INTERET DIAGNOSTIQUE ET PRONOSTIQUE DE LA TOMOSCINTIGRAPHIE MYOCARDIQUE DANS LA RECHERCHE DE L'ISCHEMIE SILENCIEUSE CHEZ LE DIABETIQUE

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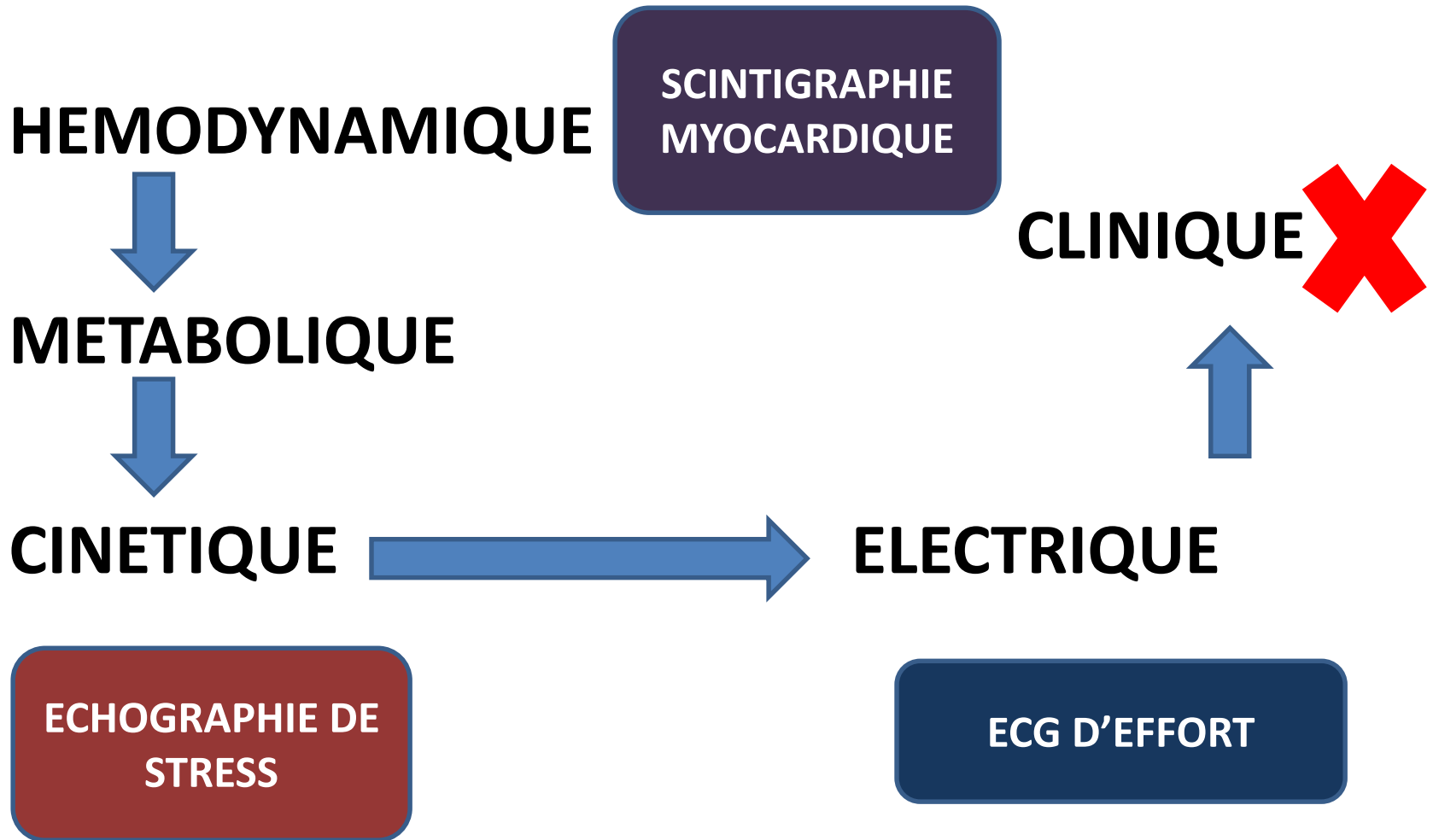**Service de Médecine Nucléaire CHU Tlemcen**

Etudes DIAD et LUCA

- ***65%-80% de décès d'origine cardio vasculaire chez le diabétique***

- ***33% d'IMS chez le diabétique vs 15% chez le non diabétique***

PROBLEMATIQUE

- Comment rechercher L'IMS ?
- QUAND LA RECHERCHER ?

APPORT DE LA CARDIOLOGIE NUCLEAIRE

1- Diagnostic

- Test d'ischémie fonctionnel
- **Perfusion relative + Fonction VG**
- Tomographie et Gated SPECT=> FEVG+ VTS

- **Sensibilité= 92%**
- **Spécificité= 93%**

- *Faux négatif*: atteinte tri tronculaire ou sténose du tronc commun (Epreuve d'effort +)
- *Artefact* : paroi inferieure (intérêt du Gated SPECT, CT, Décubitus ventral)

2- Pronostic

- **Valeurs prédictives positive et négatives (VPP-VPN)**

Probabilité de survenue d'un événement cardiovasculaire		
Faible <1%	Intermédiaire 1-5%	Haute >5%

Chez le diabétique

VPN

- Même risque / non diabétique pendant 2 ans
- Refaire après deux ans

VPP

- **7.4 % par an / 4.6%** chez le non diabétique
- Étendu
- Sévérité
- FEVG<45%
- VTS>70ml

Mauvais pronostic

QUAND DEPISTER ?
Selon les recommandations ESC 2019

ESC GUIDELINES

2019 ESC Guidelines on diabetes, pre-diabetes, and cardiovascular diseases developed in collaboration with the EASD

The Task Force for diabetes, pre-diabetes, and cardiovascular diseases of the European Society of Cardiology (ESC) and the European Association for the Study of Diabetes (EASD)

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Table 8 Overview of randomized controlled trials

Study/author	Faglia et al.[69]	DIAD[68]	DYNAMIT[64]	FACTOR-64[67]	DADDY-D[70]
Year of publication	2005	2009	2011	2014	2015
Patients (n)	141 (+1)[a]	1123	615	899	520
Inclusion criteria	T2DM	T2DM	T2DM	T1DM or T2DM	T2DM
Annual rate of major CEs (%)	1.9	0.6	1.0	0.8	1.4
Main results of screening	Significant ↓ of major and all CEs	Non-significant ↓ of major CEs	Non-significant ↓ of MI; no effect on combined CEs	Non-significant ↓ of combined CEs	Non-significant ↓ of major CEs, but significant ↓ in those aged >60 years

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Recommendations for the use of laboratory, electrocardiogram, and imaging testing for cardiovascular risk assessment in asymptomatic patients with diabetes

Recommendations	Class[a]	Level[b]
Routine assessment of microalbuminuria is indicated to identify patients at risk of developing renal dysfunction or at high risk of future CVD.[27,38]	I	B
A resting ECG is indicated in patients with DM diagnosed with hypertension or with suspected CVD.[38,39]	I	C
Assessment of carotid and/or femoral plaque burden with arterial ultrasonography should be considered as a risk modifier in asymptomatic patients with DM.[60–62]	IIa	B
CAC score with CT may be considered as a risk modifier in the CV risk assessment of asymptomatic patients with DM at moderate risk.[c] [63]	IIb	B
CTCA or functional imaging (radionuclide myocardial perfusion imaging, stress cardiac magnetic resonance imaging, or exercise or pharmacological stress echocardiography) may be considered in asymptomatic patients with DM for screening of CAD.[47,48,64,65,67–70]	IIb	B

ing strategy. Accordingly, routine screening of CAD in asymptomatic DM is not recommended.[71] However, stress testing or CTCA may be indicated in very high-risk asymptomatic individuals [with peripheral arterial disease (PAD), a high CAC score, proteinuria, or renal failure].[72]

Table 7 Cardiovascular risk categories in patients with diabetes[a]

Very high risk	Patients with DM **and** established CVD **or** other target organ damage[b] **or** three or more major risk factors[c] **or** early onset T1DM of long duration (>20 years)
High risk	Patients with DM duration ≥10 years without target organ damage plus any other additional risk factor
Moderate risk	Young patients (T1DM aged <35 years or T2DM aged <50 years) with DM duration <10 years, without other risk factors

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CV = cardiovascular; CVD = cardiovascular disease; DM = diabetes mellitus; T1DM = type 1 diabetes mellitus; T2DM = type 2 diabetes mellitus.

[a]Modified from the 2016 European Guidelines on cardiovascular disease prevention in clinical practice.[27]

[b]Proteinuria, renal impairment defined as eGFR <30 mL/min/1.73 m^2, left ventricular hypertrophy, or retinopathy.

[c]Age, hypertension, dyslipidemia, smoking, obesity.

CONCLUSION

- Particularité de la TSM = Test fonctionnel

PERFUSION + FONCTION

- Le dépistage n'est pas systématique

> **Diabète ET pathologie cardiovasculaire**

OU

> **Atteinte des organes cibles (rein, rétine, HVG)**
> **≥ 3 FDR majeurs (âge, HTA , dyslipidémie, tabac et obésité)**
> **DT1 débutant précocement et évoluant > 20ans.**