<th>Control</th>
<th>ICM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>220</td>
<td>221</td>
</tr>
<tr>
<td></td>
<td>194</td>
<td>191</td>
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<tr>
<td></td>
<td>167</td>
<td>173</td>
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<tr>
<td></td>
<td>114</td>
<td>102</td>
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<td></td>
<td>72</td>
<td>57</td>
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<tr>
<td></td>
<td>36</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>ICM</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median time to AF Detection</td>
<td>252 days</td>
<td>72 days</td>
</tr>
<tr>
<td>Patients found to have AF</td>
<td>42</td>
<td>5</td>
</tr>
<tr>
<td>% Asymptomatic Episodes</td>
<td>81%</td>
<td>40%</td>
</tr>
<tr>
<td>Tests required to detect AF</td>
<td>Auto AF detection</td>
<td>202 ECGs 52 24-hr Holters 1 Event Recorder</td>
</tr>
</tbody>
</table>

\textsuperscript{1} Sanna et al. Cryptogenic stroke and underlying atrial fibrillation (CRYSTAL AF). N Engl J Med. 2014; 370:2478-2486
NO ASSOCIATION BETWEEN INFARCT TOPOGRAPHY AND AF CRYSTAL AF SUB-ANALYSIS: BERNSTEIN, CEREBROVASC DIS 2015

Long-term monitoring should be considered in all cryptogenic stroke patients, regardless of brain imaging findings

- Retrospective analysis of brain images from Reveal™ ICM patients (N=212)
- No significant associations found between AF detection and infarct type, size or arterial distribution

1. Bernstein et al. Infarct topography and detection of atrial fibrillation in cryptogenic stroke patients: Results from CRYSTAL AF. Cerebrovasc Dis. 2015;40:91-6
GUIDELINES ARE EVOLVING TO INCORPORATE ICM FOR AF SCREENING IN STROKE SURVIVORS

AHA/ASA Guideline 2014¹

Class IIa – Level of Evidence C

For patients who have experienced an acute ischemic stroke or TIA with no other apparent cause, prolonged rhythm monitoring (~30 days) for AF is reasonable within 6 months of the index event.

ESC Guideline 2016²

Class IIa – Level of Evidence B

In stroke patients, additional ECG monitoring by long-term non-invasive ECG monitors or implanted loop recorders should be considered to document silent atrial fibrillation.

AF MANAGEMENT
ICM-GUIDED RE-ABLATION IS MORE EFFECTIVE THAN ANTI-ARRHYTHMIA DRUG MANAGEMENT FOR RECURRENT PAF

POKUSHALOV, CIRCAE 2011 & 2013 (REVEAL™ XT ICM)\textsuperscript{1-2}

ICM monitoring during 3 month “Blanking period” post-ablation guides optimal therapy via re-ablation

Two studies using ICM detected AF burden to guide re-ablation decision making

1. Pokushalov et al. Use of an implantable monitor to detect arrhythmia recurrences and select patients for repeat catheter ablation for atrial fibrillation. Circ Arrhythm Electrophysiol. 2011; 4:823-31;
ANTI-ARRHYTHMIC DRUGS POST-ABLATION CAN BE EFFECTIVELY TITRATED WITH LONG-TERM MONITORING

ABASCUS: KAPPA, J CARDIOVASC ELECTROPHYSIO, 2013¹

- **N= 44 AF ablation patients**
  - 12-month follow-up via ICM (ICM) or conventional monitoring (30-day transtelephonic monitors at baseline, and at 5 & 11 months post-ablation)

- ICM found AF recurrence in 18 vs. 7 pts with conventional monitoring

- Long-term monitoring led to more actionable events than conventional monitoring
  - 71% vs. 44% of patients (ICM versus conventional monitoring) removed from AAD
  - 60% vs. 39% of patients discontinued rate control medication

ICM continuous monitoring has a higher diagnostic rate for post-ablation recurring AF and can guide medical therapy decisions better than conventional monitoring

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MONITORING PATIENTS POST-ABLATION CAN AID IN MEDICAL MANAGEMENT FOR HIGH RISK PATIENTS

ZUERN, PACE 2015

Long-term cardiac monitoring was used to manage patients off OACs in low-to-moderate stroke risk post-ablation without adverse events

- N=65 AF ablation patients inserted with ICM
  - 32 month mean follow up
  - CHADS$_2$ 1-3; no AF recurrence after 3 months; post-ablation discontinued OACs
- 63% (41) of patients remained off OACs at end of follow-up
  - Re-initiation of OACs was due to:
    - 21 (32%) AF burden > 1 hr
    - 2 deep vein thrombosis
    - 1 pulmonary embolism
- No strokes or TIAs

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MANAGING LOW STROKE RISK (CHADS2 <2) PATIENTS OFF ANTICOAGULATION

PASSMAN (REACT.COM), J CARDIOVASC ELECTROPHYSIOL 2016¹
(Additional studies are required to show safety and effectiveness)

- N=50; ICM
- 41 patients with previous ablation
- 465 day mean follow up
- Low stroke risk patients (CHADS₂ 1-2); AF free for 60 days – discontinued OACs
- **94% reduction of time on anticoagulation**
- 18 (31%) patients required re-initiation of anticoagulation (AF burden ≥1 hr)
- **No strokes or deaths occurred in patients**
- 2 potential and 1 confirmed TIA – patients on aspirin w/CHADS₂ = 1
- 3 traumatic bleeds in patients on aspirin

Long-term cardiac monitoring was effective in managing low-stroke-risk patients off OACs with low-AF burden

1. Passman et al. Targeted anticoagulation for atrial fibrillation guided by continuous rhythm assessment with an insertable cardiac monitor: the rhythm evaluation for anticoagulation with continuous monitoring (REACT.COM) pilot study. PACE 2016; 27:264-70
MANAGING PATIENTS OFF ANTICOAGULATION WHO ARE AT RISK FOR BLEEDING COMPLICATIONS
MASCARENHAS, *EUROPACE*¹
(Additional studies are required to show safety and effectiveness)

- N=70; ICM or Reveal LINQ™ ICM
  - Post-cardioversion; mean follow-up: 23 months
  - Higher stroke and bleed risk patients (CHADS₂ ≥ 2 and HAS-BLED ≥3)
- 90% (18/20) patients with variable (1-50%) AF burden reduced burden to <1% titrating AADs based on ICM data
- 76% patients discontinued anticoagulation therapy (with <1% AF burden & patient consent)

Long-term cardiac monitoring was effectively used to manage high-risk stroke and bleed-risk patients off anticoagulation and to optimize rhythm control


No strokes or TIAs occurred
24 vs 0% of patients on OACs vs off had major bleeds

¹ (Additional studies are required to show safety and effectiveness)
THANK YOU
### Current ECG: 12-Jan-2018 03:04:50

![ECG Graph]

### Tachy Episode(s)

<table>
<thead>
<tr>
<th>ID#</th>
<th>Assessment</th>
<th>Type</th>
<th>Date</th>
<th>Detected hh:mm</th>
<th>Duration hh:mm:ss</th>
<th>Max V. Rate</th>
<th>Median V. Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td></td>
<td>Tachy</td>
<td>11-Jan-2018</td>
<td>21:13</td>
<td>00:02:03</td>
<td>333 bpm</td>
<td>300 bpm</td>
</tr>
</tbody>
</table>

![Graph of Tachy Episode]

- ECG suspended for 00:01:57