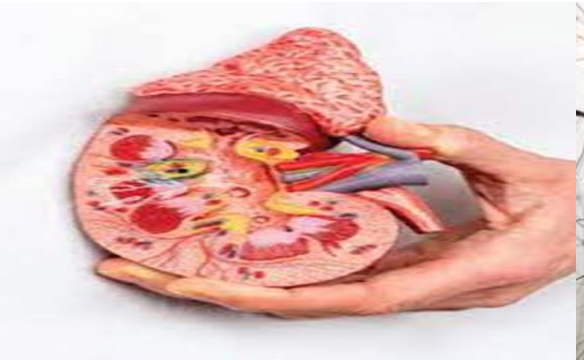
ESC
European Society of Cardiology

15e Congrès national
de l'Association des Internistes Libéraux Algériens
10 et 11 Octobre 2024
Hôtel El Aurassi

Association des Internistes Libéraux Algériens

Neuropathie diabétique & risque CV : Résultats d'une étude analytique rétrospective



Pr Hamdaoui Mohamed Seddik
Médecine Interne & Diabète
EHU Oran

Les maladies cardiovasculaires restent la **première cause de mortalité** chez les diabétiques de type 2.

Comorbidités dégénératives

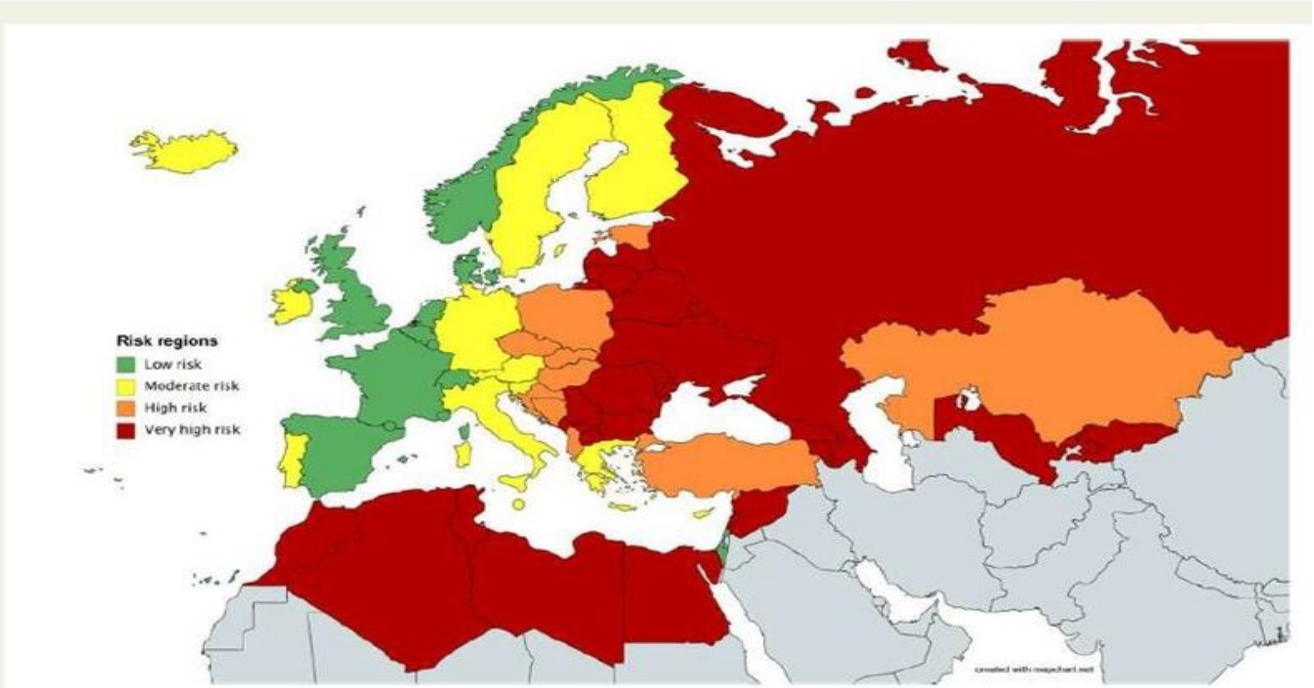
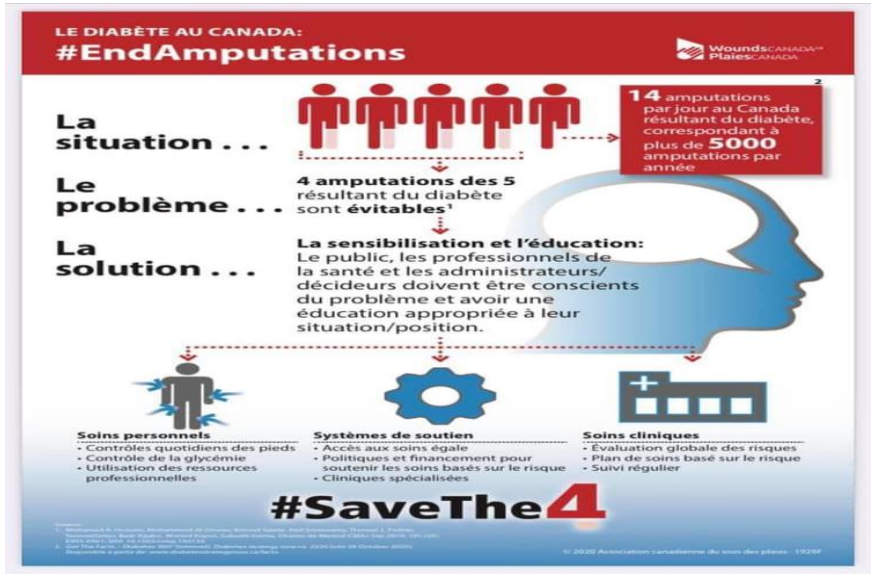
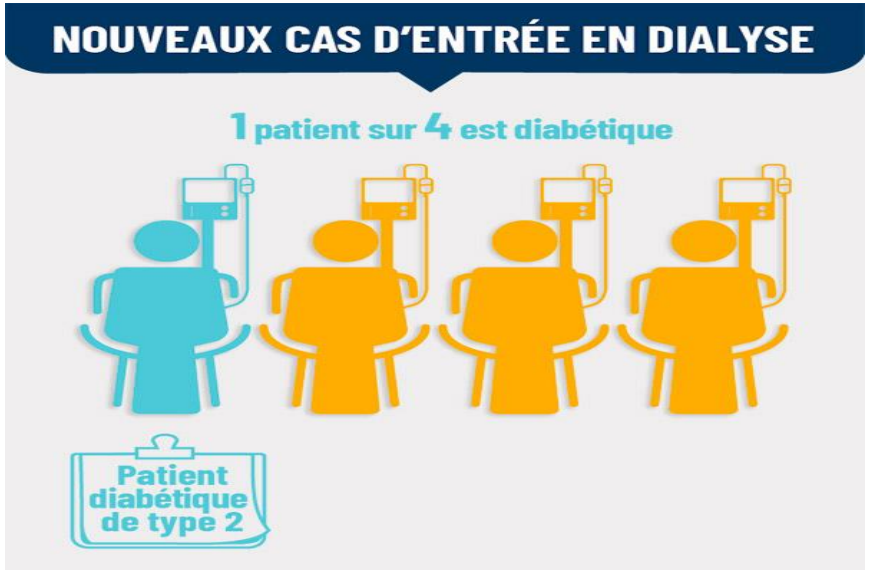


Figure 2 Risk regions based on standardised cardiovascular disease mortality rates. Countries were grouped into four risk regions accord their most recently reported WHO age- and sex-standardized overall CVD mortality rates per 100,000 population (ICD chapters 9, I00-I99 four groupings were: low risk (<100 CVD deaths per 100,000), moderate risk (100 to <150 CVD deaths per 100,000), high risk (150 to <300 deaths per 100,000), and very high risk (≥300 CVD deaths per 100,000).





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1.Development process, risk regions and illustrative example for the SCORE2-OP algorithm.

2.Insuffisance rénale, Décrypter les mécanismes de destruction du rein, INSERM, https://www.inserm.fr/dossier/insuffisance-renale/

Neuropathie diabétique

- Complication dégénérative la plus fréquente du DT2
- Dysfonctionnement nerveux (fibres myélinisées ou non en périphérie et/ou à destinée végétative)
  - Physiopathologie multifactorielle
  - Pied diabétique ++

Microalbuminurie

- 20% des patients diabétique (DT1> DT2)
- Marqueur précoce de la néphropathie
- Facteur de risque cardio-vasculaire, d'infarctus ou encore d'AVC.
- HTA +++
- RAC > 3mg/mmol

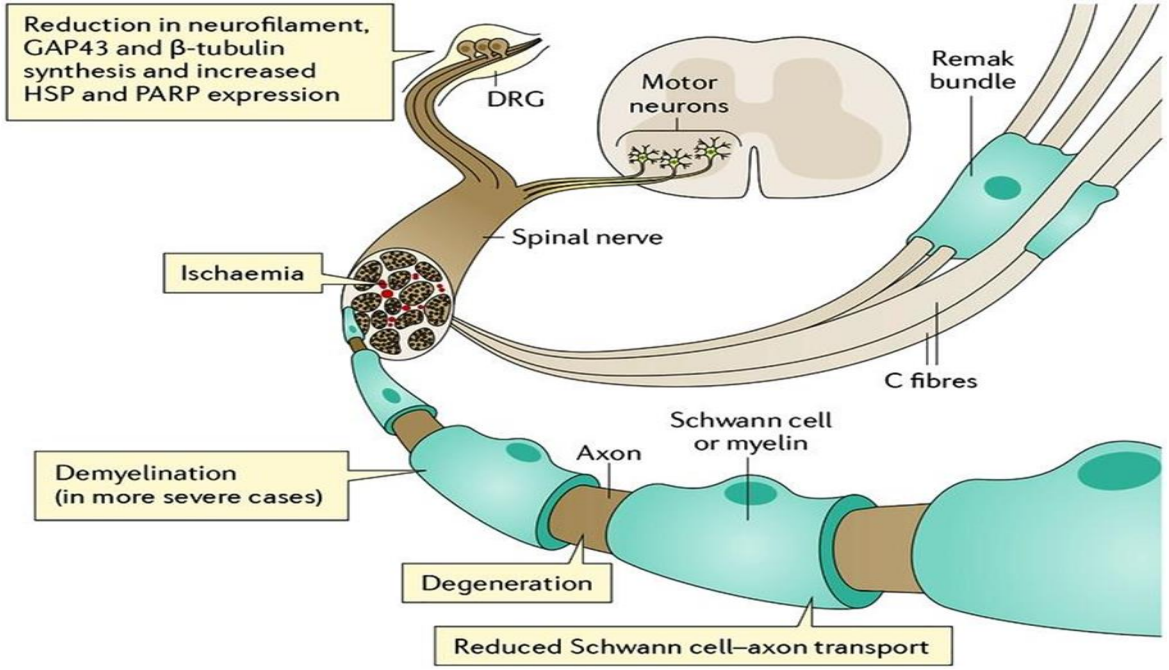
Forte association aux comorbidités cardiovasculaires

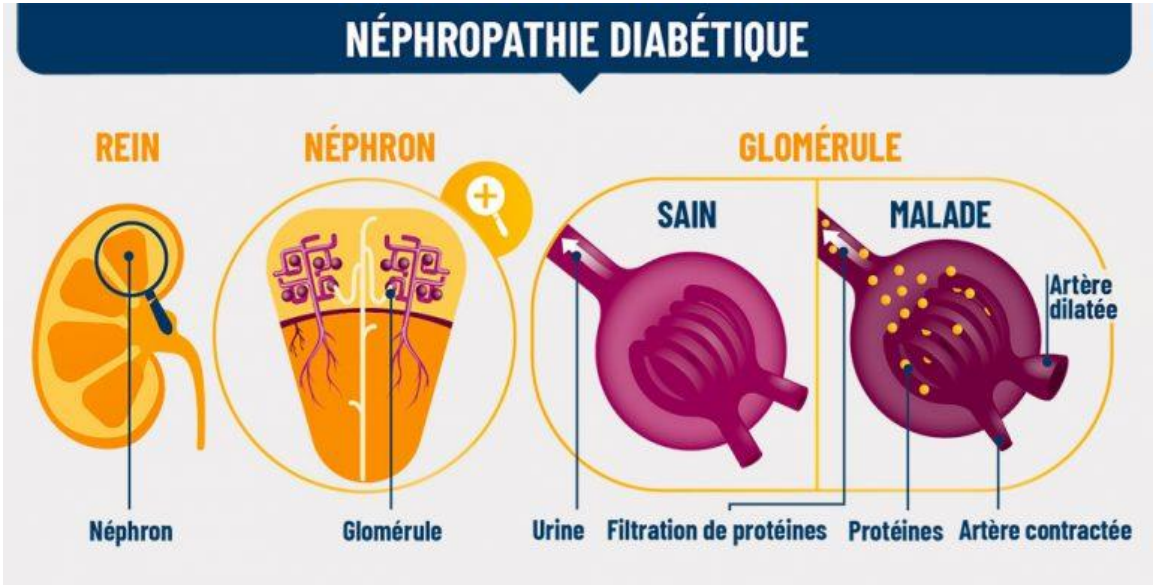
Ischémie +++

Dégénérescence axonale + Démyélinisation

Stress oxydatif
Dysfonction endothéliale

Microalbuminurie (Système RAA*)





1.Calcutt NA. Neuropathie diabétique et douleur neuropathique 2020

2.Insuffisance rénale, Décrypter les mécanismes de destruction du rein, INSERM, https://www.inserm.fr/dossier/insuffisance-renale/

- ***Y a-t-il une relation entre ces paramètres***

Design de l'étude

- Rétrospective Cas/Témoins
- Service de Médecine interne EHU Oran -
Durée : 2ans {*2019-2021}*
- *270 DT2 retenus*
- *90 NDP + / 180 NDP –*

- *NDP : Symptômes et/ou perturbation d'au moins un test de sensibilité (voir une preuve ENMG si doute)*
-*Analyse statistique :Epi DATA 3.0 et SPSS 20*

Objectif primaire

- Identifier les facteurs de risque de survenue de la neuropathie périphérique chez les DT2

Objectifs secondaires

1. Etablir le profil des DT2 atteints de neuropathie périphérique.
2. Définir les comorbodités associées.

La Microalbuminurie des 24 heures Fortement associée à la NDP

- **Microalbuminurie chez 1patient /2 a**yant une NDP +

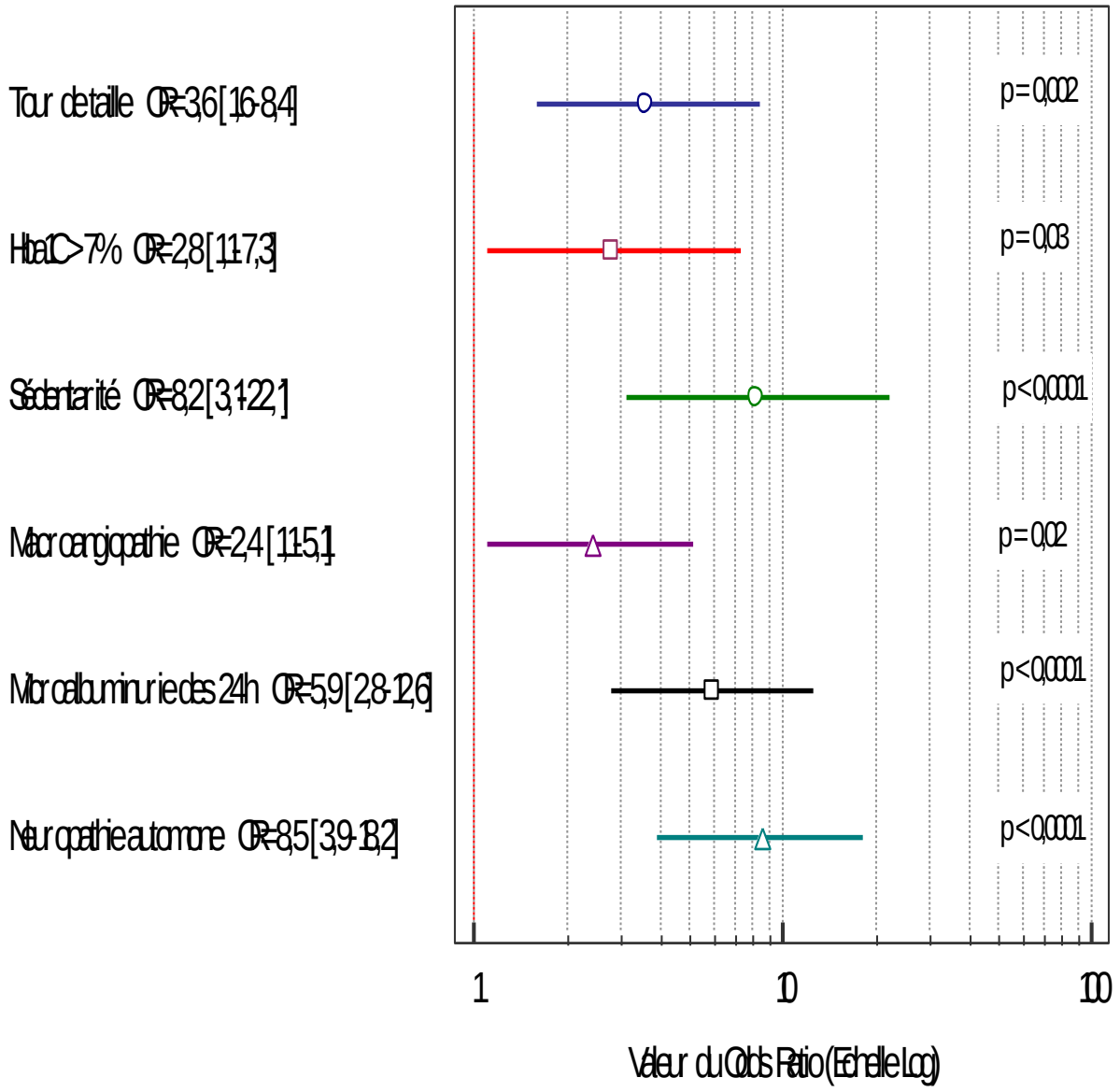
  [Moyenne MA = 105,66 ±188,10 mg/24heures]
- DFG (MDRD°) = 68,20 ± 22,26 ml/min.
- 09 patients /10 ayant déjà une MRC .

- 08 patients /10 sont Hypertendus.
- **75%** ont au moins une MCV avérée.
- Majorité sédentaire avec un Syndrome métabolique …

MACRO +++

- l'AOMI et l'artérite cervicale : Risque multiplié par 5,69 et 5,50
- La maladie coronaire OR = 5,46 [2,72 – 11,07].
- La cardiomyopathie OR = 4,8 [2,78 – 8,25].
- Le risque est multiplié par plus de 5 si on considère au moins une complication macro-vasculaire.

Population au stade de Prévention secondaire +++



HAMDAOUI, Mohamed Seddik, MIDOUN, Nori, et BELHADJ, Mohamed. Facteurs de risque de la neuropathie périphérique patente chez le diabétique de type 2 dans une population algérienne: principaux déterminants. Médecine des Maladies Métaboliques, 2023, vol. 17, no 7, p. 586-593.

Discussion

La **Microalbuminurie** associée de manière significative à la présence de rétinopathie (P < 0,001), **Neuropathie (P < 0,001) Maladies cardiovasculaires (P < 0,001).**

Dans les analyses de régression logistique multiple, EAU présentaient de fortes associations indépendantes avec la rétinopathie, **la neuropathie et les maladies cardiovasculaires +++**

Urinary Albumin Excretion as a Predictor of Diabetic Retinopathy, Neuropathy, and Cardiovascular Disease in NIDDM

SUSAN SAVAGE, MD
RAYMOND O. ESTACIO, MD
BARRETT JEFFERS, PHD
ROBERT W. SCHRIER, MD

OBJECTIVE — The relationship between urinary albumin excretion (UAE) and diabetic complications in NIDDM has not been studied in a large American population. The demonstrated relationship between increased UAE and the development of retinopathy, nephropathy, and neuropathy in IDDM makes this an important issue to also be studied in NIDDM patients.

RESEARCH DESIGN AND METHODS — A large population study of 947 NIDDM patients living predominantly in a metropolitan area was undertaken. Three categories of UAE, namely, normal albuminuria (<20 μg/min), microalbuminuria (20–200 μg/min), and overt albuminuria (>200 μg/min) were compared with *1*) retinopathy as assessed by stereoscopic fundus photographs; *2*) cardiovascular disease as assessed by a history of cardiac disease or stroke; ischemic changes on exercise treadmill testing; Q wave myocardial infarction; Estes, Sokolow, or Cornell criteria for left ventricular hypertrophy; positive Rose questionnaire for angina; and an abnormal Doppler exam for peripheral vascular disease; and *3*) neuropathy as assessed by neurological symptom and disability scores, autonomic function testing, and quantitative sensory exams involving thermal and vibratory sensation. Selected patient characteristics were then evaluated to determine their effects on the presence of diabetic complications using univariate analyses. Multiple logistic regression analyses were then performed to determine the independent effect of UAE on these diabetic complications.

RESULTS — $\chi 2$ analyses revealed that UAE was significantly associated with the presence of retinopathy ($P < 0.001$), neuropathy ($P < 0.001$), and cardiovascular disease ($P < 0.001$). In the multiple logistic regression analyses, UAE had strong independent associations with retinopathy, neuropathy, and cardiovascular disease.

CONCLUSIONS — Thus, increasing UAE in this large NIDDM population in the U.S. was associated with an increased prevalence of diabetic retinopathy, neuropathy, and cardiovascular disease. This suggests that UAE may be more than an indicator of renal disease in NIDDM patients and, in fact, may reflect a state of generalized vascular damage occurring throughout the body. Prospective studies in NIDDM patients are needed to determine the predictive effect of UAE and the effect of decreasing UAE on future diabetic micro- and macrovascular complications.

a powerful predictor for the future development of diabetic nephropathy and retinopathy in IDDM (2–4). However, less information is available about UAE in NIDDM. Some studies involving NIDDM subjects have demonstrated associations between microalbuminuria and cardiovascular events (5–7). Gall et al. (8) demonstrated a similar relationship between increasing albuminuria and retinopathy in European NIDDM subjects; however, other studies were unable to find a similar relationship (9–11). There have been no studies performed in the U.S. or elsewhere in which the relationships between UAE and diabetic neuropathy, retinopathy, and cardiovascular disease have been examined in a single large NIDDM population.

On this background a cross-sectional analysis was undertaken in 950 NIDDM subjects to examine possible relationships of UAE and various risk factors with diabetic vascular complications, including retinopathy, neuropathy, and cardiovascular disease. The patients were categorized into the following UAE classes: *1*) normal albuminuria (NA), <20 μg/min; *2*) microalbuminuria (MA), 20–200 μg/min; 3) overt albuminuria (OA), >200 μg/min.

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ORIGINAL ARTICLE

Peripheral neuropathy and the risk of cardiovascular events in type 2 diabetes mellitus

Jack R W Brownrigg,[1] Simon de Lusignan,[2] Andrew McGovern,[2] Cian Hughes,[1] Matthew M Thompson,[1] Kausik K Ray,[1] Robert J Hinchliffe[1]

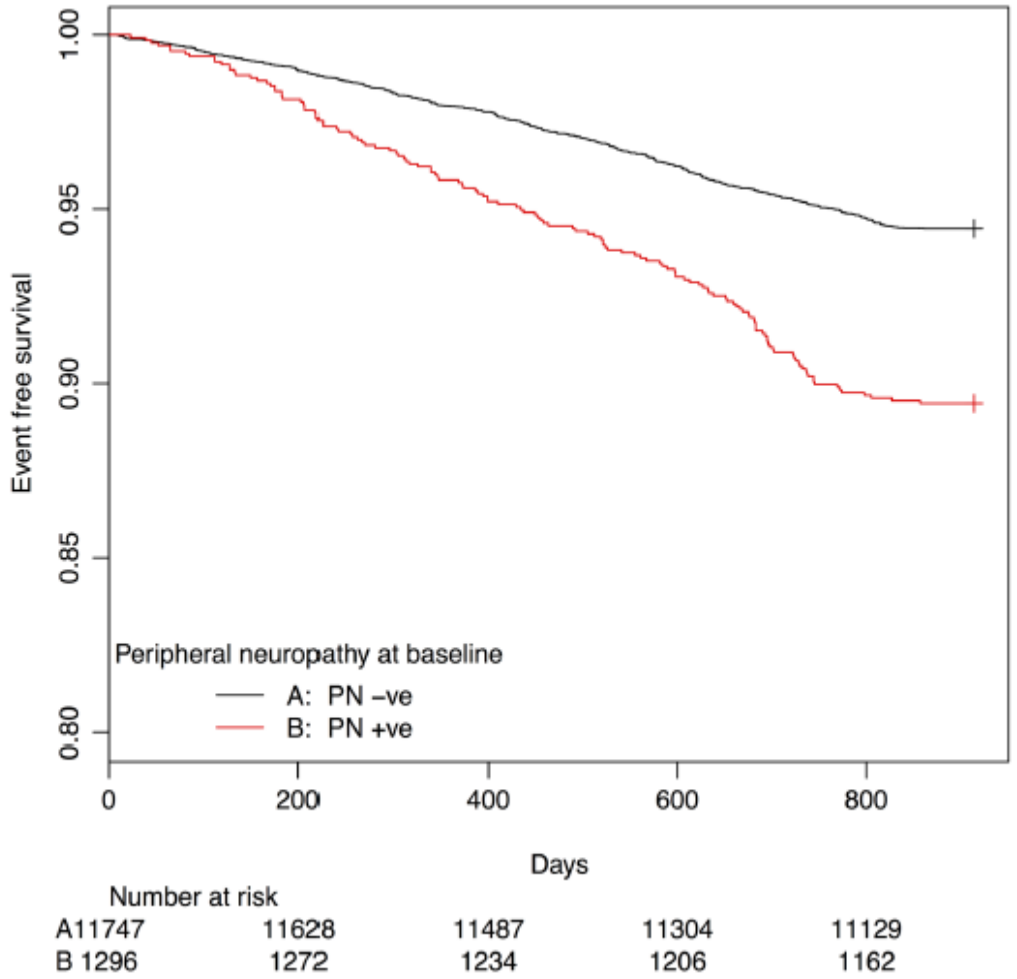

Figure 2 Unadjusted Kaplan–Meier estimates of event free survival with and without peripheral neuropathy (PN). Composite event includes myocardial infarction, coronary revascularisation, congestive cardiac failure, stroke and transient ischaemic attack. HRs for PN as compared with no PN are HR 1.78; 95% CI 1.37 to 2.32; p<0.001.

Results Among 13 043 eligible individuals, we recorded 407 deaths from any cause and 399 non-fatal CVD events. After adjustment for age, sex, ethnicity, systolic blood pressure, cholesterol, body mass index, HbA1c, smoking status and use of statin or antihypertensive medication, PN was associated with incident CVD events (HR 1.33; 95% CI 1.02 to 1.75, p=0.04). The addition of information on PN to a model based on standard CVD risk factors resulted in modest improvements in discrimination for CVD risk prediction and reclassified 6.9% of individuals into different risk categories.

Conclusions PN is associated with increased risk for a first cardiovascular event among individuals with diabetes.

Brownrigg JRW, *et al*. *Heart* 2014;**100**:1837–1843. doi:10.1136/heartjnl-2014-305657

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https://doi.org/10.1093/eurheartj/ehad260
CLINICAL RESEARCH
Epidemiology, prevention, and health care policies

SCORE2-Diabetes: 10-year cardiovascular risk estimation in type 2 diabetes in Europe

SCORE2-Diabetes Working Group and the ESC Cardiovascular Risk Collaboration*†

Received 10 June 2022; revised 6 April 2023; accepted 17 April 2023; online publish-ahead-of-print 29 May 2023

See the editorial comment for this article 'Risk prediction in patients with diabetes: is SCORE 2D the perfect solution?', by L. Rydén et al., https://doi.org/10.1093/eurheartj/ehad363.

- E GFR **< 45 ml/min**, quel que soit RAC
- Quand la valeur de l'eGFR se situe entre **45 et 59 ml/min** avec un rapport albumine/créatinine urinaire (établi sur un échantillon d'urine et non le recueil des urines des 24 heures) compris entre ***30 - 300 mg/g***
- Quand ce rapport urinaire albumine/créatinine dépasse les 300 mg/g
- Au moins une maladie microvasculaire dans au moins trois sites: Rein, Œil **…**

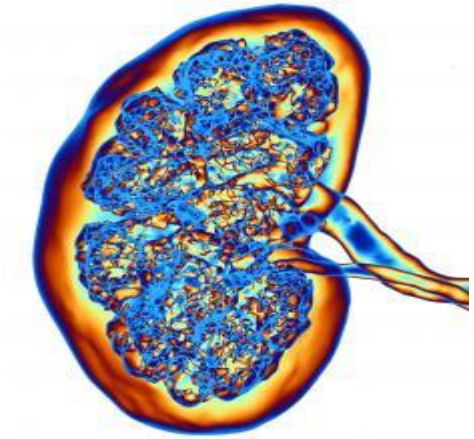
Nerfs +++

https://play.google.com/store/apps/details?id=org.escardio.esccvdriskcalculation&hl=fr&pli=1

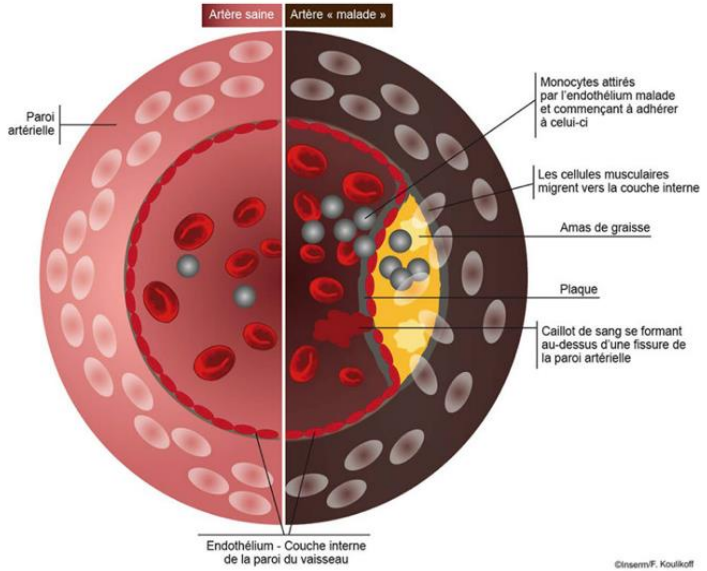
Très haut risque cardiovasculaire
> 20% sur 10 ans

Take Home Message

- L'identification des individus à haut risque permet de concentrer les efforts de prévention primaire.
- Le développement de nouveaux modèles de prédiction du risque est primordial pour estimer le risque cardiovasculaire.
- Les patients DT2 ayant une Neuropathie périphérique & Microalbuminurie sont une sous populations à haut risque cardiovasculaire.
- Des études prospectives chez ces patients sont nécessaires pour déterminer l'effet prédictif du RAC sur la survenue MACE
- La diminution du RCV implique le dépistage systématique en soins primaires.



Dysfonction endothéliale



Merci de votre attention