

Endocardite

Recommandations ESC 2023

Nouvelle classification: quels changements pour quelles améliorations ?

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Classification diagnostique Endocardite

Pour permettre la comparabilité des études épidémiologiques
Etablie en fin d'hospitalisation

Degré de certitude du diagnostic: Certain / (Probable) / Possible / Exclu

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Certain / (Probable) / Possible / Exclu

- ❖ Von Reyn C (1981) Beth Israel classification
- ❖ Durack D (1994) Duke criteria (*inclusion résultats échocardiographie*)
- ❖ Li JS (2000) modified-Duke criteria

The original Duke criteria classify any case of suspected IE as “possible,” if it falls short of qualifying as a “definite” case but is not “rejected.”



Définition plus précise des endocardites « possibles »

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- ❖ ESC 2015 Introduction de l'imagerie nucléaire

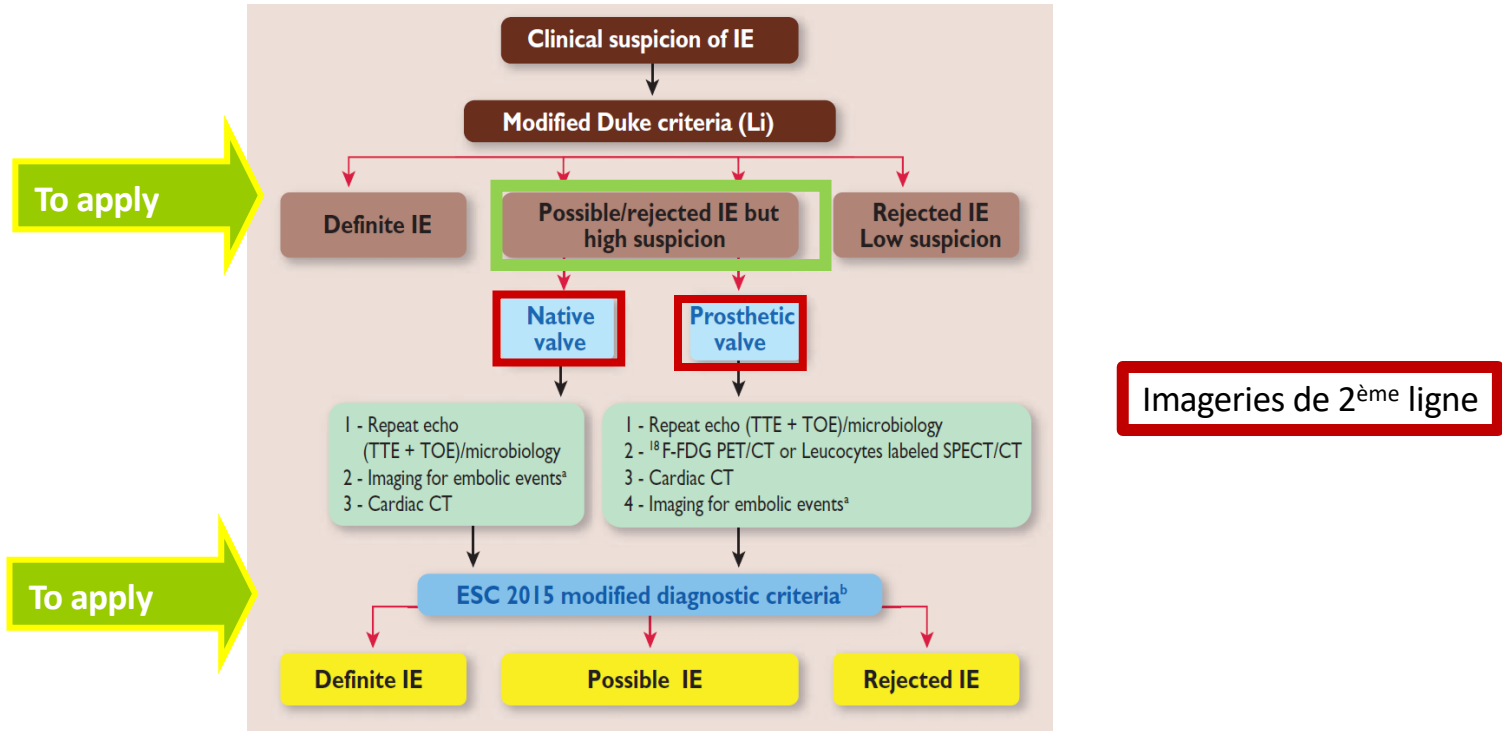
Von Reyn CF, Annals Internal Medicine 1981

Durack DT, American Journal Medicine 1994

Li JS, Clin Infect Dis 2000

Hbib G, Eur Heart J 2015

Démarche diagnostique - ESC 2015



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Clinical Infectious Diseases

VIEWPOINTS



OXFORD

The 2023 Duke-International Society for Cardiovascular Infectious Diseases Criteria for Infective Endocarditis: Updating the Modified Duke Criteria

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**ESC**European Society
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<https://doi.org/10.1093/eurheartj/ehad193>**ESC GUIDELINES**

2023 ESC Guidelines for the management of endocarditis

Developed by the task force on the management of endocarditis of the European Society of Cardiology (ESC)

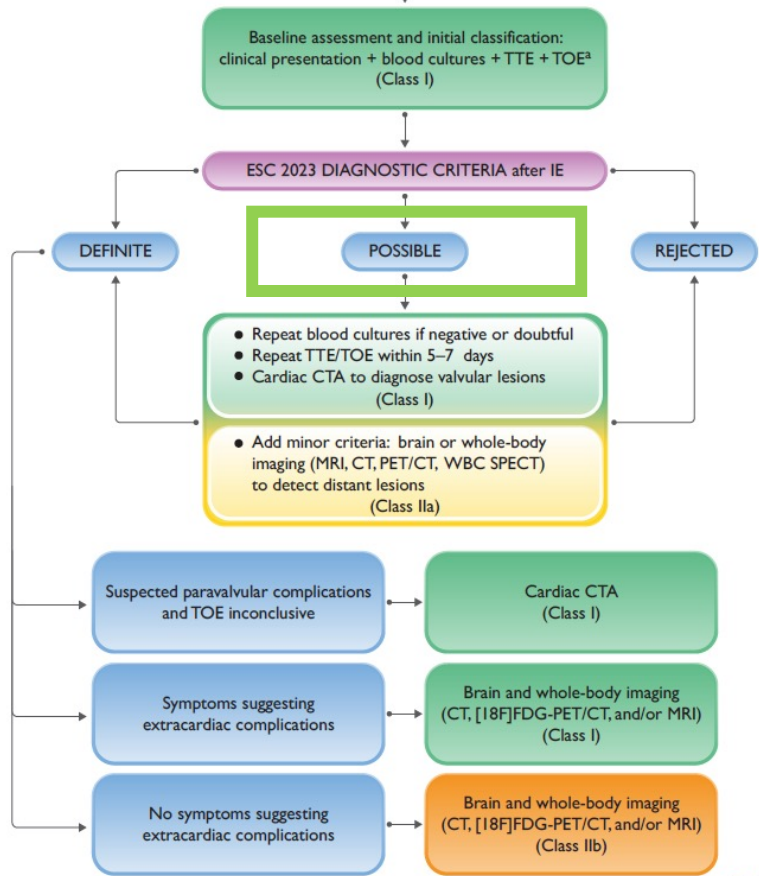
Endorsed by the European Association for Cardio-Thoracic Surgery (EACTS) and the European Association of Nuclear Medicine (EANM)

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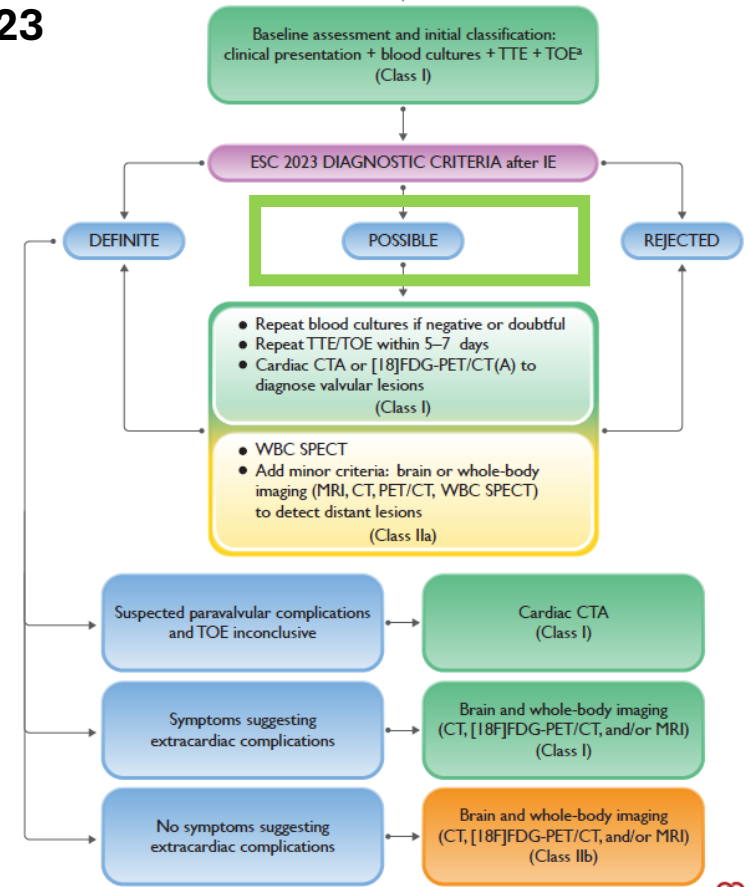
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ESC 2023

Suspected native valve IE



Suspected prosthetic valve IE



Classifications – Quels changements ?

- ❖ Critères anatomo-pathologiques / cliniques
- ❖ Nombre identique de critères cliniques Majeurs ou mineurs nécessaires pour définir une EI certaine
 - 2 critères Majeurs
 - 1 critère Majeur et 3 critères mineurs
 - 5 critères mineurs
- ❖ Par contre, **Duke-ISCVID 2023** et **ESC 2023** diffèrent:
 - Le nombre de critères mineurs possibles dans les 2 classifications
 - Les items définissant les critères Majeurs et mineurs

Classification diagnostique

2015 ESC vs Duke-ISCVID 2023 vs ESC 2023

	2015 ESC	2023 Duke-ISCVID	2023 ESC
Major pathologic Criteria			
Microbiological confirmation			
Microorganisms demonstrated by culture of vegetation, vegetation that has embolized or intracardiac abscess specimen	X	X	X
Microorganisms demonstrated by staining examination of vegetation, vegetation that has embolized or intracardiac abscess specimen		X	
Microorganisms demonstrated by culture or histologic examination of an endovascular intracardiac CIED		X	
Microorganisms identified in appropriate sample by PCR*			
On cardiac tissue or embolic material		X	X
On endovascular CIED		X	
Microorganisms identified in appropriate sample by amplicon or metagenomic sequencing, or in situ hybridization on cardiac tissue, embolic material and/or CIED leads		X	
Histological confirmation			
Vegetation or intracardiac abscess confirmed by histologic examination	X	X	X

Classification diagnostique 2015 ESC vs Duke-ISCVID 2023 vs ESC 2023

	2015 ESC	2023 Duke-ISCVID	2023 ESC
Major pathologic Criteria	26,8%	34,2%	29,1%
Microbiological confirmation			
Microorganisms demonstrated by culture of vegetation, vegetation that has embolized or intracardiac abscess specimen	X	X	X
Microorganisms demonstrated by staining examination of vegetation, vegetation that has embolized or intracardiac abscess specimen		X	
Microorganisms demonstrated by culture or histologic examination of an endovascular intracardiac CIED		X	
Microorganisms identified in appropriate sample by PCR*			
On cardiac tissue or embolic material		X	X
On endovascular CIED		X	
Microorganisms identified in appropriate sample by amplicon or metagenomic sequencing, or in situ hybridization on cardiac tissue, embolic material and/or CIED leads		X	
Histological confirmation			
Vegetation or intracardiac abscess confirmed by histologic examination	X	X	X

Classification diagnostique

2015 ESC vs Duke-ISCVID 2023 vs ESC 2023

	2015 ESC	2023 Duke-ISCVID	2023 ESC
Major clinical criteria			
Major microbiologic criteria			
Typical microorganisms ** 2 positive and separate blood cultures	X		X **
2 blood cultures without timing or separate venipunctures restriction		X **	

Classification diagnostique 2015 ESC vs Duke-ISCVID 2023 vs ESC 2023

	2015 ESC	2023 Duke-ISCVID	2023 ESC
Major clinical criteria			
Major microbiologic criteria			
Typical microorganisms ** 2 positive and separate blood cultures	X		X **
2 blood cultures without timing or separate venipunctures restriction		X **	
Microorganisms consistent with IE			
2 positive cultures of blood samples drawn 12 hours apart, or 3 or a majority of ≥ 4 separate cultures of blood (first and last sample drawn at least 1 h apart)	X		X **
3 blood cultures without timing or separate venipunctures restriction		X **	
Single positive blood culture for <i>C. burnetii</i>	X	X	X
Antiphase I IgG AC titer $\geq 1:800$ for <i>C. burnetii</i>	X	X	X
PCR or amplicon/ metagenomic sequencing identification of <i>C. burnetii</i> , <i>Bartonella</i> spp., or <i>T. whipplei</i> from blood		X	
IFA $> 1:800$ for IgG Ab for <i>B. henselae/quintana</i> ;		X	

Classification diagnostique

2015 ESC vs Duke-ISCVID 2023 vs ESC 2023

	2015 ESC	2023 Duke-ISCVID	2023 ESC
Major clinical criteria			
Major microbiologic criteria	67,8%	74,4%	68,4%
Typical microorganisms ** 2 positive and separate blood cultures	X		X **
2 blood cultures without timing or separate venipunctures restriction		X **	
Microorganisms consistent with IE			
2 positive cultures of blood samples drawn 12 hours apart, or 3 or a majority of ≥4 separate cultures of blood (first and last sample drawn at least 1 h apart)	X		X **
3 blood cultures without timing or separate venipunctures restriction		X **	
Single positive blood culture for <i>C. burnetii</i>	X	X	X
Antiphase I IgG AC titer ≥1:800 for <i>C. burnetii</i>	X	X	X
PCR or amplicon/ metagenomic sequencing identification of <i>C. burnetii</i> , <i>Bartonella</i> spp., or <i>T. whipplei</i> from blood		X	
IFA > 1:800 for IgG Ab for <i>B. henselae/quintana</i> ;		X	

Classification diagnostique

2015 ESC vs Duke-ISCVID 2023 vs ESC 2023

	2015 ESC	2023 Duke-ISCVID	2023 ESC
Major clinical criteria			
Major imaging criteria			
TTE/TEE			
Vegetation or abscess or new partial dehiscence of prosthetic valve or new valvular regurgitation	X	X	X
Valve perforation	X	X	X
Valvular thickening			X

Classification diagnostique

2015 ESC vs Duke-ISCVID 2023 vs ESC 2023

	2015 ESC	2023 Duke-ISCVID	2023 ESC
Major clinical criteria			
Major imaging criteria			
TTE/TEE			
Vegetation or abscess or new partial dehiscence of prosthetic valve or new valvular regurgitation	X	X	X
Valve perforation	X	X	X
Valvular thickening			X
Cardiac CT			
Vegetation, perforation		X	X
Abscess, Pseudo aneurysm	X	X	X
Valvular thickening			X

Classification diagnostique

2015 ESC vs Duke-ISCVID 2023 vs ESC 2023

	2015 ESC	2023 Duke-ISCVID	2023 ESC
Major clinical criteria			
Major imaging criteria			
TTE/TEE			
Vegetation or abscess or new partial dehiscence of prosthetic valve or new valvular regurgitation	X	X	X
Valve perforation	X	X	X
Valvular thickening			X
Cardiac CT			
Vegetation, perforation		X	X
Abscess, Pseudo aneurysm	X	X	X
Valvular thickening			X
18-FDG PET-CT			
PV (≥3 months post implant)	X	X	X
CIED (≥3 months post implant)		X	X
Native Valve		X	X
PV and CIED (<3 months post implant)			X

Classification diagnostique

2015 ESC vs Duke-ISCVID 2023 vs ESC 2023

	2015 ESC	2023 Duke-ISCVID	2023 ESC
Major clinical criteria			
Major imaging criteria			
TTE/TEE			
Vegetation or abscess or new partial dehiscence of prosthetic valve or new valvular regurgitation	X	X	X
Valve perforation	X	X	X
Valvular thickening			X
Cardiac CT			
Vegetation, perforation		X	X
Abscess, Pseudo aneurysm	X	X	X
Valvular thickening			X
18-FDG PET-CT			
PV (≥3 months post implant)	X	X	X
CIED (≥3 months post implant)		X	X
Native Valve		X	X
PV and CIED (<3 months post implant)			X
WBC-SPECT/CT			
PV	X		X
CIED			X
Native valve			X
Major surgical criteria***			
Intraoperative IE findings		X	

Classification diagnostique

2015 ESC vs Duke-ISCVID 2023 vs ESC 2023

	2015 ESC	2023 Duke-ISCVID	2023 ESC
Major clinical criteria			
Major imaging criteria	88,1%	89,3%	89,7%
TTE/TEE			
Vegetation or abscess or new partial dehiscence of prosthetic valve or new valvular regurgitation	X	X	X
Valve perforation	X	X	X
Valvular thickening			X
Cardiac CT			
Vegetation, perforation		X	X
Abscess, Pseudo aneurysm	X	X	X
Valvular thickening			X
18-FDG PET-CT			
PV (≥3 months post implant)	X	X	X
CIED (≥3 months post implant)		X	X
Native Valve		X	X
PV and CIED (<3 months post implant)			X
WBC-SPECT/CT			
PV	X		X
CIED			X
Native valve			X
Major surgical criteria***			
Intraoperative IE findings		X	

Classification diagnostique 2023 ESC vs 2023 Duke-ISCVID vs 2015 ESC

	2015 ESC	2023 Duke-ISCVID	2023 ESC
Minor criteria			
Predisposition			
Predisposing heart condition or IV substance use	X	X	X
Endovascular CIED		X	X
Fever			
Fever greater than 38°C (100.4°F)	X	X****	X

Classification diagnostique 2023 ESC vs 2023 Duke-ISCVID vs 2015 ESC

	2015 ESC	2023 Duke-ISCVID	2023 ESC
Minor criteria			
Predisposition			
Predisposing heart condition or IV substance use	X	X	X
Endovascular CIED		X	X
Fever			
Fever greater than 38°C (100.4°F)	X	X****	X
Vascular phenomena			
Major arterial emboli, septic pulmonary infarcts, mycotic aneurysm, intracranial haemorrhage, conjunctival haemorrhages, Janeway's lesions.....	X	X	X
Pulmonary abscess			X
Splenic abscess		X	X
Cerebral abscess		X	X
Spondylodiscitis			X

Classification diagnostique 2023 ESC vs 2023 Duke-ISCVID vs 2015 ESC

	2015 ESC	2023 Duke-ISCVID	2023 ESC
Minor criteria			
Predisposition			
Predisposing heart condition or IV substance use	X	X	X
Endovascular CIED		X	X
Fever			
Fever greater than 38°C (100.4°F)	X	X****	X
Vascular phenomena			
Major arterial emboli, septic pulmonary infarcts, mycotic aneurysm, intracranial haemorrhage, conjunctival haemorrhages, Janeway's lesions.....	X	X	X
Pulmonary abscess			X
Splenic abscess		X	X
Cerebral abscess		X	X
Spondylodiscitis			X
Immunologic phenomena			
Osler's nodes, Roth's spots, and rheumatoid factor	X	X	X
Glomerulonephritis, no strict definition	X		X
Glomerulonephritis, strict definition *****		X	
Microbiological criteria			
Positive blood culture but does not meet a major criterion or serological evidence of active infection with organism consistent with IE	X	X	X
PCR or amplicon/ metagenomic sequencing evidence of an organism consistent with IE from a sterile body site other than cardiac tissue, cardiac prosthesis, or embolus		X	
Single finding of a skin bacterium by PCR on a valve or wire without additional supporting evidence		X	
Positive CIED leads culture (extracted from a non-infected pocket)			
Imaging criteria			
18-FDG PET/CT evidence < 3 months of cardiac surgery on PV or CIED		X	
Physical examination			
New auscultation of regurgitant murmur when echocardiography is unavailable		X	

Classification diagnostique

2023 ESC vs 2023 Duke-ISCVID vs 2015 ESC

	2015 ESC	2023 Duke-ISCVID	2023 ESC
Minor criteria			
Predisposition	61%	69,7%	69,7%
Predisposing heart condition or IV substance use	X	X	X
Endovascular CIED		X	X
Fever			
Fever greater than 38°C (100.4°F)	X	X****	X
Vascular phenomena	53,6%	53,7%	60,8%
Major arterial emboli, septic pulmonary infarcts, mycotic aneurysm, intracranial haemorrhage, conjunctival haemorrhages, Janeway's lesions.....	X	X	X
Pulmonary abscess			X
Splenic abscess		X	X
Cerebral abscess		X	X
Spondylodiscitis			X
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Osler's nodes, Roth's spots, and rheumatoid factor	X	X	X
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Positive CIED leads culture (extracted from a non-infected pocket)			
Imaging criteria			
18-FDG PET/CT evidence < 3 months of cardiac surgery on PV or CIED		X	
Physical examination			

Classification diagnostique

2015 ESC vs Duke-ISCVID 2023 vs ESC 2023

	2015 ESC	2023 Duke-ISCVID	2023 ESC
Exclusion criteria			
Firm alternate diagnosis explaining the signs/symptoms	X	X	X
Resolution of symptoms with antibiotic therapy for <4 days	X		
No pathologic/macroscopic evidence at surgery with antibiotics ≤4 day	X	X	
Does not meet criteria for possible infective endocarditis, as above	X	X	X
Lack of recurrence despite antibiotics ≤4 days		X	
Classification rules			
Definite IE			
Pathologic criteria	X	X	X
2 Major, or 1 Major + 3 Minor	X	X	X
5 Minor	X	X	X
Possible IE			
1 Major + 1 Minor, or 3 Minor	X	X	X
Rejected IE			
Exclusion criteria, or Does not meet criteria for possible IE, as above	X	X	X



Evolution du % d'endocardites classées CERTAINES



Evolution du % d'endocardites classées CERTAINES

1194 pts AEPEI traités pour EI

Global classification (3 classes)	2000 modified Duke n (%)	2015 ESC n (%)	2023 Duke-ISCVID n (%)	2023 ESC n (%)
Definite	978 (81.9%)	998 (83.8%)	1058 (88.8%)	1042 (87.5%)
Possible	184 (15.4%)	168 (14.1%)	124 (10.4%)	132 (11.1%)
Excluded	32 (2.7%)	25 (2.1%)	9 (0.8%)	17 (1.4%)

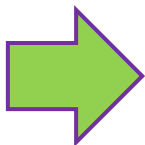
Goehring F, Clin Infect Dis 2024
Selton – Suty C, (Submitted)



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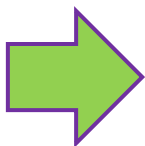
Augmentation du nombre de patients dont l'endocardite est classée certaine



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Augmentation du nombre de patients dont l'endocardite est classée certaine

Est-ce à bon escient ?

Evaluation **performances** diagnostiques de ces classifications (Classification épidémiologique)

Evaluation **performances** diagnostiques de ces classifications (Classification épidémiologique)

❖ **Quel gold standard ?**

- Résultats anatomopathologiques ?
- Comité d'adjudication (certitude) ? Ou Pts traités comme une EI ?

Evaluation performances diagnostiques de ces classifications (Classification épidémiologique)

❖ Quel gold standard ?

- Résultats anatomopathologiques ?
- Comité d'adjudication (certitude) ? Ou Pts traités comme une EI ?

❖ Quelle population ?

- Pts suspects d'EI
 - Quelle définition ? Quel degré de suspicion ?
 - Pts discutés en EI team ?
 - Pts traités comme des EI ?
 - Pts pour lesquels une Echocardiographie cardiaque et des Hémocultures ont été demandées ?
 - Suffisamment d'EI *in fine* pour évaluer les performances
- Pts exclus avec certitude (spécificité)

Evaluation performances diagnostiques de ces classifications (Classification épidémiologique)

❖ Quel gold standard ?

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 - Suffisamment d'EI *in fine* pour évaluer les performances
- Pts exclus avec certitude (spécificité)

❖ Quels regroupements ? EI Certaine vs Possible/ Exclue ?

Evaluation **performances** diagnostiques de ces classifications (Classification épidémiologique)

Méthodes: Protocole prospectif

- ❖ **Inclusion des patients suspects d'endocardite selon des critères d'inclusion prédéfinis**
- ❖ Protocole standardisé d'examens complémentaires avec recours aux examens d'imagerie de 2^{ème} et 3^{ème} lignes systématiquement si ceux de 1^{ère} ligne sont négatifs
- ❖ Suivi standardisé 6 mois
- ❖ Comité d'adjudication

.....

Evaluation **performances** diagnostiques de ces classifications (Classification épidémiologique)

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- ❖ Suivi standardisé 6 mois
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..... **À défaut.....études rétrospectives sur cohortes**



Performances diagnostiques (Etude Française)

1194 patients traités pour endocardite

Comité d'adjudication: 946 (79.2%) patients adjudiqués rétrospectivement comme « vraie endocardite »



Performances diagnostiques (Etude Française)

1194 patients traités pour endocardite

Comité d'adjudication: 946 (79.2%) patients adjudiqués rétrospectivement comme « vraie endocardite »

	Sensitivity % Definite IE [95% CI]
Whole sample	
2000 Modified Duke (978 definite)	93.2 [91.6-94.8]
2015 ESC (997 definite)	94.9% [93.5-96.3]
2023 Duke-ISCVID (1057 definite)	97.6% [96.6-98.6]
2023 ESC (1042 definite)	96.7% [95.6-97.9]



Performances diagnostiques (Etude Française)

1194 patients traités pour endocardite

Comité d'adjudication: 946 (79.2%) patients adjudiqués comme « vraie endocardite »

	Sensitivity % Definite IE [95% CI]	Specificity % [95% CI]
Whole sample		
2000 Modified Duke (978 definite)	93.2 [91.6-94.8]	61.3 [55.2-67.4]
2015 ESC (997 definite)	94.9% [93.5-96.3]	59.2% [53.0-65.3]
2023 Duke-ISCVID (1057 definite)	97.6% [96.6-98.6]	44.9% [38.7-51.1]
2023 ESC (1042 definite)	96.7% [95.6-97.9]	48.2% [41.9-54.4]



Performances diagnostiques (Etude Française)

1194 patients traités pour endocardite

Comité d'adjudication: 946 (79.2%) patients adjudiqués comme « vraie endocardite »

	Sensitivity % Definite IE [95% CI]	Specificity % [95% CI]	Accuracy % [95% CI]
Whole sample			
2000 Modified Duke (978 definite)	93.2 [91.6-94.8]	61.3 [55.2-67.4]	86.6 [84.7-88.5]
2015 ESC (997 definite)	94.9% [93.5-96.3]	59.2% [53.0-65.3]	87.6% [85.7-89.4]
2023 Duke-ISCVID (1057 definite)	97.6% [96.6-98.6]	44.9% [38.7-51.1]	86.7% [84.8-88.7]
2023 ESC (1042 definite)	96.7% [95.6-97.9]	48.2% [41.9-54.4]	86.7% [84.8-88.7]

Performances diagnostiques (Etude Hollandaise)

595 patients hospitalisés pour suspicion d'endocardite

Comité d'adjudication: 399 (67%) patients adjudiqués comme « vraie endocardite »

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	Sensitivity (95% CI) (Definite EI)
Modified Duke Criteria	74.9 (70.4 - 79.1)
2015 ESC Criteria	80.0 (75.7 - 83.8)
2023 ESC Criteria	85.5 (81.6 - 88.8)
Duke-ISCVID Criteria	84.2 (80.3 - 87.7)

Full criteria

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	Sensitivity (95% CI) (Definite EI)	Specificity (95% CI)
Modified Duke Criteria	74.9 (70.4 - 79.1)	94.9 (90.8 - 97.5)
2015 ESC Criteria	80.0 (75.7 - 83.8)	93.9 (89.6 - 96.8)
2023 ESC Criteria	85.5 (81.6 - 88.8)	82.1 (76.1 - 87.2)
Duke-ISCVID Criteria	84.2 (80.3 - 87.7)	93.9 (89.6 - 96.8)

Full criteria

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	Sensitivity (95% CI) (Definite EI)	Specificity (95% CI)	Negative predictive value (95% CI)	Positive predictive value (95% CI)	P-value (sensitivity versus Duke- ISCVID sensitivity)	P-value (specificity versus Duke- ISCVID specificity)
Modified Duke Criteria	74.9 (70.4 - 79.1)	94.9 (90.8 - 97.5)	65.0 (59.2 - 70.6)	96.8 (94.1 - 98.4)	<0.001	0.16
2015 ESC Criteria	80.0 (75.7 - 83.8)	93.9 (89.6 - 96.8)	69.7 (63.8 - 75.2)	96.4 (93.8 - 98.1)	<0.001	1
2023 ESC Criteria	85.5 (81.6 - 88.8)	82.1 (76.1 - 87.2)	73.5 (67.2 - 79.2)	90.7 (87.3 - 93.4)	0.22	<0.001
Duke-ISCVID Criteria	84.2 (80.3 - 87.7)	93.9 (89.6 - 96.8)	74.5 (68.6 - 79.8)	96.6 (94.1 - 98.2)	-	-

Full criteria

Bactériémie à *Staphylococcus aureus* (Suisse)

- ❖ Sensibilité/spécificité classification EI ESC 2015, Duke-ISCVID 2023 ESC 2023
- ❖ 1344 bactériémies *S. aureus* issues de 3 cohortes (Suisse)
Cohortes bactériémies, cohorte suspicion EI, cohorte EI
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	Sensibilité	Spécificité	VPP	VPN	Accuracy
ESC 2015	75% IC 95:71-98	99% IC 95:98-99	97% IC 95:95-99	88% IC 95:86-89	90% IC 95:88-92
Duke-ISCVID 2023	81% IC 95:77-84	96% IC 95:95-97	92% IC 95:90-95	90% IC 95:88-91	91% IC 95:90-91
ESC 2023	82% IC 95:78-85	96% IC 95:95-97	92% IC 95:89-94	90% IC 95:89-92	91% IC 95:89-92

Performances diagnostiques (Spécificité) Bichat

130 patients hospitalisés pour suspicion d'endocardite en 2021 chez lesquels le diagnostic a été formellement exclu

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- ❖ Echographie cardiaque
- ❖ ≥ 2 paires d'hémoculture
- ❖ 3 mois de suivi
- ❖ ≤ 3 semaines d'antibiothérapie
- ❖ Patients classés par 2015 ESC, 2023 Duke-ISCVID, 2023 ESC comme si le diagnostic d'EI n'avait pas été exclu

Performances diagnostiques (Spécificité) Bichat

	2015 ESC		Duke-ISCVID 2023		2023 ESC	
Pathologic and clinical criteria						
Definite	2	1.5%	5	4%	5	4%

Performances diagnostiques (Spécificité) Bichat

Specificity of the 2015 ESC, 2023 Duke-ISCVID, and 2023 ESC classifications (definite category), depending on the criteria used and the duration of antibiotics received.

	2015 ESC	2023 Duke-ISCVID	2023 ESC
Clinical criteria alone			
All patients (n=130)	100% [96.4% ; 100%]*	97.7% [92.9% ; 99.4%]*	97.7% [92.9% ; 99.4%]*
Pathologic and clinical criteria			
All patients (n=130)	98.5% [93.9% ; 99.7%]*	96.2% [90.8% ; 98.6%]*	96.2% [90.8% ; 98.6%]*

Performances diagnostiques (Spécificité) Bichat

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	2015 ESC	2023 Duke-ISCVID	2023 ESC
Clinical criteria alone			
All patients (n=130)	100% [96.4% ; 100%]*	97.7% [92.9% ; 99.4%]*	97.7% [92.9% ; 99.4%]*
< 14 days of antibiotics (n=116)	100% [96% ; 100%]*	98.3% [93.3% ; 99.7%]*	98.3% [93.3% ; 99.7%]*
< 7 days of antibiotics (n=82)	100% [94.4% ; 100%]*	98.8% [92.5% ; 99.9%]*	98.8% [92.5% ; 99.9%]*
Pathologic and clinical criteria			
All patients (n=130)	98.5% [93.9% ; 99.7%]*	96.2% [90.8% ; 98.6%]*	96.2% [90.8% ; 98.6%]*
< 14 days of antibiotics (n=116)	98.3% [93.3% ; 99.7%]*	96.6% [90.9% ; 98.9%]*	96.6% [90.9% ; 98.9%]*
< 7 days of antibiotics (n=82)	97.6% [90.7% ; 99.6%]*	96.3% [88.9% ; 99.1%]*	96.3% [88.9% ; 99.1%]*

Performances diagnostiques (Spécificité) Bichat

	2015 ESC		Duke-ISCVID 2023		2023 ESC	
Pathologic and clinical criteria						
Definite	2	1.5%	5	4%	5	4%
Possible	45	35%	46	35%	47	36%
Rejected	83	64%	79	61%	78	60%

≈ 40% des suspicions d'EI sont classées EI certaines ou possibles alors qu'elles n'en sont pas

Conclusion

- ❖ Classification EI: Epidémiologie versus Démarche diagnostique

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- ❖ Etudes prospectives en théorie nécessaires mais difficiles à mettre en œuvre

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