

CNCH 2022 Tous droits réservés Toute

Intérêt et limites des enregistreurs d'évènements

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Grand Paris Nord-Est

Aulnay-sous-Bois - Le Raincy-Montfermeil - Montreuil



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Disclosures

- ◆ Consulting and Speaker's fees from Bayer, BMS, Pfizer, Boehringer Ingelheim, Biotronik, Medtronic, Boston Scientific, Microport, Philadelphia

AF Screening



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Recommendations for screening to detect AF

Recommendation	Class ^a	Level ^b
Opportunistic screening for AF by pulse taking or ECG monitoring is recommended in patients ≥65 years of age. ^{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100}	IIa	B
It is recommended to integrate parameters and implantable ambulatory data bases on a regular basis for Atrial Fibrillation (AF) screening. ^{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100}	IIb	B
When screening for AF it is recommended that: ^{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100}	III	C
<ul style="list-style-type: none"> The individual undergoing screening, are informed about the significance, not treatment implications of detection.^{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100} A structured referral to care is appropriate for screen-positive AF, to confirm the diagnosis of AF and plan a systematic management of screen-positive AF.^{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100} Devices to detect AF in screen-positive AF is established only after physician review the single-lead ECG recording of AF on a 12 lead ECG and confirms that it shows AF.^{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100} 	III	C
Systematic ECG screening should be considered to detect AF in individuals aged ≥75 years of those at high risk of stroke. ^{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100}	III	C

- pulse palpation
- automated BP monitors
- single-lead ECG devices
- photoplethysmography (PPG) devices OR other sensors (using seismocardiography, accelerometers, and gyroscopes, etc.) used in applications for smartphones, wrist bands, and watches
- intermittent smartwatch detection through PPG or ECG recordings.

Long term monitoring tools

- MCOT: Mobile Cardiac Outpatient Telemetry

Cardionet



Novacor R. test Evolution 4

- External loop recorder

Sorin Spiderflash Afib



- Insertable cardiac monitor

Medtronic Reveal XT
Ou LINQ

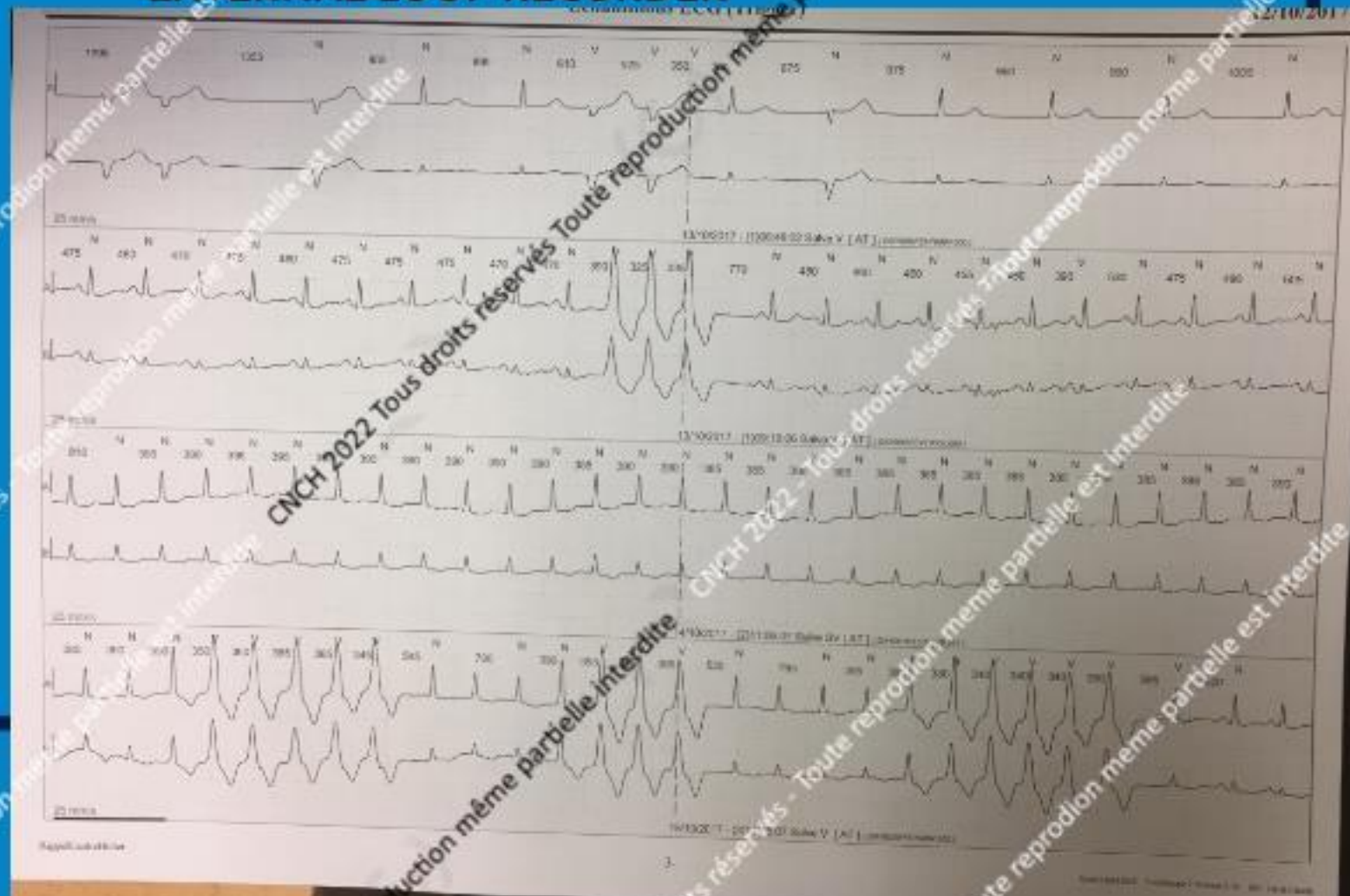


- External loop recorder

Sorin Spiderflash AG



EXTERNAL LOOP RECORDER



EVENT RECORDER

The screenshot shows the Amazon France website during a Black Friday sale. The search bar contains 'alivacor kardia'. The top navigation bar includes the Amazon logo, a search icon, and the 'black friday' banner. Below the search bar, the user's location is set to 'Neuilly-s... 92200'. The main navigation menu lists various categories and services. The search results section shows one result for 'ALIVECOR Kardia Mobile' by Alivacor. The product is priced at 138,90 € (reduced from 159,90 €) and is available for Prime delivery. The product image shows a hand holding the device. The page also features a sidebar with filters and a 'Trier' option.

amazon.fr

Toutes nos catégories

alivacor kardia

black friday

Votre adresse de livraison: Neuilly-s... 92200

Bonjour, id... Vos Comptes

Amazon.fr Offres suivies Ventes Flash Outlet Meilleures ventes Offres recommandées Nos offres cadeaux Services Amazon Amazon Assistant Coupons

1 résultat pour "alivacor kardia"

Afficher les résultats pour

Jeux et Loisirs

Cardiofréquences

Voir les 5 boutiques

Affiner par

Option d'expédition: Livraison gratuite

prime

ALIVECOR Kardia Mobile

de Alivacor

138,90 € prime

Recevez votre article le mercredi 22 novembre

Livraison gratuite possible (voir fiche produit)

Plus de choix d'achat

138,90 € (au lieu de 159,90 €)

★★★★★ 1,10



Payez par prélèvement bancaire

Les clients ayant consulté **Le KardiaMobile 6L - Enregistreur ECG personnel et marqué CE pour iOS et...** ont également consulté



ALIVECOR Kardia Mobile
★★★★★ 55
EUR 169,00 prime
4 utilisé et neuf from EUR 100,00



R. 5000 € en plus pour ALIVECOR
Kardia Mobile
★★★★★ 11
EUR 10,99
1 utilisé et neuf from EUR 10,99



EMAY Monitor ECG Portable
Mobile Electrocardiographie, Mesure
la fréquence Cardiaque, ECG et
Les symptômes
★★★★★ 20
EUR 79,00 prime
1 utilisé et neuf from EUR 79,00

Commerce, Industrie et Science | Produits médicaux professionnels | Diagnostic et dépistage | Electrocardiogramme



Le KardiaMobile 6L - Enregistreur ECG personnel et marqué CE pour iOS et Android | ECG 6 dérivations sans fil | Détecte la Fibrillation Atriale (FA) en 30 secondes

de AliveCor
★★★★★ 735 évaluations

Prix : 199,00 €
Tous les prix incluent la TVA

- L'appareil ECG personnel le plus populaire: Un ECG 6 dérivations permettant d'obtenir rapidement la précision du suivi cardiaque. Un ECG à emporter: Prenez un ECG de qualité médicale n'importe où, n'importe quand.
- Reconnu par les médecins: marqué CE pour détecter spécifiquement la fibrillation atriale, la tachycardie, la bradycardie ou le rythme cardiaque normal en 30 secondes.

199,00 €

Livré : 28 Nov. - 3 mars
Livré son emballage : 28 Nov. - 3 mars Délivré

Entrez votre adresse

Il ne reste plus que 11 exemplaire(s) en stock.

Quantité : 1

199,00 € + EUR 5,00 Livraison



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2018 – FDA APPROVAL FOR AF DETECTION WITH THE APPLE WATCH ECG




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Move ECG Black

129,95 €


En stock



Choisir une couleur

Couleur du cadran

Ajouter un bracelet (optionnel)



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[FR] Move ECG - Montre ECG tracker d'activité



Qui vous le dit, s'il est nécessaire de consulter un spécialiste.

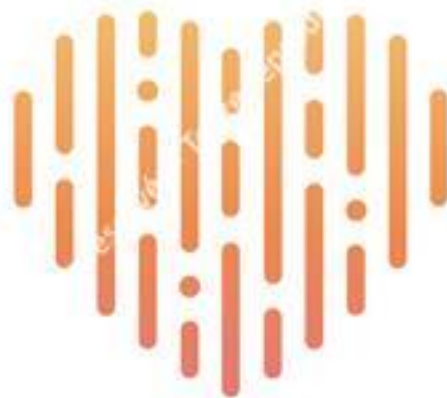
YouTube

atronic

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Results of a Large-scale, App-based Study to Identify Atrial Fibrillation Using a Smartwatch:

The Apple Heart Study



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Mintu Turakhia MD MAS and Marco Perez MD
on behalf of the Apple Heart Study Investigators

NCT # 03335800

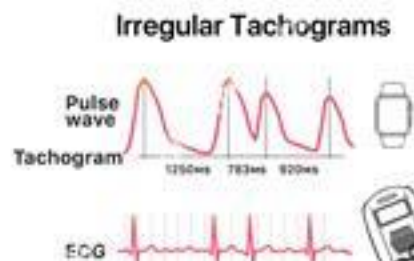
production même partielle interdite



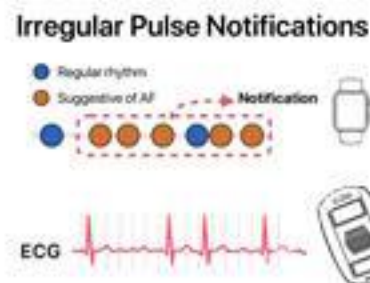
Stanford MEDICINE

repr

Positive Predictive Values



Afib on ECG Patch	Total Positive Tachograms	PPV* (97.5% CI)
1,489	2,089	0.71 (0.69–0.74)



Afib on ECG Patch	Total Positive Notifications	PPV (95% CI)
72	86	0.84 (0.76–0.92)

* Decision rule for lower bound of CI ≥ 0.7 and upper bound ≥ 0.75 not met



Detection of Atrial Fibrillation in a Large Population using Wearable Devices: the Fitbit Heart Study

Steven A. Lubitz, MD, MPH; Anthony Z. Faranesh, PhD; Caitlin Selvaggi, MS; Steven J. Atlas, MD, MPH; David D. McManus, MD, ScM; Daniel E. Singer, MD; Sherry Pagoto, PhD; Alexandros Pantelopoulos, PhD; Andrea S. Foulkes, PhD



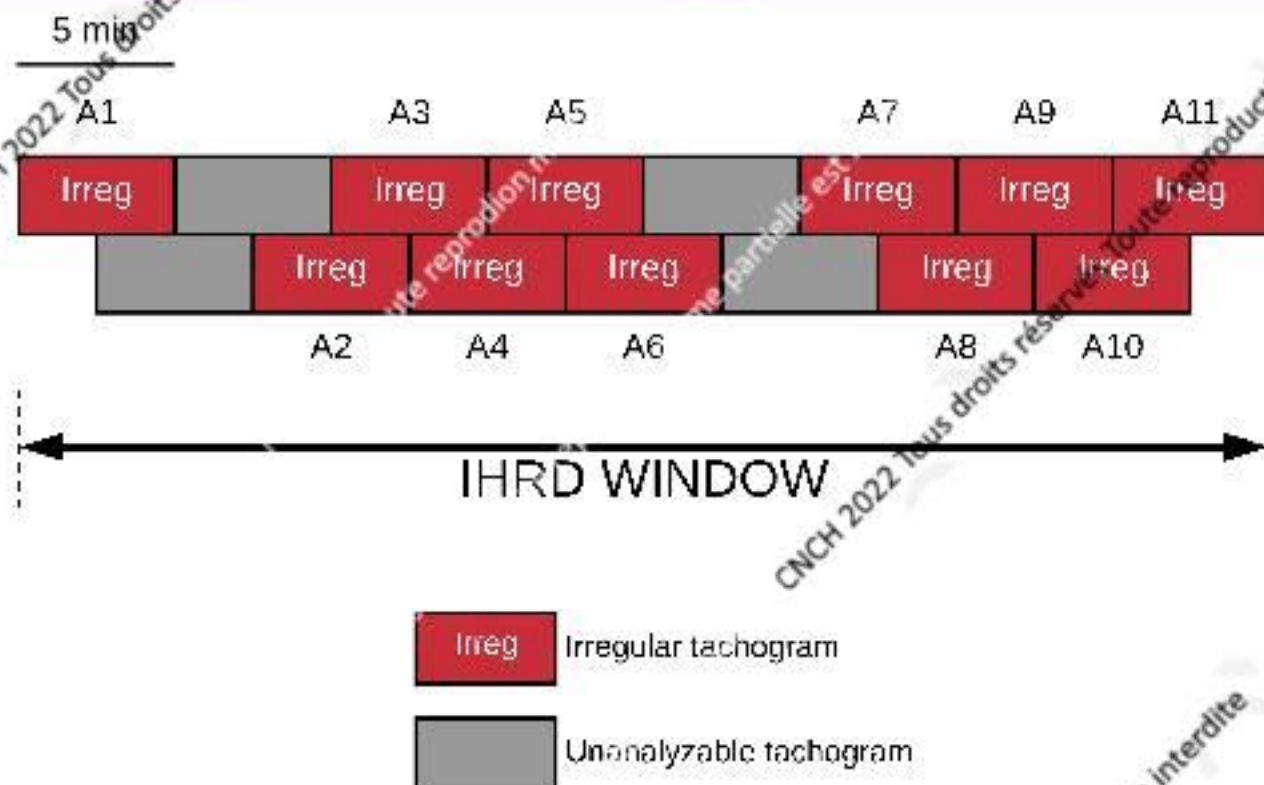
HARVARD
MEDICAL SCHOOL



MASSACHUSETTS
GENERAL HOSPITAL

CORRIGAN MINEHAN
HEART CENTER

Novel irregular heart rhythm detection (IHRD) algorithm



Continuous sampling

5-min tachograms, 50% overlap

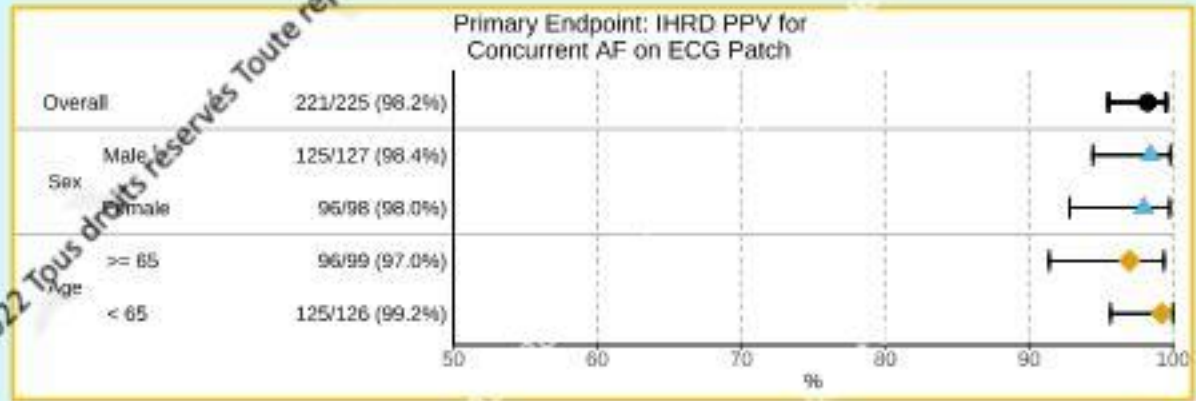
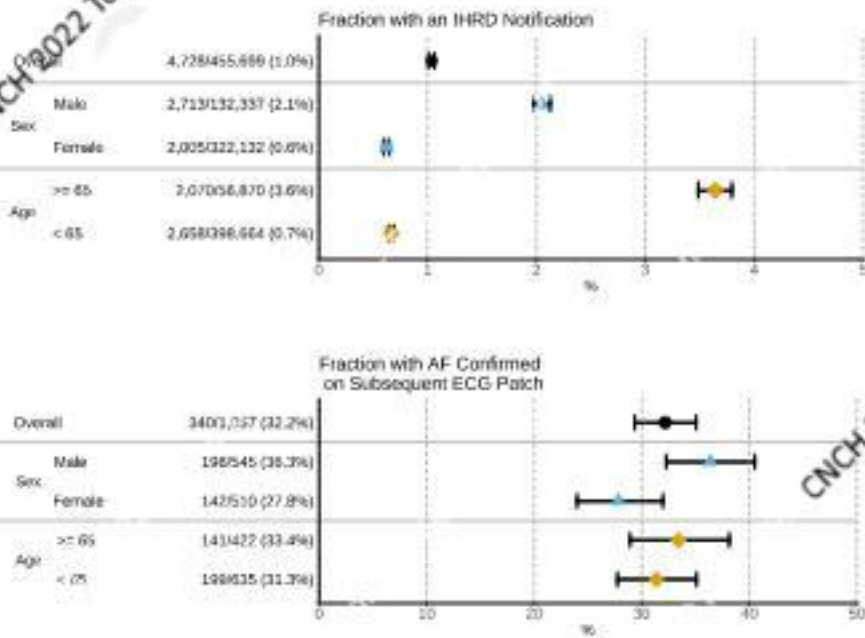
11/11 irregular tachograms

≥ 30-minutes of irregular rhythm

Only analyzes if inactive

Resets with negative tachogram

Study results



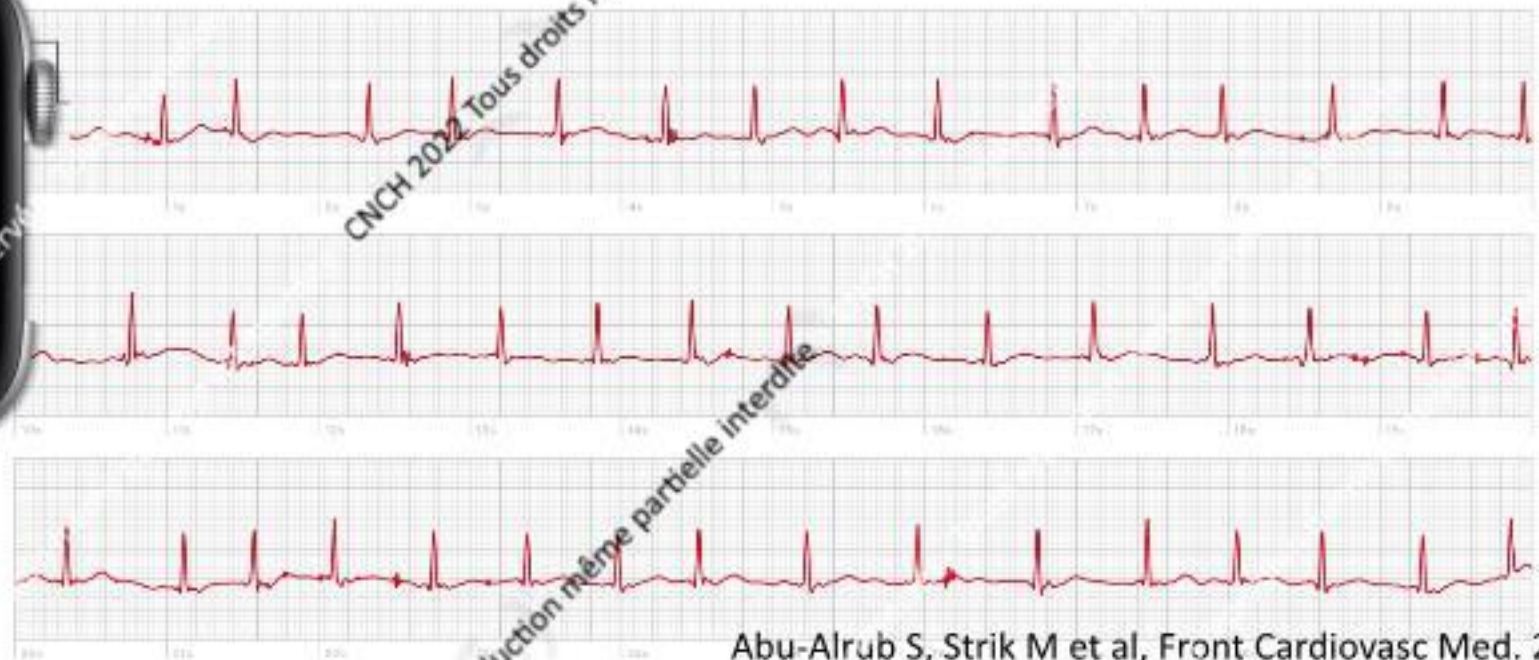
SMARTWATCH ECG FOR AF DETECTION



Atrial Fibrillation — ❤️ 93 BPM Average

This ECG shows signs of AF.

If this is an unexpected result, you should talk to your doctor.



FALSE NEGATIVES (MISSED AF)

Heart Rate Under 50 — ❤️ 46 BPM
Average

This ECG was not checked for AFib because your heart rate was under 50 BPM.



FALSE NEGATIVES (MISSED AF)

Heart Rate Over 120 — ❤️ 125 BPM
Average

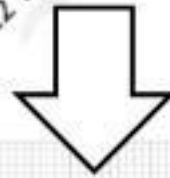
This ECG was not checked for AFib
because your heart rate was over 120 BPM.



FALSE NEGATIVES (MISSED AF)

atrial flutter

wrist



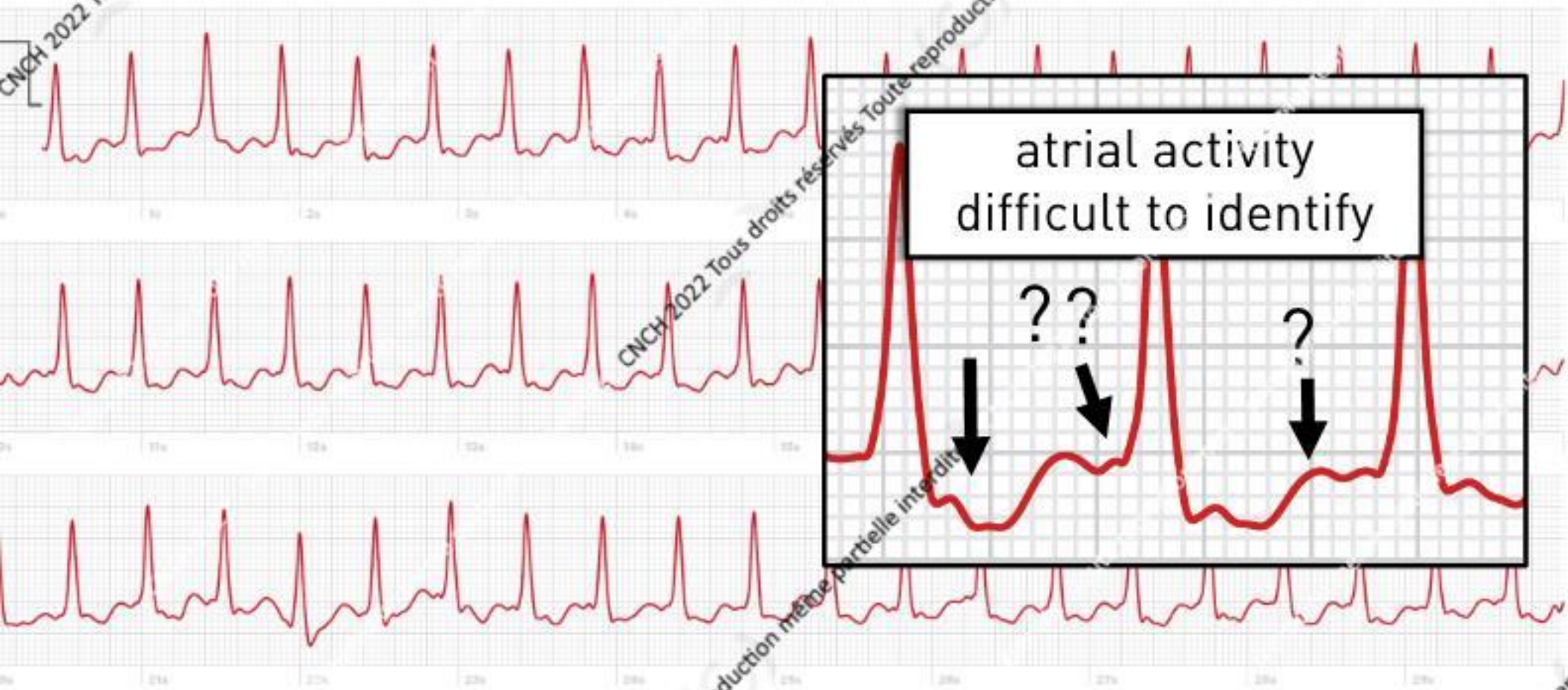
ankle



flutter waves

FALSE NEGATIVES (MISSED AF)

atrial tachycardia



FALSE POSITIVES (NOT AF)

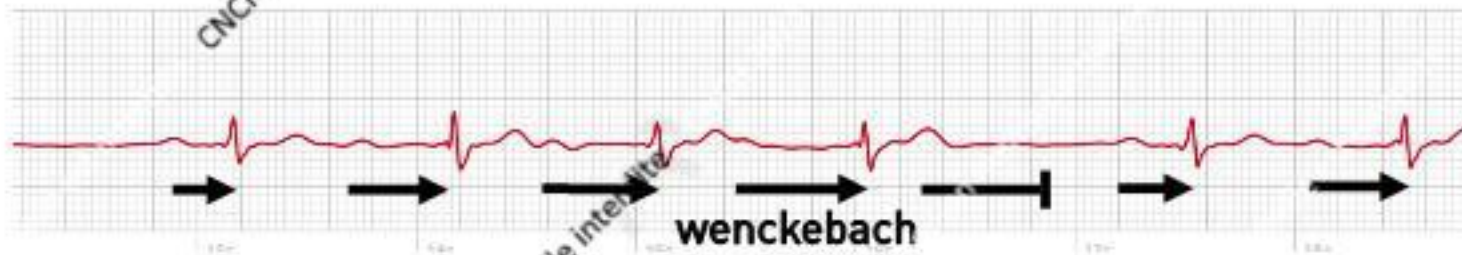
Atrial Fibrillation — ❤️ 112BPM Average

This ECG shows signs of AF.



Atrial Fibrillation — ❤️ 53 BPM Average

This ECG shows signs of AF.

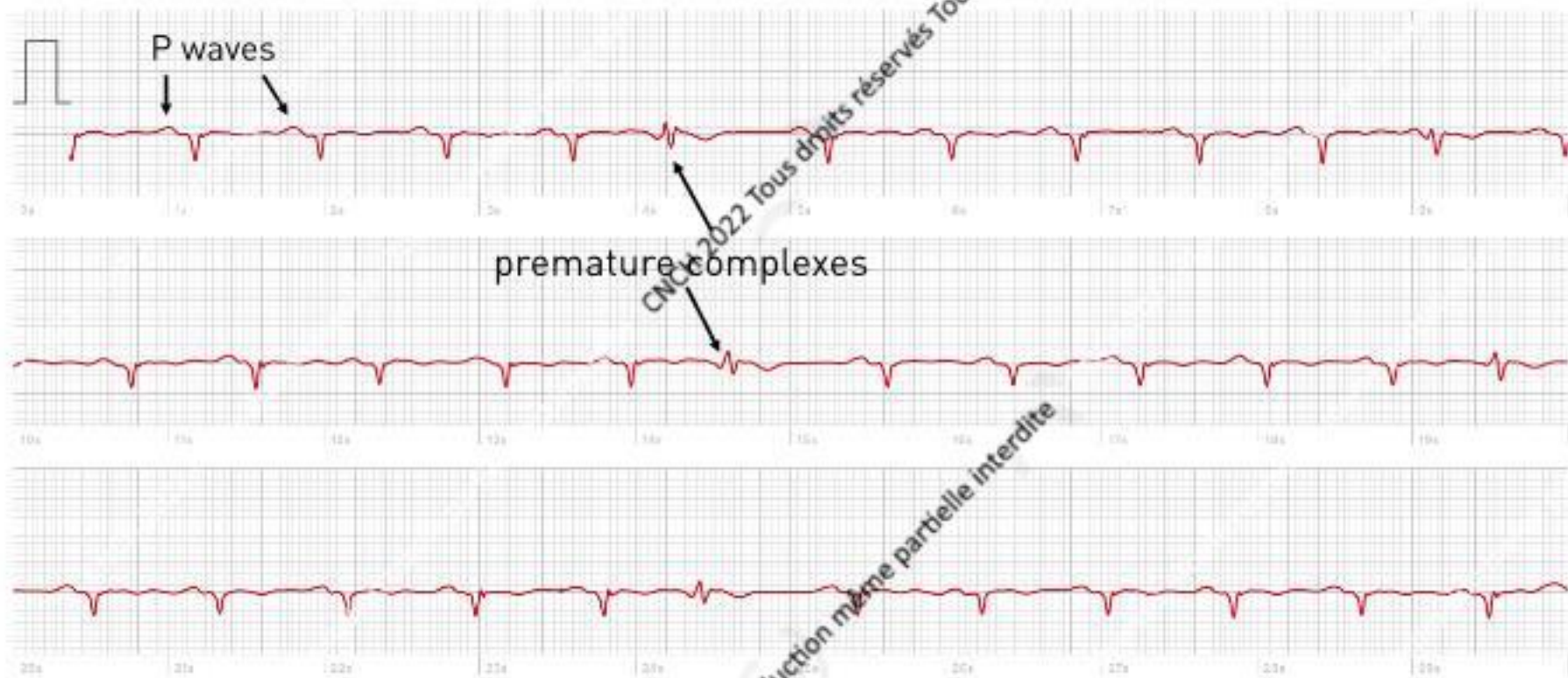


FALSE POSITIVES (NOT AF)

Atrial Fibrillation — ❤️ 74 BPM Average

This ECG shows signs of AF.

If this is an unexpected result, you should talk to your doctor.



BEYOND APPLE

Atrial Fibrillation — 93 BPM Average

This ECG shows signs of AF. If this is an unexpected result, you should talk to your doctor.



Samsung Health Monitor - ECG

Atrial fibrillation

Irregular heart rhythm detected. Talk to your doctor about this result.

Average heart rate: 88 bpm



WITHINGS

Done on Tuesday, March 14 at 10:09 | Duration of 23 seconds | Left wrist

- Mean HR: 89 BPM
- Signs of Atrial Fibrillation

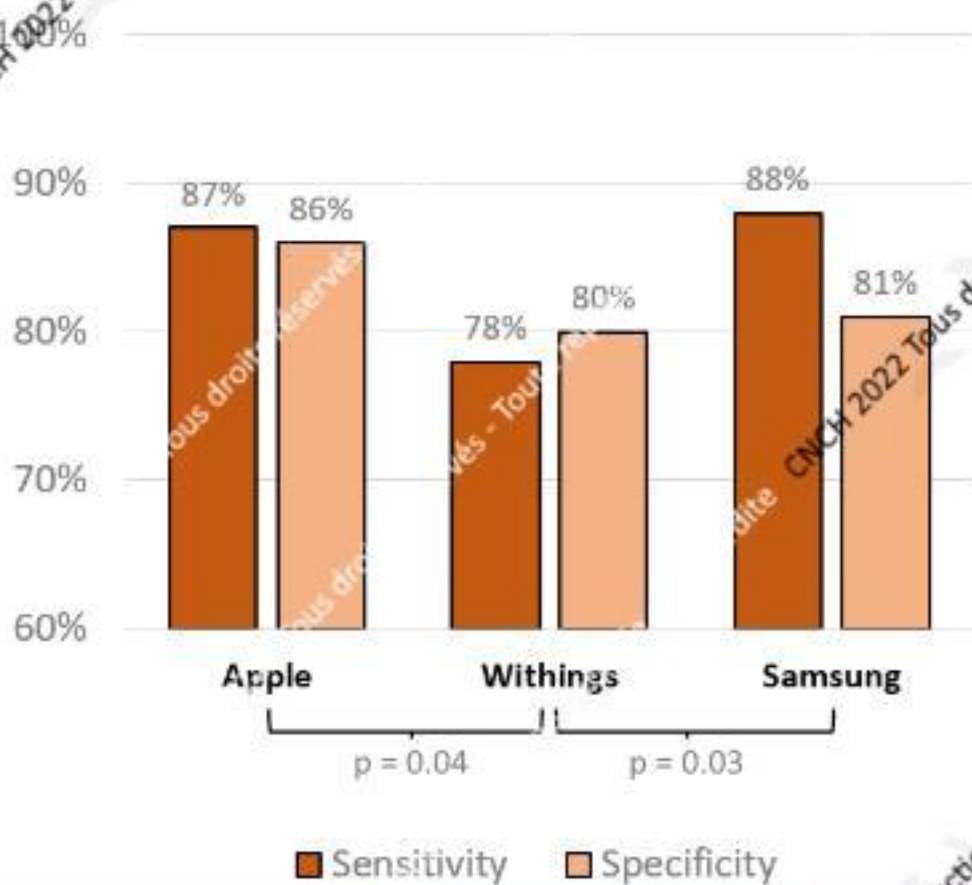


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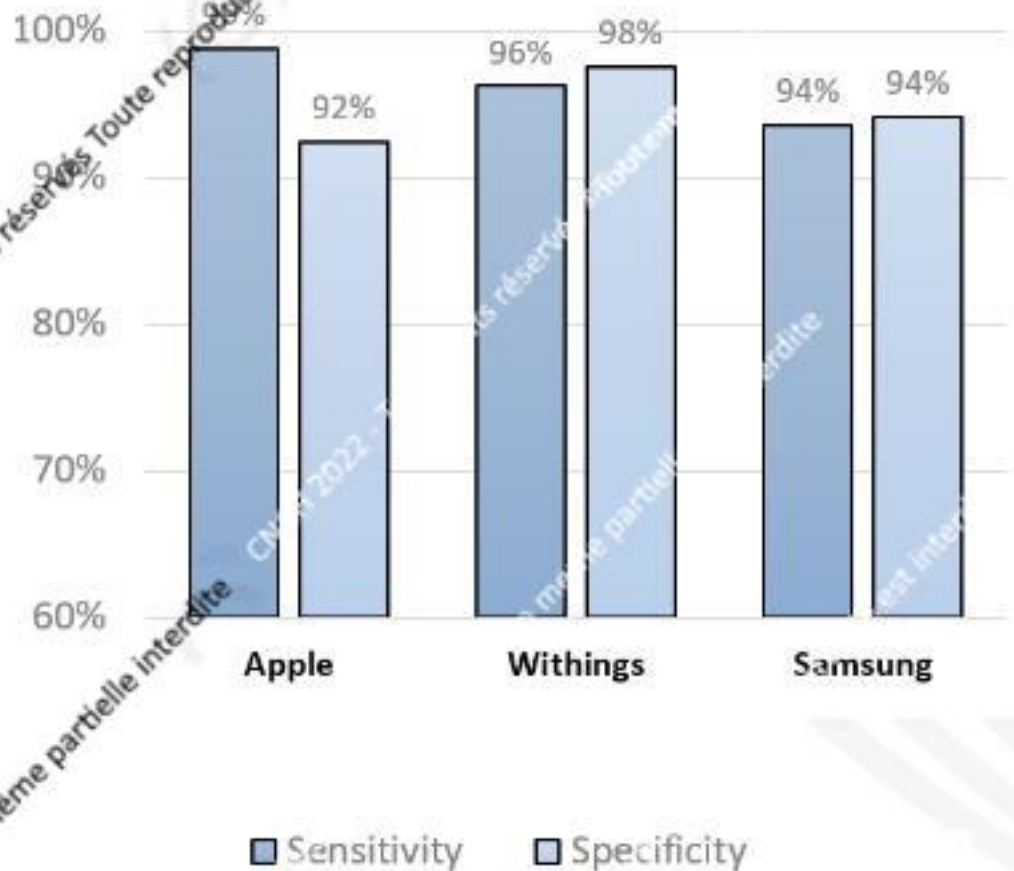


AUTOMATIC DIAGNOSIS OF AF

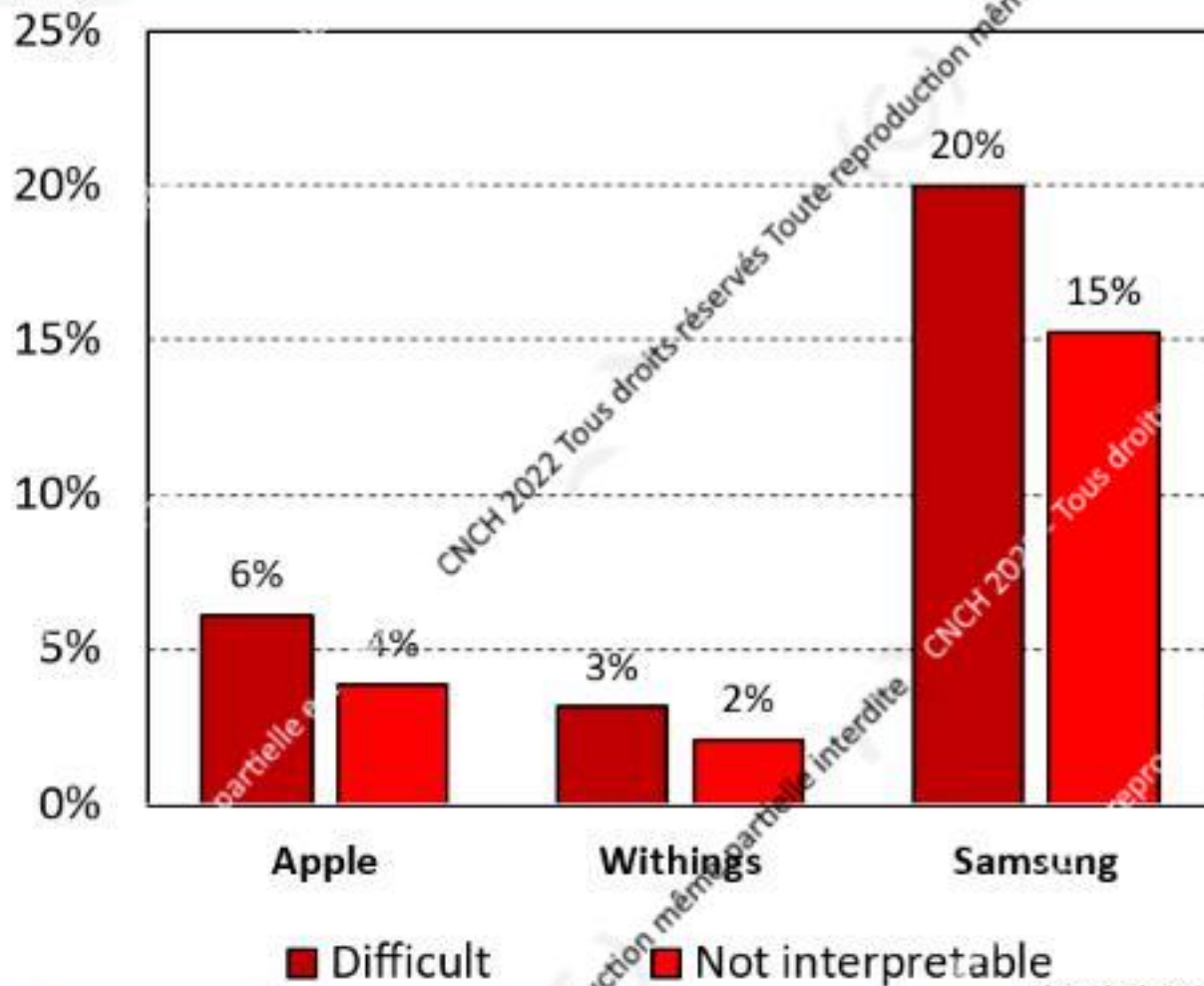
NON-CLASSIFIED ECGS INCLUDED



NON-CLASSIFIED ECGS EXCLUDED

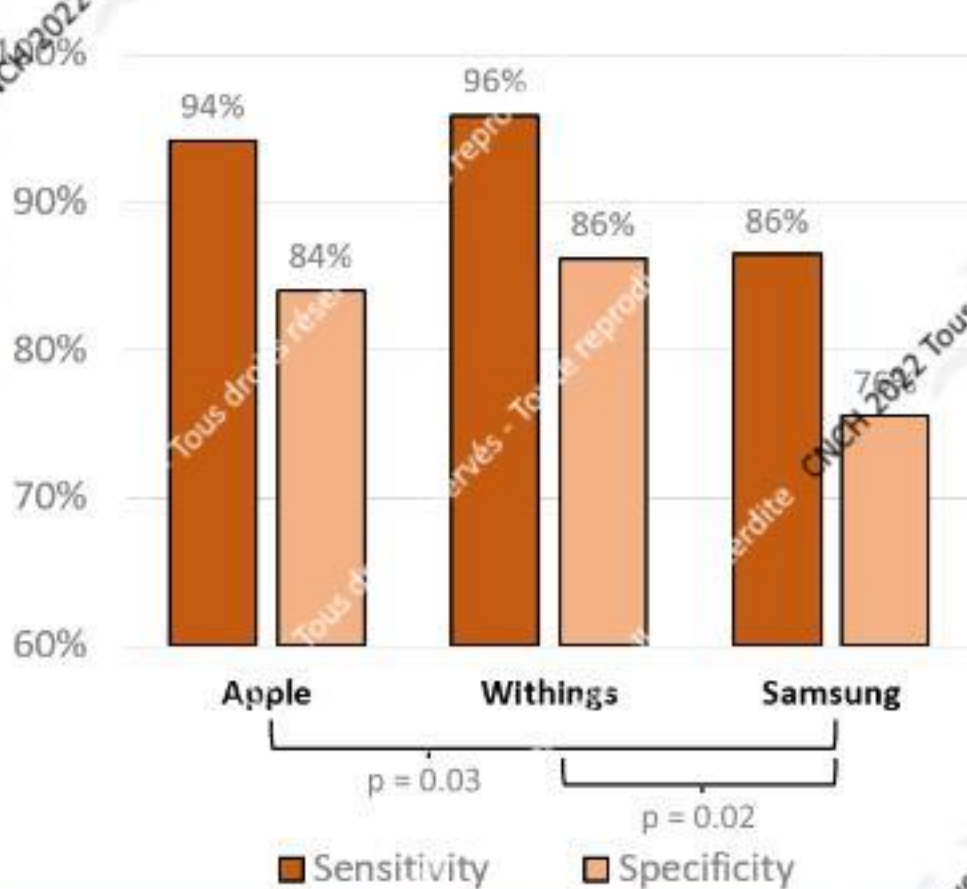


DIFFICULTY TO INTERPRET

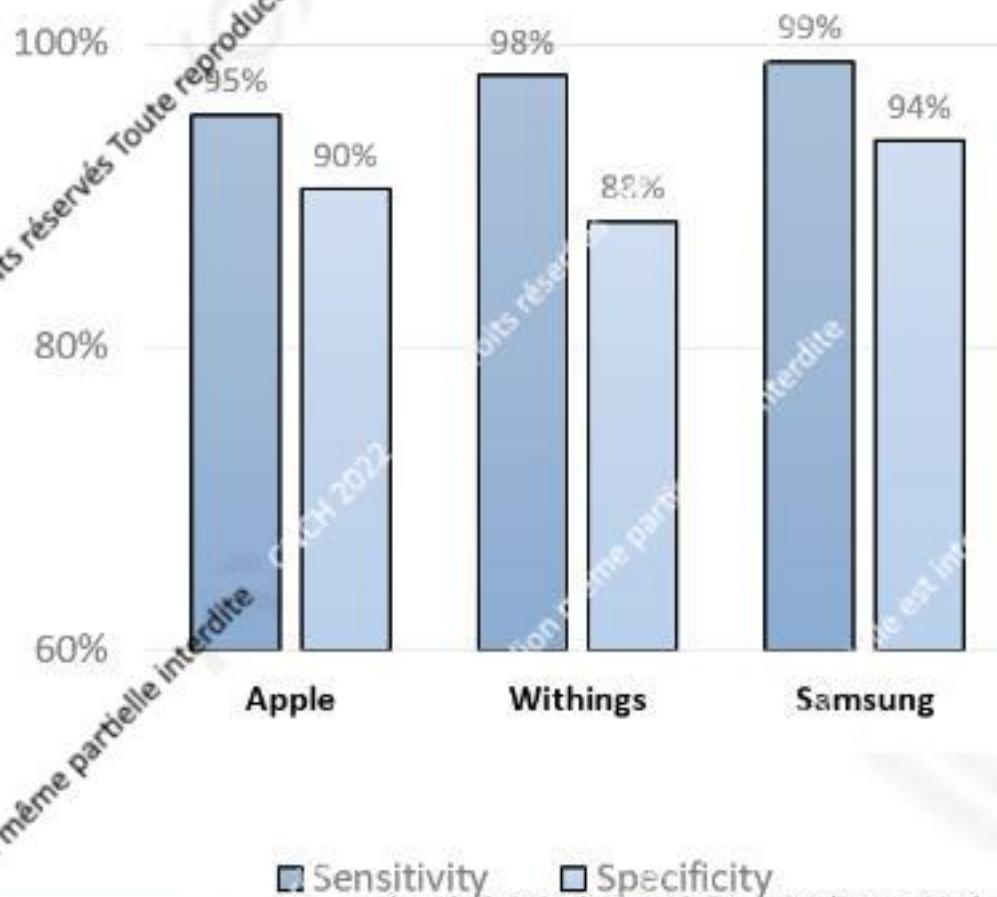


MANUAL DIAGNOSIS OF AF

NON-CLASSIFIED ECGS INCLUDED



NON-CLASSIFIED ECGS EXCLUDED



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Si vous obtenez ce résultat à plusieurs reprises
ou que vous ne vous sentez pas bien, consultez
votre médecin.



ESC GUIDELINES AF

Recommendations for screening for atrial fibrillation

Recommendations	Class ^a	Level ^b	Ref ^c
Opportunistic screening for AF is recommended by pulse taking or ECG rhythm strip in patients >65 years of age.	I	B	130, 134, 155
In patients with TIA or ischaemic stroke, screening for AF is recommended by short-term ECG recording followed by continuous ECG monitoring for at least 72 hours.	I	B	27, 127
It is recommended to interrogate pacemakers and ICDs on a regular basis for atrial high rate episodes (AHRE). Patients with AHRE should undergo further ECG monitoring to document AF before initiating AF therapy.	I	B	141, 156
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.	IIa	B	18, 128
Systematic ECG screening may be considered to detect AF in patients aged >75 years, or those at high stroke risk.	IIIb	B	130, 135, 157

Recommendations	Class ^a	Level ^b	Ref ^c
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.	IIa	B	18, 128



Quand mettre en place un moniteur ECG implantable ?



Quand mettre un moniteur ECG implantable ?

2,5 k vues • il y a 1 an



Dr Walid Amara

Quand implanter un "holter implantable" ? Ces petits boîtiers ECG de la taille d'une gellule sont aussi appelés holter injectables.



Intérêts

- ◆ Diagnostic plus précoce
- ◆ Réduire le nombre d'examens
- ◆ Corréler les symptômes à l'ECG
- ◆ Traitement plus précoce
- ◆ Evaluer l'efficacité d'un traitement

Limites

- ◆ Stress ++
- ◆ Nombreuses sollicitations du médecin
- ◆ Multiplications des enregistrements
- ◆ Faux positifs
- ◆ Parasites et tremblements
- ◆ Rater un diagnostic reste possible

Quelle place en pratique?

- ◆ Symptômes = OUI
- ◆ AVC = NON