APPAC 14ème EDITION
Actualisations et Perspectives en PAthologie Cardiovasculaire

Le SCA ST- est il particulier chez la femme ?

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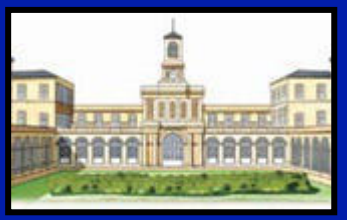

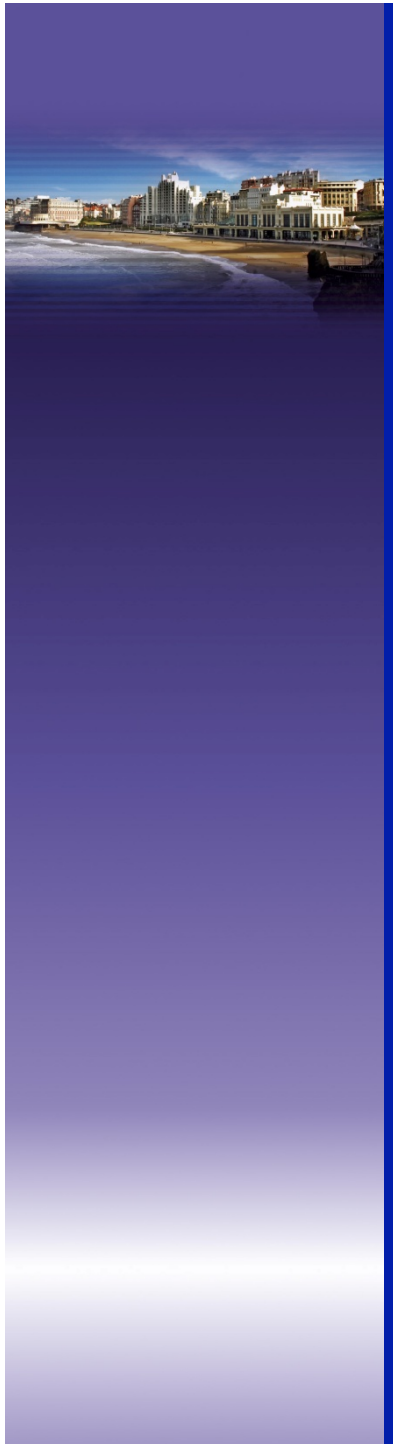

APPAC 14ème EDITION

ACTUALISATIONS ET PERSPECTIVES EN PATHOLOGIE CARDIOVASCULAIRE

Stéphane Manzo-Silberman
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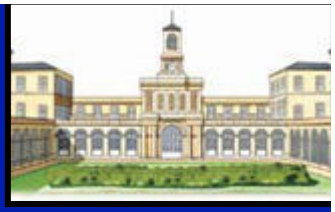
Paris

déclare n'avoir aucun conflit d'intérêt concernant les données de sa communication

Un ancien débat….



The New England
Journal of Medicine

Volume 325 JULY 25, 1991 Number 4

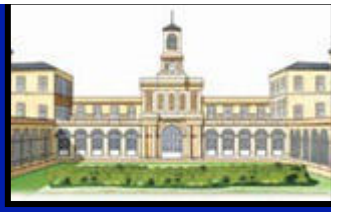
DIFFERENCES IN THE USE OF PROCEDURES BETWEEN WOMEN AND MEN HOSPITALIZED FOR CORONARY HEART DISEASE

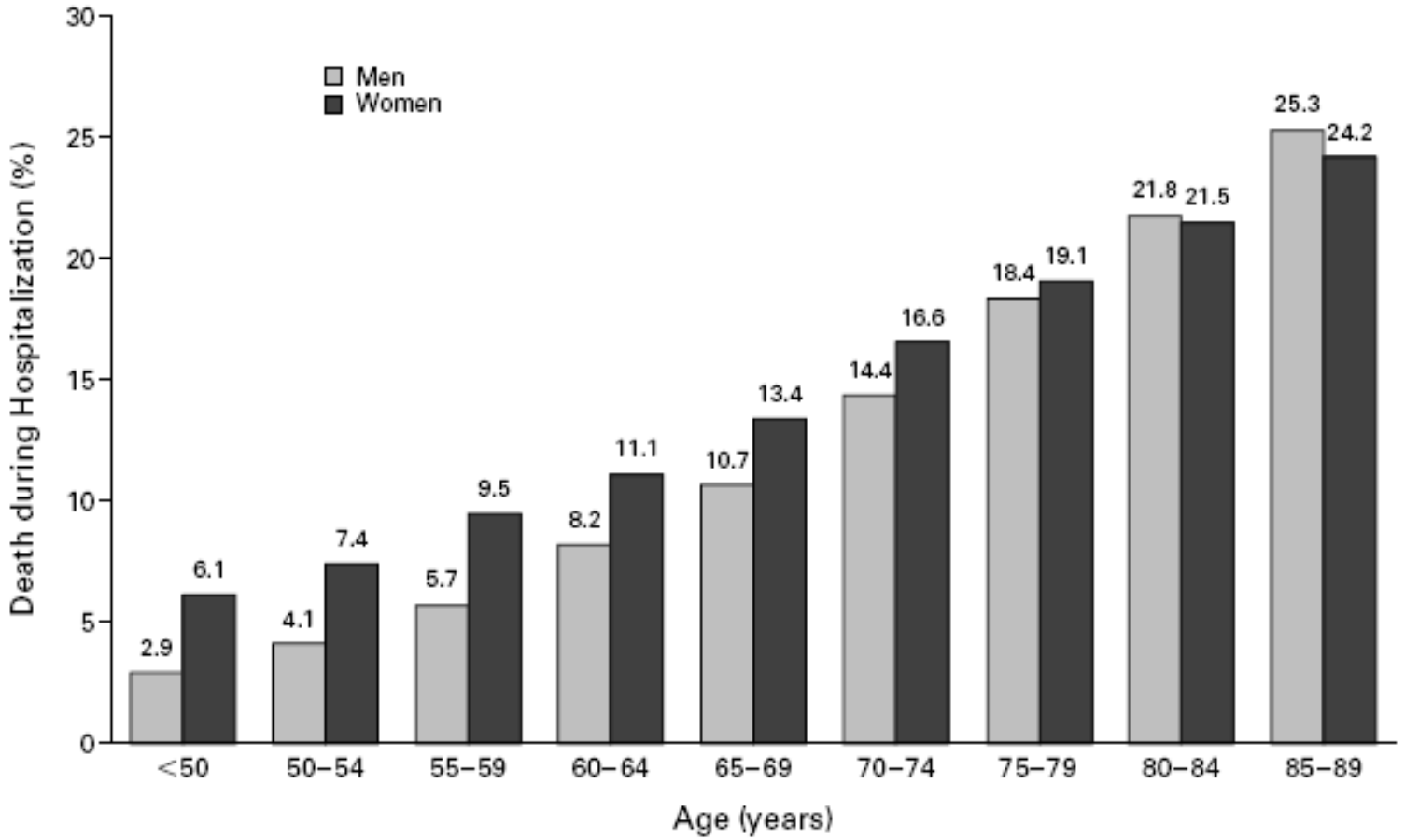
JOHN Z. AYANIAN, M.D., M.P.P., AND ARNOLD M. EPSTEIN, M.D., M.A.

- Moins d'exploration
- Moins de revascularisation

Our findings reflect patterns that may not be limited to coronary procedures. The relative differences that we found are similar in magnitude to the sex differences reported for dialysis and kidney transplantation in patients with end-stage renal disease,[27-30] suggesting the need to understand better how patients' sex influences patterns of medical care.

Pronostic

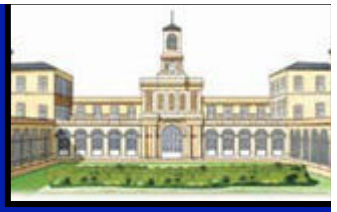


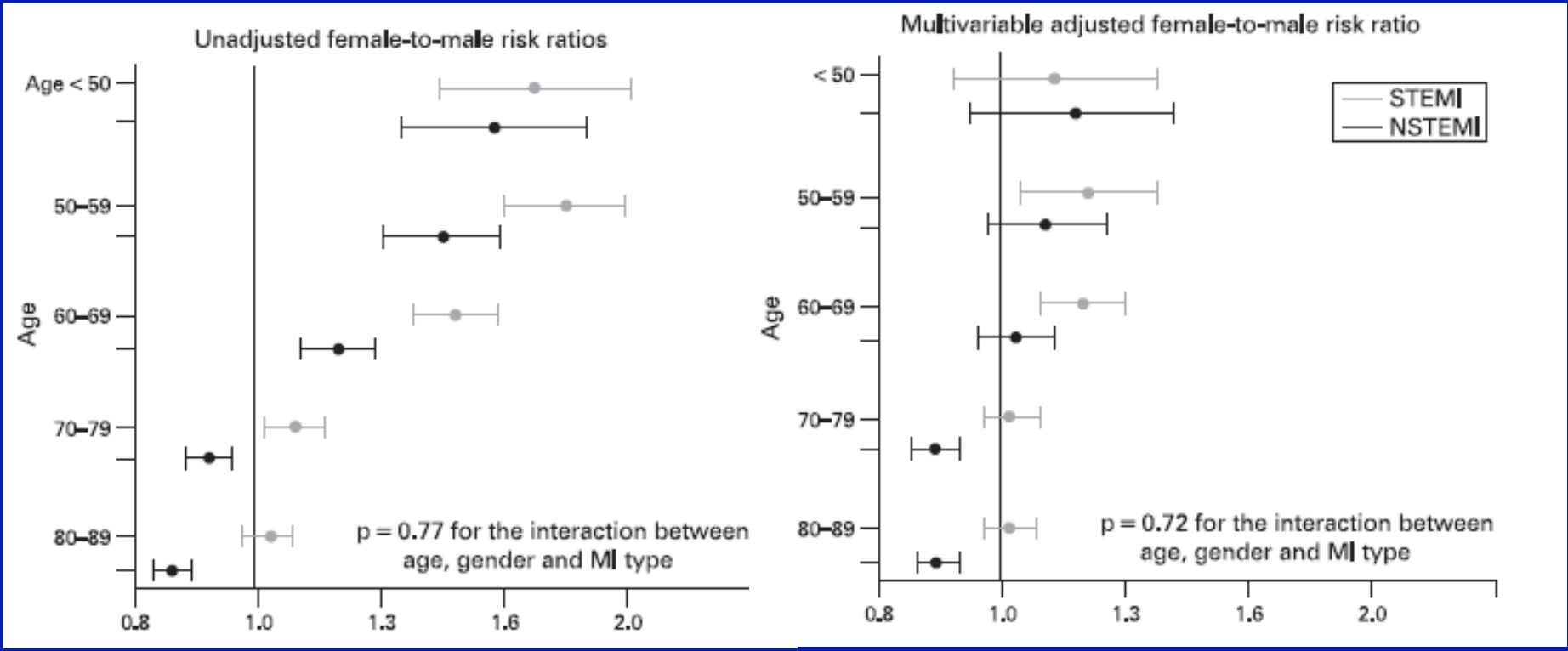


ISIS-3, NEJM 1998

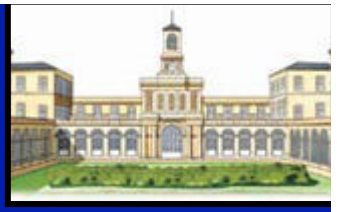
Vaccarino et al, NEJM 1999

Pronostic





Champney, Heart 2009



Physiopathologie

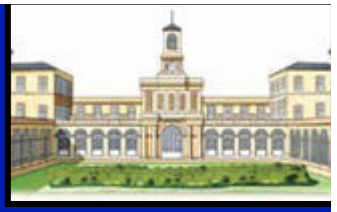
- Femme jeune: + FdR, + sévère
- Physiopathologie ≠ des SCA selon statut hormonal *Burke et al. Circ 1998*
  - Pré ménopause: érosion plaque, tabac++
  - Post ménopause: rupture plaque, Cholestérol
- Coronaropathie non obstructive >:
  - 10-25% IDM : coro normale ou subnormale
  - remodela… *C 2006; Reynolds et al. Circ 2011*
  - Spasme …

Table. Prevalence of "Normal" and Nonobstructive Coronary Arteries in Women Compared With Men

	No./Total (%)		
	Women	Men	*P* Value
Acute coronary syndrome			
GUSTO[2]	343/1768 (19.4)	394/4638 (8.4)	<.001
TIMI 18[3]	95/555 (17)	99/1091 (9)	<.001
Unstable angina[2]	252/826 (30.5)	220/1580 (13.9)	<.001
TIMI IIIa[6]	30/113 (26.5)	27/278 (8.3)	<.001
MI without ST-segment elevation[2]	41/450 (9.1)	55/1299 (4.2)	.001
MI with ST-segment elevation[2]	50/492 (10.2)	119/1759 (6.8)	.02

Abbreviations: GUSTO, Global Utilization of Streptokinase and t-PA for Occluded Coronary Arteries; MI, myocardial infarction; TIMI, Thrombosis In Myocardial Infarction.

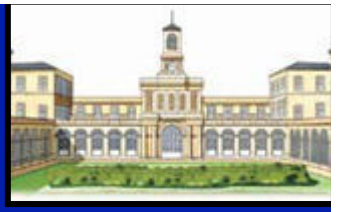
Facteurs de risque/comorbidités



Variable	Women	Men	p Value
Patients (n)	1,119 (32%)	2,391 (68%)	<0.0001
ST-segment elevation myocardial infarction	461 (41%)	1,117 (47%)	0.0008
Non–ST-segment elevation myocardial infarction	658 (59%)	1,274 (53%)	<0.0001
Age (years)	74 ± 13	64 ± 13	<0.0001
Body weight (kg)	66 ± 14	79 ± 14	<0.0001
Diabetes mellitus	301 (27%)	495 (21%)	<0.0001
History of hypertension	762 (68%)	1,143 (48%)	<0.0001
History of hypercholesterolemia	451 (40%)	1,132 (47%)	<0.0001
Smoker	258 (23%)	1,583 (66%)	<0.0001
Previous myocardial infarction	151 (13%)	449 (19%)	<0.0001
Previous coronary angioplasty	94 (8%)	349 (15%)	<0.0001
Previous coronary bypass	37 (3%)	105 (4%)	0.12
Previous stroke	79 (7%)	121 (5%)	0.002
Peripheral vessel disease	86 (8%)	286 (12%)	<0.0001
Creatinine (mmol/L)	104 ± 69	76 ± 51	0.0012
Creatinine clearance (Cockcroft-Gault formula)	61 ± 41	76 ± 51	<0.0001

Champney et al 2009; Hvelplund et al 2010; Schiele et al, 2011

Clinique



- Formes « *atypiques* » *Gallagher et al., Heart&Lung 2010,* :
  - Nausée
  - Vomissements
  - Fatigue
  - Douleurs au dos et au cou
  - Perte d'appétit
- Troponine moins souvent élevée
  Wiviott et al.Circ 2004

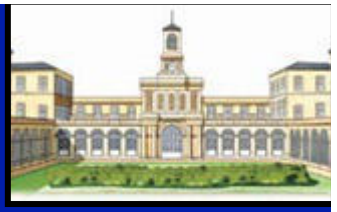
- Délais plus long

- Plus de NSTEMI méconnus aux urgence : femme, non blanc, dyspnée
  Pope et al. NEJM 2000

Symptom	Number of studies	Sample size (men/women)	Average effect size (random)
Chest pain	19	10,309/4824	.19 (.10, .29)†
Chest discomfort	9	1215/754	−.10 (−.25 .04)
Left arm pain	15	5039/2712	−.09 (−.23, .04)
Right arm pain	13	4648/2539	−.10 (−.19, −.01)*
Shoulder pain	5	1413/644	−.15 (−.48, .17)
Left shoulder pain	8	2761/1425	−.10 (−.27, .06)
Right shoulder pain	8	2761/1425	.17 (−.41, .06)
Back pain	12	3725/1924	−.47 (−.59, −.35)†
Upper back pain	6	654/437	−.48 (−.65, −.30)†
Neck pain	10	3769/1964	−.30 (−.38, −.22)†
Jaw pain	10	3223/1659	−.28 (−.44, −.11)†
Abdominal pain	9	2418/1142	−.10 (−.24, .04)
Belching	3	1484/673	.13 (−.004, .27)
Epigastric pain/ discomfort	4	2671/1372	.06 (−.06, .18)
Indigestion	9	1067/594	−.001 (−.17, .16)
Loss of appetite	4	163/147	−.68 (−.98, −.38)†
Nausea	19	5895/3122	−.28 (−.35, −.20)†
Vomiting	10	3339/1440	−.26 (−.43, −.10)†
Nausea/vomiting	3	4486/4340	−.31 (−.55, −.06)*
Shortness of breath	22	5722/3099	−.16 (−.22, −.11)†
Cough	6	1899/898	−.22 (−.34, −.10)†
Diaphoresis	22	6636/3461	.11 (.03, .19)†
Lightheadedness/ dizziness	13	2964/1463	−.16 (−.25, −.07)†
Fainting	8	3517/1818	−.09 (−.26, .08)
Headache	4	1952/907	−.28 (−.45, −.10)†
Fatigue	13	1685/936	−.21 (−.31, −.11)†
General weakness	10	2095/1019	−.13 (−.28, .01)
Palpitations	11	1380/835	−.32 (−.45, −.20)†

Shin et al., 2010, Heart&Lung

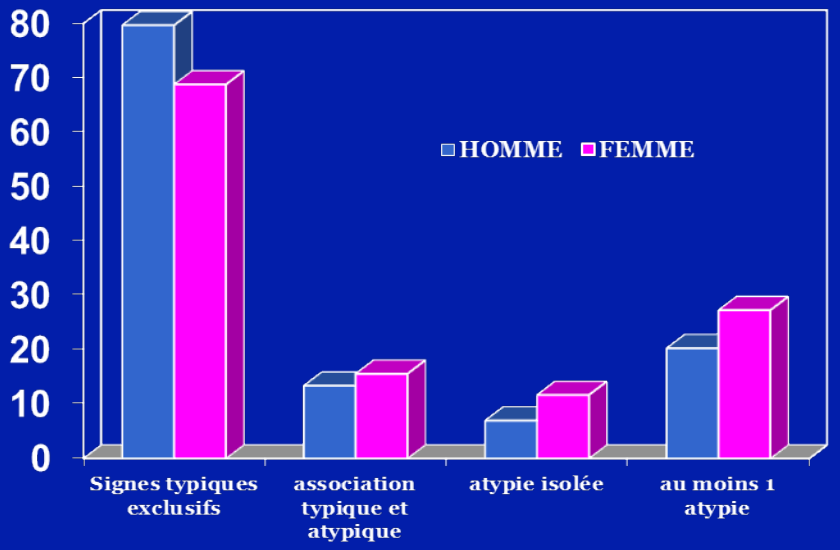
CASSANDRE



Symptômes:

- 70% douleur rétrosternale,
- plus souvent au repos: 86.4% vs 78.4% (NS)
- 65% en étau, moins souvent en barre (NS)
- Plus souvent variable à l'inspiration 7.5% vs 2.3% !
- Plus souvent avec irradiation dorsale 23.4% vs 9.3% !
- Irradiations mâchoire (20%) et bras gauche (39% vs 46.5)
- Intensité semblable
- Plus souvent associée à
  - Sensation d'asthénie 25.3% vs 11.9%
  - Dyspnée 35.8% vs 24.9% (NS)
  - Palpitations 10.5% vs 3%

Caractéristiques des symptômes: typicité des caractéristiques de la douleur



Explorations

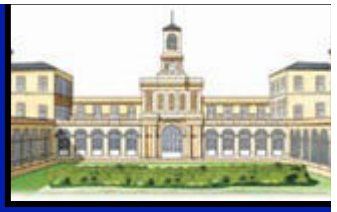


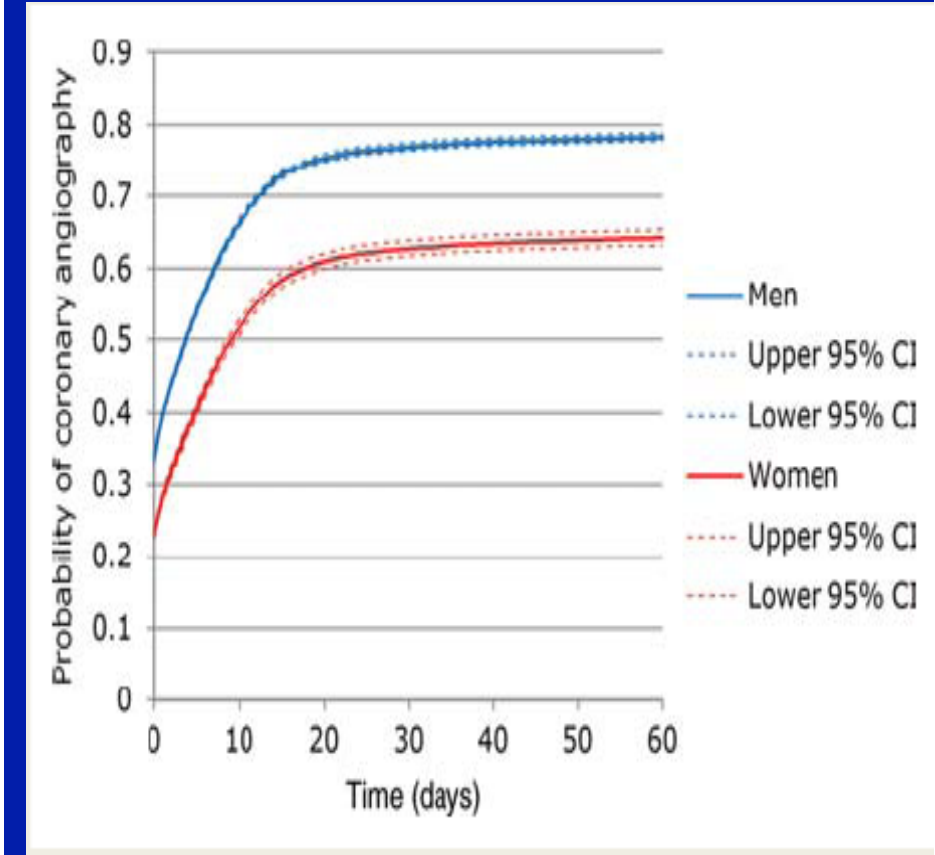
Table 2. Rates of Coronary Angiography and Male-to-Female Relative Risks after Stratification for Potential Confounding Variables.*

Variable	Massachusetts			Maryland		
	Rate in men	Rate in women	Relative risk (95% confidence interval)	Rate in men	Rate in women	Relative risk (95% confidence interval)
Principal diagnosis						
Myocardial infarction	17.2	9.3	1.85 (1.68–2.04)	16.6	9.8	1.69 (1.50–1.92)
Unstable angina	20.2	11.4	1.77 (1.63–1.93)	14.4	8.7	1.67 (1.48–1.87)
Angina pectoris	24.1	11.4	2.12 (1.88–2.39)	21.1	14.7	1.43 (1.24–1.66)
Chronic ischemia	62.0	60.5	1.03 (0.99–1.07)	63.3	57.3	1.11 (1.06–1.15)
Chest pain	8.4	11.0	0.76 (0.67–0.86)	10.5	15.7	0.66 (0.58–0.76)
Age (yr)						
30–49	29.2	21.5	1.36 (1.24–1.49)	27.8	20.6	1.35 (1.22–1.50)
50–69	31.9	21.8	1.46 (1.40–1.53)	33.5	23.8	1.41 (1.34–1.48)
70–89	17.0	9.6	1.77 (1.63–1.91)	17.8	9.5	1.89 (1.70–2.09)
Congestive heart failure						
Yes	15.6	9.0	1.73 (1.51–1.98)	13.3	8.6	1.55 (1.29–1.86)
No	29.0	17.4	1.67 (1.60–1.73)	30.4	19.2	1.58 (1.52–1.65)
Diabetes mellitus						
Yes	23.1	14.9	1.55 (1.42–1.70)	25.3	15.4	1.64 (1.47–1.83)
No	28.3	16.4	1.72 (1.65–1.79)	29.2	18.3	1.60 (1.53–1.67)
Race						
White	28.1	16.4	1.71 (1.65–1.78)	29.9	18.5	1.62 (1.55–1.69)
Nonwhite	19.7	12.9	1.52 (1.31–1.77)	21.8	14.8	1.47 (1.32–1.64)
Insurance status						
Insured	27.8	16.2	1.72 (1.66–1.79)	29.2	17.8	1.65 (1.58–1.72)
Uninsured	17.8	14.6	1.22 (0.96–1.55)	16.8	16.1	1.05 (0.81–1.36)

*Rates shown are the numbers of procedures per 100 admissions.

Ayanian, NEJM 1991

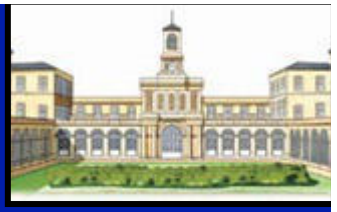
taux de coronarographie



HR: 0.84 , 95% CI [0.81-0.87], p<0.0001

European Heart Journal (2010) **31**, 684–690

Traitement médicamenteux



	30–67 years			68–89 years		
	Group 1 (Women) $n = 308$	Group 2 (Men) $n = 1878$	*P*	Group 3 (Women) $n = 860$	Group 4 (Men) $n = 1301$	*P*
Statins	111 (36.0%)	864 (46.0%)	0.001	210 (24.4%)	374 (28.8%)	0.0266
Nitrates	163 (52.9%)	986 (52.5%)	0.89	518 (60.2%)	782 (60.1%)	0.9537
ACE-inhibitors	139 (45.1%)	857 (45.6%)	0.87	401 (46.6%)	630 (48.4%)	0.4132

CASSANDRE

Moins d'Aspirine 76.3% vs 89.6% (S après ajustement)

Moins de prasugrel (NS)

Moins d'HBPM 32.1% vs 45% (S après ajustement)

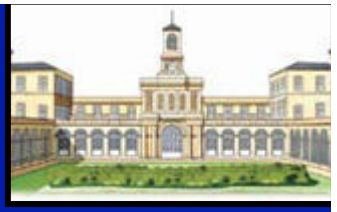
Moins d'antalgiques morphiniques 14.1% vs 27.9% (S après ajustement)

✓statines

Simon T et al , EHJ 2006

Schiele et al, Am J C2011

Reperfusion



Women with acute coronary syndrome are less invasively examined and subsequently less treated than men

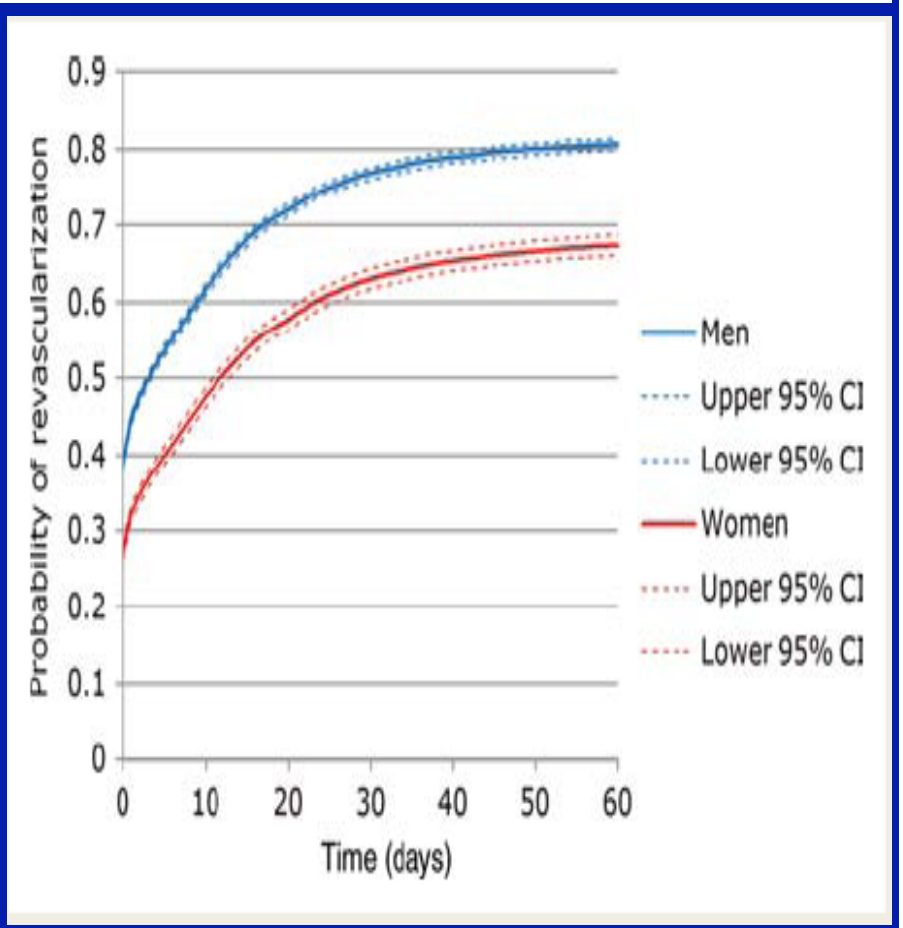
- Moins de revascularisation

(*Aklfredsson, Heart 2007; Lansky Circ 2005*)

- Risque complication locale

Applegate et al J Inv Card 2007

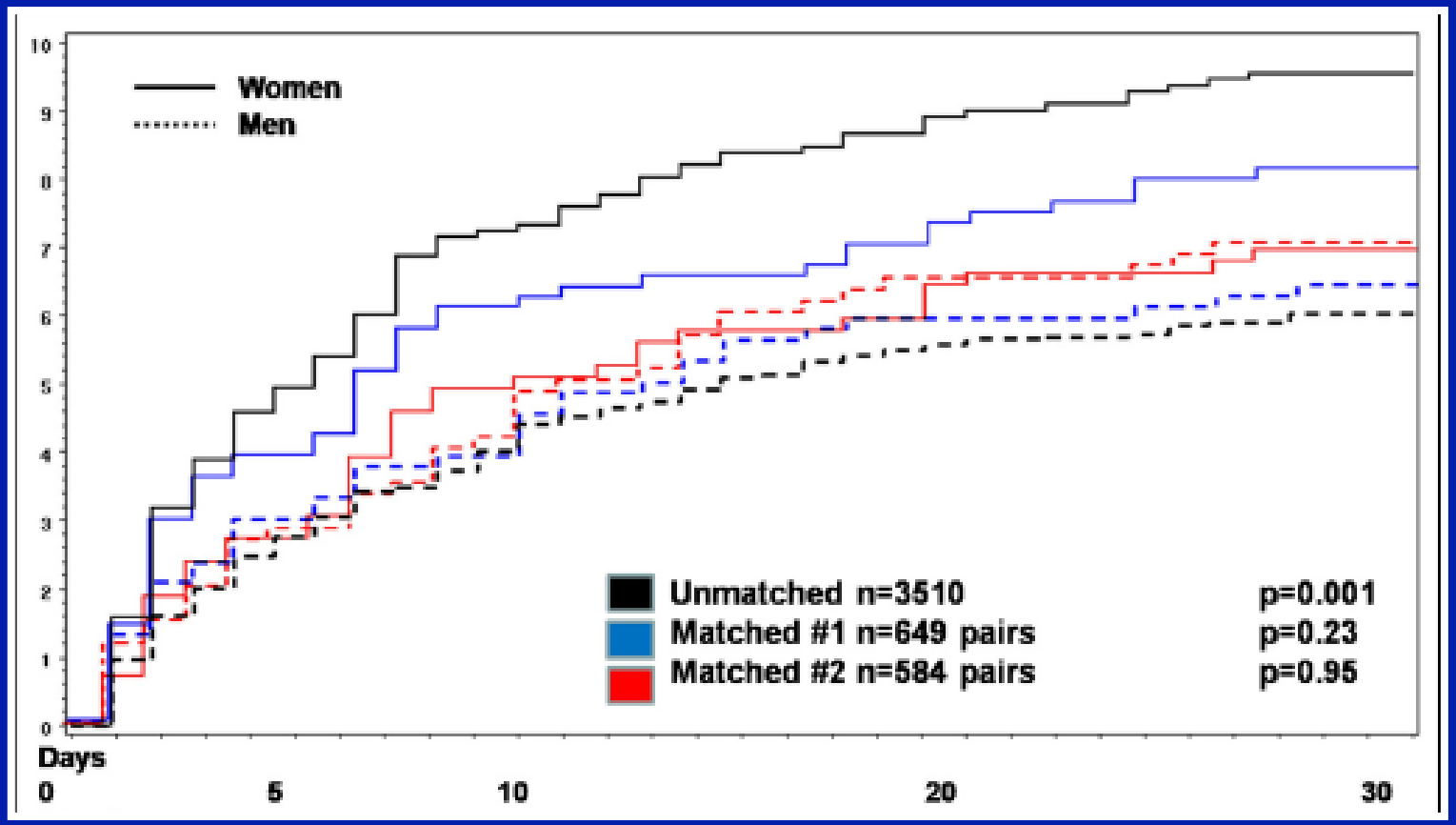
- Un bénéfice controversé:
  - Frisc 2 (1999) , RITA 3 (2002), OASIS 5 (2009):
    ↑IDM et Décès bras stratégie invasive
  - TACTICS-TIMI 18 (2004), méta analyse (JAMA 2008): ↑ pronostic surtout si haut risque



HR: 0.92 , 95% CI [0.88-0.96], p<0.0001

European Heart Journal (2010) **31**, 684–690

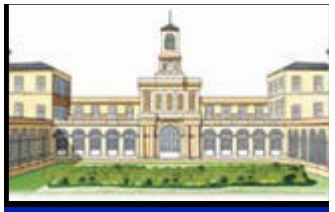
Propensity Score-Matched Analysis of Effects of Clinical Characteristics and Treatment on Gender Difference in Outcomes After Acute Myocardial Infarction



Schiele et al, Am J C2011

APPAC 14ème EDITION
Actualisations et Perspectives en Pathologie Cardiovasculaire

ESC Guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation



Recommendations for gender

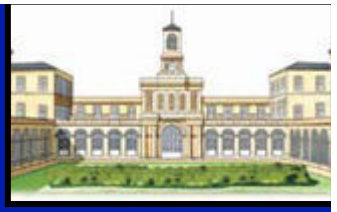
Recommendations	Class [a]	Level [b]	Ref [c]
Both genders should be evaluated and treated in the same way.	I	B	246

Thus, the data suggest that a routine early invasive strategy should be considered in women on the same principles as in men, i.e. after careful risk stratification for both ischaemic and bleeding risks including clinical and ECG evaluation, analysis of bio-markers, co-morbidities, and use of risk scores (see Section 4).

EUROPEAN SOCIETY OF CARDIOLOGY®

European Heart Journal (2011) **32**, 2999–3054
doi:10.1093/eurheartj/ehr236

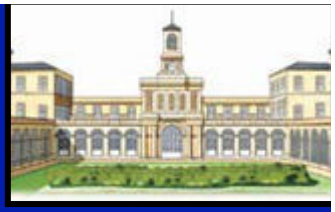
Conclusion



Le SCA ST- est il particulier chez la femme ?

- **OUI:**
  - Caractéristiques cliniques: âge, facteur de risque, symptômes
  - Physiopathologie chez la femme jeune

- **NON:**
  - Stratégie thérapeutique
  - Bénéfice approche invasive
  - Correction du surrisque hémorragique: adaptation posologies, voie abord
  - Pronostic




AVEC le NSTEMI
QUE VOUS AVEZ, C'EST DOMMAGE
QUE VOUS SOYEZ UNE FEMME...
Vous mériteriez un traitement d'homme!
... Je suppose que c'est un compliment ...