UNIVERSITY ABOUBEKR BELKAID

LABORATORY OF RESEARCH ON DIABETES
مخبر بحث سكري
« LAREDIAB »
Code ATRSS/DGRST N° W0417700
FACULTY OF MEDICINE BENAOUDA BENZERDJEB
https://larediab.univ-tlemcen.dz
Mobile : 0770 218 100/ E-mail: ali.lounici@univ-tlemcen.dz

AMIWIT
جمعية الطب الداخلي الجامعي لولاية تلمسان

ACADEMIC HOSPITAL TIDJANI DAMERDJI

Cardiovascular screening on patients with rheumatoid arthritis

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11th CONGRESS OF AMIWIT
FACULTY OF SNV/STU - UNIVERSITY OF TLEMCEN

Dr CHERIF BENMOUSSA F.
Pr LOUNICI A.

Introduction

- Rheumatoid Arthritis is a chronic inflammatory disease associated with important cardiovascular morbidity and mortality
- The increased CV risk cannot be explained only by traditional CV risk factors, even if smoking and changes in lipid profile may be implied.
- Thus, it is essential for proper management of RA patients to be aware of this risk and to treat any modifiable CV risk factors.

Who accepts or declines an invitation to cardiovascular screening – a register study on patients with rheumatoid arthritis

Julie Katrine Karstensen

Ann Bremander, Jeanette Reffstrup Christensen, Jette Primdahl

SDU University of Southern Denmark

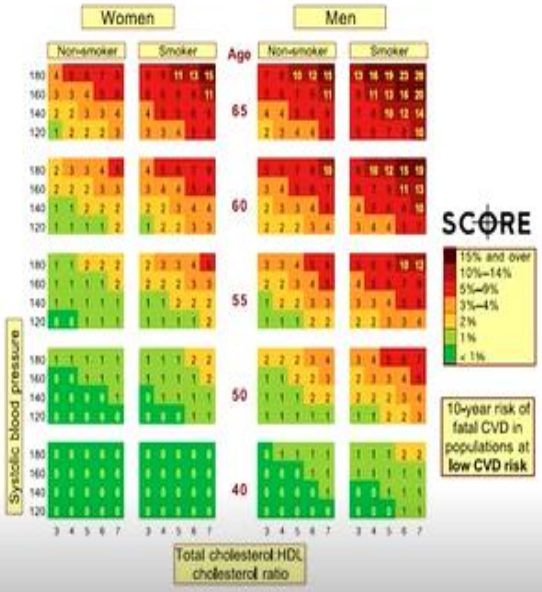
Danish Hospital for Rheumatic Diseases
University Hospital of Southern Denmark

FoU Spenshult
Reumatologisk forskning och utveckling

Lund University

Background

- EULAR's recommendation for cardiovascular (CV) risk management in patients with rheumatoid arthritis (RA)
  - Structured CV risk management
  - Lifestyle recommendations: smoking cessation, regular physical activity and a healthy diet
- Danish Hospital for Rheumatic Diseases
  - Screening consultations since 2011
  - Lipid profile, measurements and dialogue regarding lifestyle habits
- Systematic Coronary Risk Evaluation (SCORE)
  - In patients with RA multiplied with 1.5 = mSCORE
  - Follow-up for high risk patients



Agca R, et al. 2017, Conroy RM, et al. 2003, p. 996

Aims

I) Explore participation in the systematic CV risk assessment for patients with RA

II) Explore differences in CV risk factors not included in the SCORE for patients with low versus high mSCORE

III) Explore differences between patients with a high mSCORE that accept versus decline a follow-up CV screening consultation

Material

- DANBIO, a national rheumatology database
- Outpatients diagnosed with RA
- Connected to the Danish Hospital for Rheumatic Diseases
  - 2011-2021

DANBIO
Dansk Reumatologisk
Database

Methods

CV risk factors included in SCORE

- Gender
- Smoking
- Systolic blood pressure
- Total cholesterol : HDL cholesterol ratio

CV risk factors *not* included in SCORE

- Triglycerides
- Long term glucose (HbA1C)
- Lifestyle factors
  - BMI, Waist circumference, Alcohol and Physical activity

Conroy RM, et al. 2003, p. 996

Methods
- Lifestyle factors

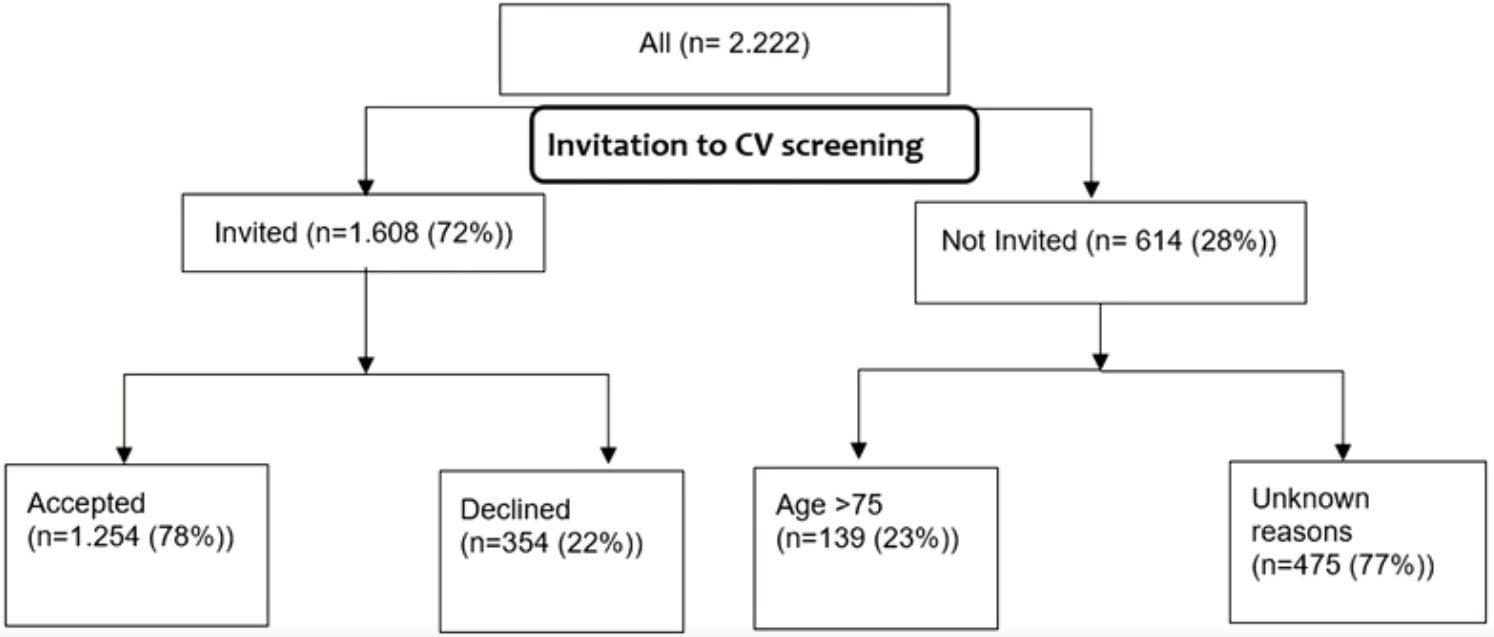
- BMI
  - <25 kg/m2 vs. ≥25 kg/m2
- Waist circumference
  - Women ≥ 80 cm
  - Men ≥ 94 cm

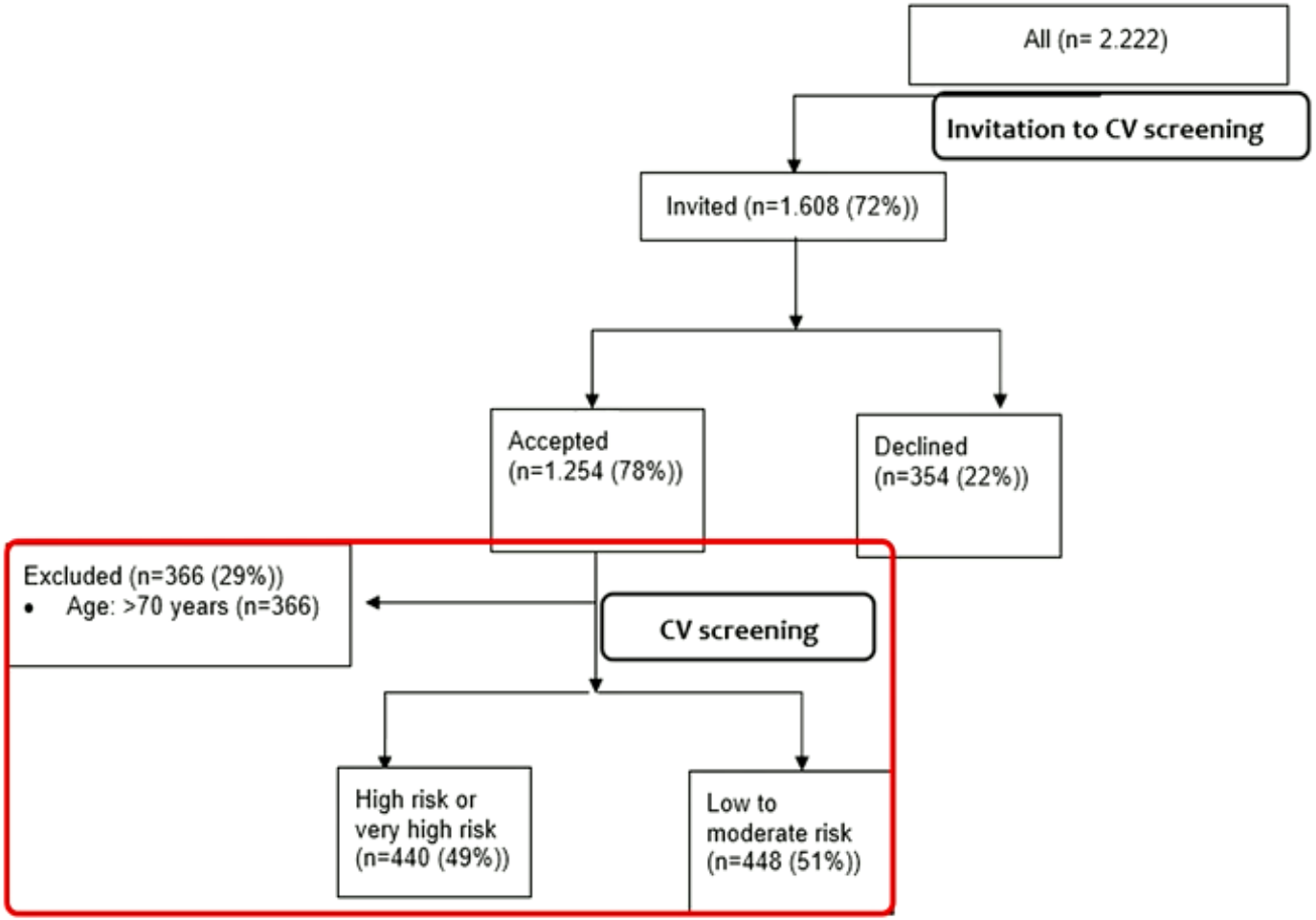
- Alcohol
  - Denmark: max 7 units for women and 14 for men per week

- Physical activity
  - 5 days a week or not

Perk et al. 2012, Primdahl et al. 2013, Fleming et al. 1991, Haskell et al. 2007

Results
- Participation in the systematic CV risk assessment for patients with RA




All (n= 2.222)
Invitation to CV screening
Invited (n=1.608 (72%))
Accepted
(n=1.254 (78%))
Declined
(n=354 (22%))
Excluded (n=366 (29%))
• Age: >70 years (n=366)
CV screening
High risk or
very high risk
(n=440 (49%))
Low to
moderate risk
(n=448 (51%))

Patients with low to moderate vs high to very high risk of CV death in 10years

	Multivariate analysis Adjusted OR (CI 95%) ◊	p- value
Disease duration, years	1.02 (1.00-1.05)	0.005
Triglycerides (mM/L)	1.45 (1.12-1.88)	0.004
HbA1c (mM/L)	1.30 (0.99-1.07)	0.055
Unhealthy lifestyle factors		
Physical activity		
0-2 days per month	1	Ref.
1-4 days per week	0.91 (0.60-1.37)	0.848
5 or more days per week	1.02 (0.65-1.60)	0.921
High waist circumference		
Women ≥ 80 cm	1.05 (0.32-1.06)	0.080
Men ≥ 94 cm	1.00 (0.50-1.97)	0.994
Measure of disease impact		
Pain (0-100)	1.02 (1.01-1.04)	0.001
Fatigue (0-100)	0.99 (0.98-1.01)	0.321
PatGA (0-100)	0.98 (0.96-0.99)	0.014
HAQ (0-3)	1.33 (0.91-1.96)	0.137
EQ5D (0-1)	0.72 (0.19-2.77)	0.640

Patients with a high to very high risk who declined vs. accepted a follow-up screening consultation

	Declined N=187	Accepted N=253	P-value
Age, years	65.0 (59.0-68.0)	63.0 (57.0-67.0)	0.016
Gender, male	68 (36%)	93 (37%)	0.93
Gender, female	119 (64%)	160 (63%)	0.93
DAS28-CRP	2.6 (1.8-3.7)	2.4 (1.7-3.1)	0.090
Disease duration, years	5.5 (2.0-13.0)	8.0 (3.0-15.0)	0.006
Unhealthy lifestyle factors			
Alcohol above national limits			
Women ≥ 7	10 (8%)	15 (9%)	0.779
Men ≥ 14	8 (12%)	19 (20%)	0.146
Physical activity			
0-2 days per month	72 (39%)	86 (34%)	-
1-4 days per week	67 (36%)	89 (35%)	-
5 or more days per week	47 (25%)	78 (31%)	0.40
High waist circumference			
Women ≥ 80 cm	97 (82%)	126 (79%)	0.445
Men ≥ 94 cm	48 (71%)	68 (73%)	0.919
Combined number of unhealthy lifestyle factors			
0-1	70 (40%)	102 (40%)	-
≥ 2	112 (60%)	150 (60%)	0.67
Measures of disease impact			
Pain (0-100)	33.5 (11.0-57.0)	27.0 (11.0-52.0)	0.36
Fatigue (0-100)	41.5 (15.0-65.0)	32.5 (15.0-60.0)	0.14
PatGA (0-100)	36.0 (11.0-63.0)	26.0 (11.0-54.0)	0.086
HAQ (0-3)	0.8 (0.3-1.1)	0.5 (0.1-1.1)	0.068
EQ5D-5L (0-1)	0.8 (0.7-0.8)	0.8 (0.7-0.9)	0.37

Conclusion

- Eight out of ten patients accepted the first CV screening invitation
  - High to very high risk patients had longer disease duration, higher levels of triglycerides, reported more pain but better global health
- 60% of the patients with high to very high risk adhered to a follow-up
  - Those who declined were older and had a shorter disease duration
- Further studies are needed to explore barriers and facilitators for adhering to CV screening

Points forts

- RA remains associated with an excess of RCV.

- It is therefore important for any practitioner to integrate the evaluation of the RCV of the patients in its common practice, and to deal optimally standard CV FDRs according to the recommendations

Thank you for your attention

E-mail: jkarstensen@danskgigthospital.dk