Società Medico Chirurgica di Ferrara
dal 1846

S.I.M.G.
SOCIETÀ ITALIANA DI MEDICINA GENERALE
Sezione "Andrea Corridoni" di Ferrara

con il patrocinio dell'Azienda Ospedaliero Universitaria di Ferrara e Azienda Unità Sanitaria Locale di Ferrara

SERVIZIO SANITARIO REGIONALE
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GENERE E APPROPRIATEZZA CLINICO-DIAGNOSTICA

Sabato 24 settembre 2016

Aula Magna Nuovo Arcispedale S. Anna
Cona, Ferrara

Medicina di genere: quando la medicina deve tener conto delle differenze biologiche

Massimo Gallerani

44 anni

Impiegato

Fuma 15 sigarette al di

Mai ricoverato in ospedale

Tosse e febbre da 3 giorni

Questa notte vomito e nausea

Obiettività polmonare normale; linfonodi normali; faringe arrossata

smettere di fumare

aereosol con cortisonici e mucolitici; antinfiammatori-antipiretici; copertura antibiotica; antiemitico

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smettere di fumare

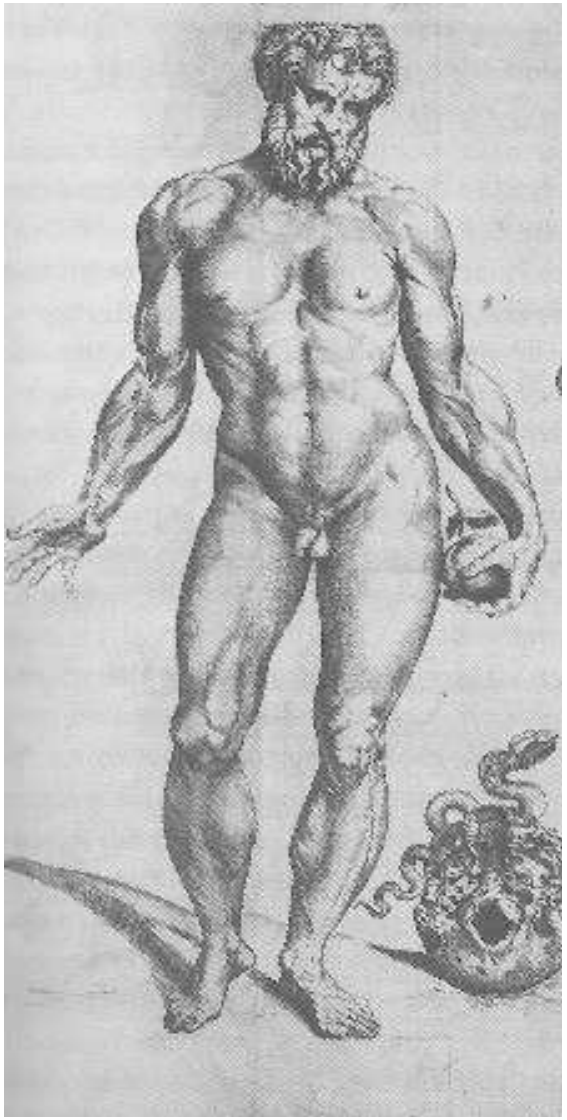
aereosol con cortisonici e mucolitici; antinfiammatori-antipiretici; copertura antibiotica; antiemitico

Problema

Altezza 180 cm
Peso 89 Kg
BMI 27,5

Altezza 160 cm
Peso 57 Kg
BMI 23

PARAMETRO	UOMO	DONNA	DONNA IN GRAVIDANZA
Peso (Kg)	89	57	72
Altezza (cm)	180	160	160
Superfice corporea (m2)	2,12	1,76	1,81
Acqua Totale (lt)	42	29	33



peso corporeo

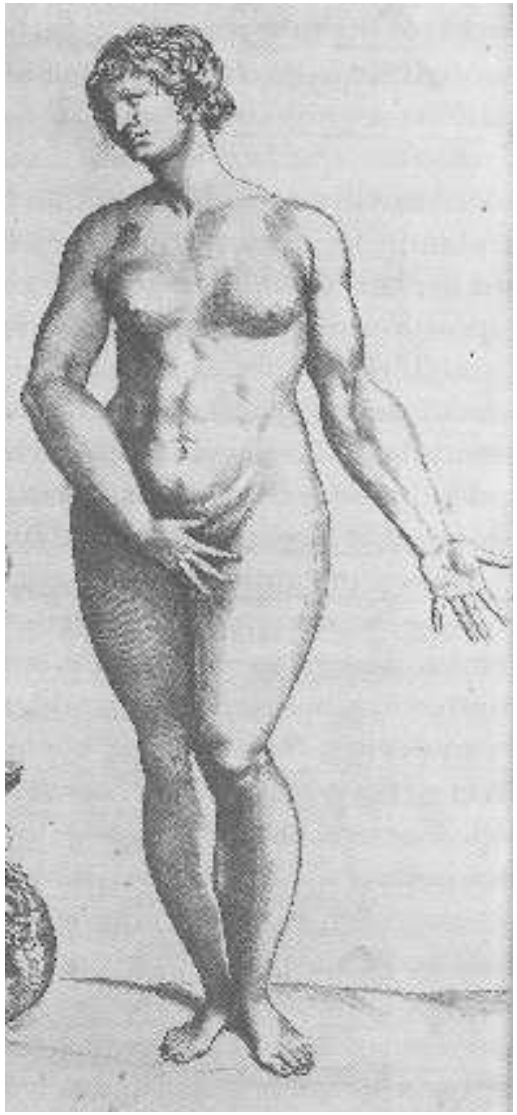
massa magra

massa grassa

velocità di svuotamento gastrico e secrezione

motilità intestinale

velocità di filtrazione glomerulare



Gender, aging and longevity in humans: an update of an intriguing/neglected scenario paving the way to a gender-specific medicine

Ostan R et al.

Clin Sci (Lond) 2016; 130(19): 1711–25.

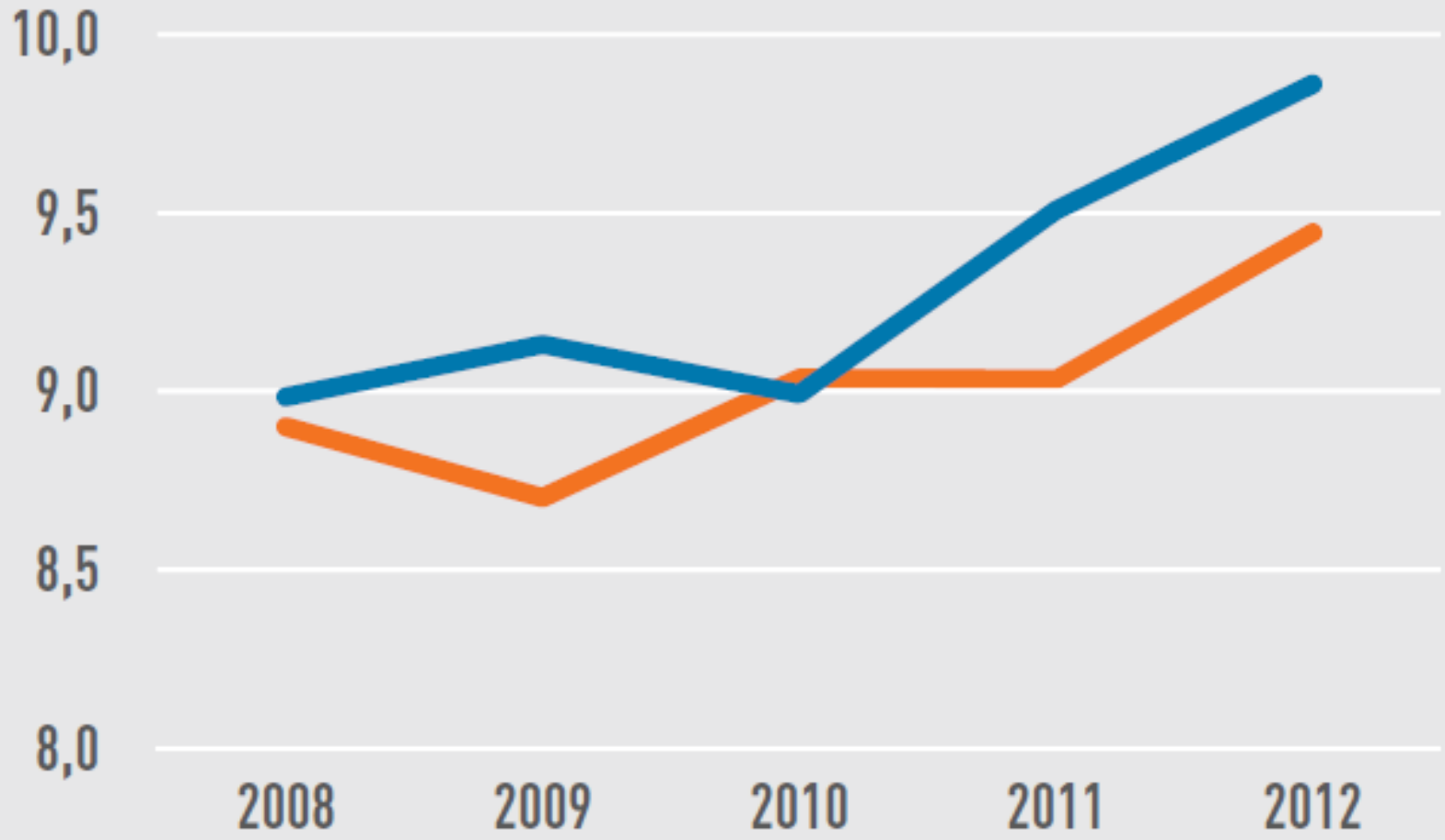
Abstract

Data showing a remarkable gender difference in life expectancy and mortality, including survival to extreme age, are reviewed starting from clinical and demographic data and stressing the importance of a comprehensive historical perspective and a gene–environment/lifestyle interaction. Gender difference regarding prevalence and incidence of the most important age-related diseases, such as cardiovascular and neurodegenerative diseases, cancer, Type 2 diabetes, disability, autoimmunity and infections, are reviewed and updated with particular attention to the role of the immune system and immunosenescence. On the whole, gender differences appear to be pervasive and still

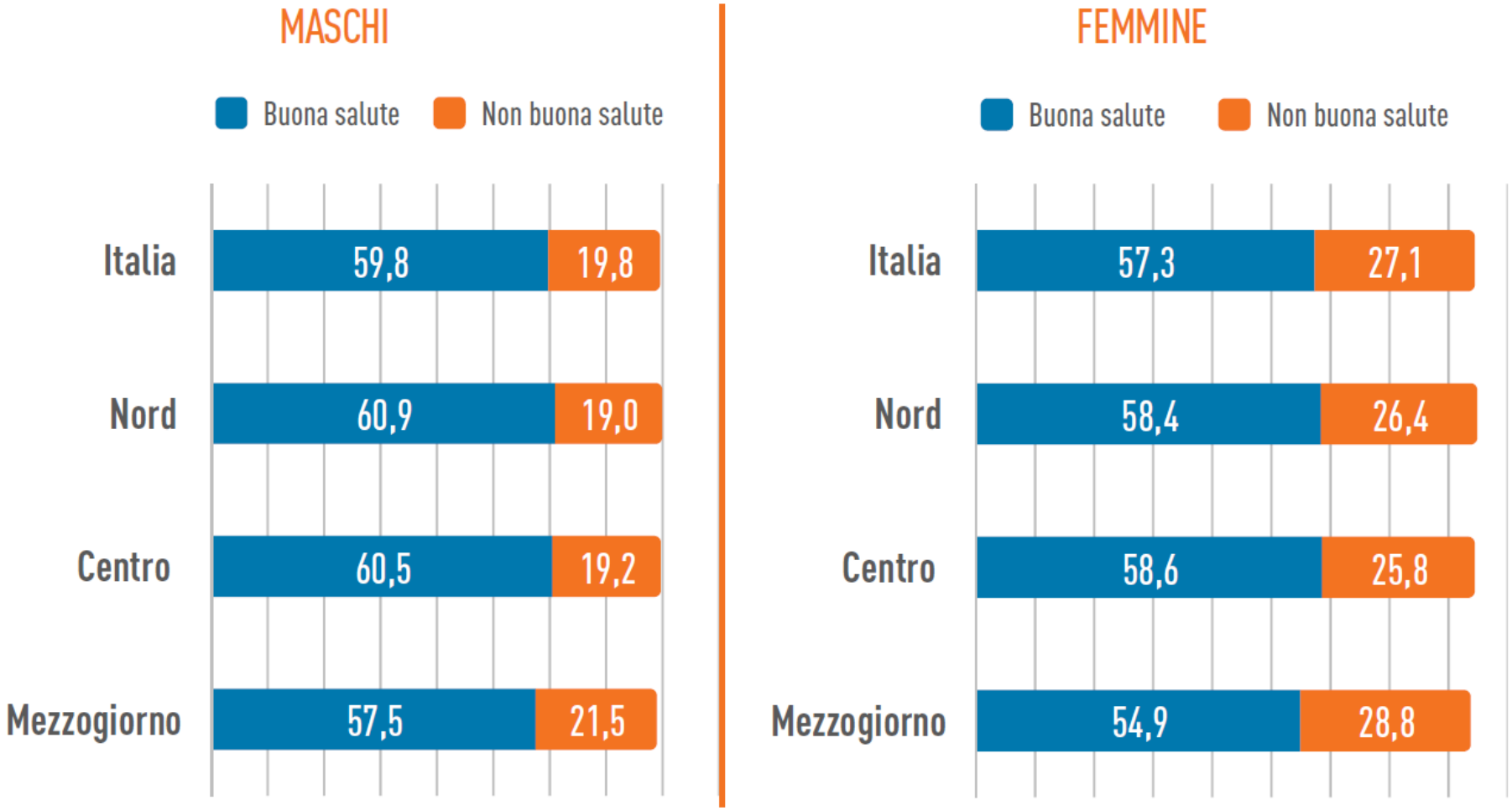
Un adeguato approccio di medicina di genere è urgente e dovrebbe essere perseguito in modo sistematico negli studi in materia di invecchiamento in buona salute, la longevità e le malattie legate all'età, in un mondo globalizzato caratterizzato da grandi differenze di genere che hanno un elevato impatto sulla salute e le malattie.

aging, longevity and age-related diseases, in a globalized world characterized by great gender differences which have a high impact on health and diseases.

SPERANZA DI VITA SENZA LIMITAZIONI NELLE ATTIVITÀ QUOTIDIANE A 65 ANNI (NUMERO MEDIO DI ANNI)



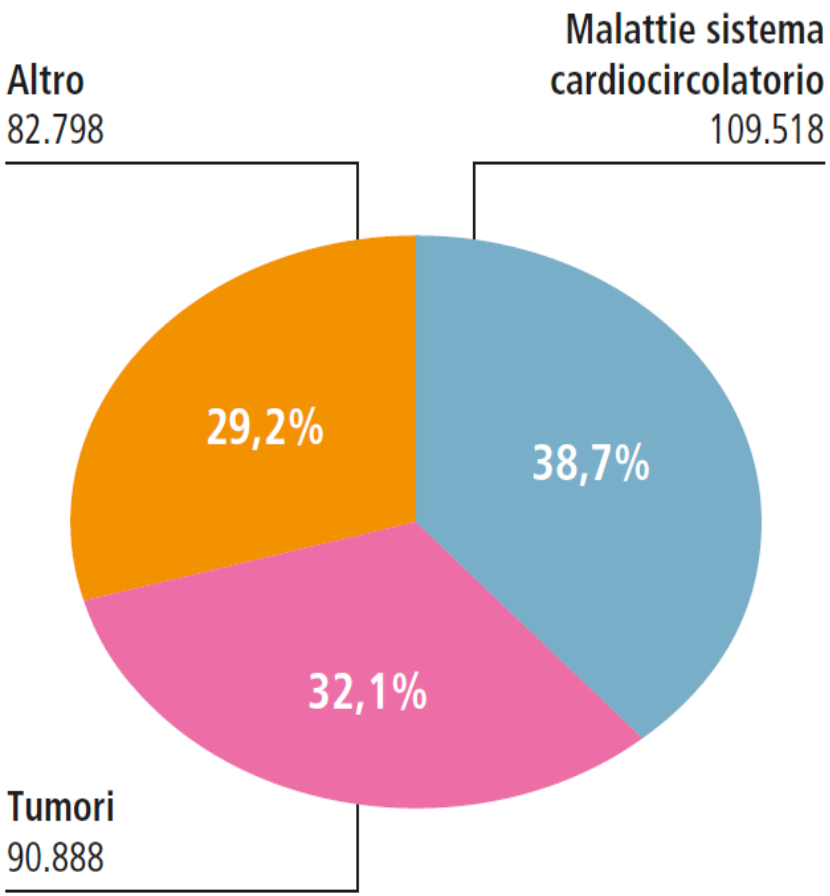
NEL NORD E NEL CENTRO SI VIVE PIÙ A LUNGO E IN MIGLIORI CONDIZIONI DI SALUTE



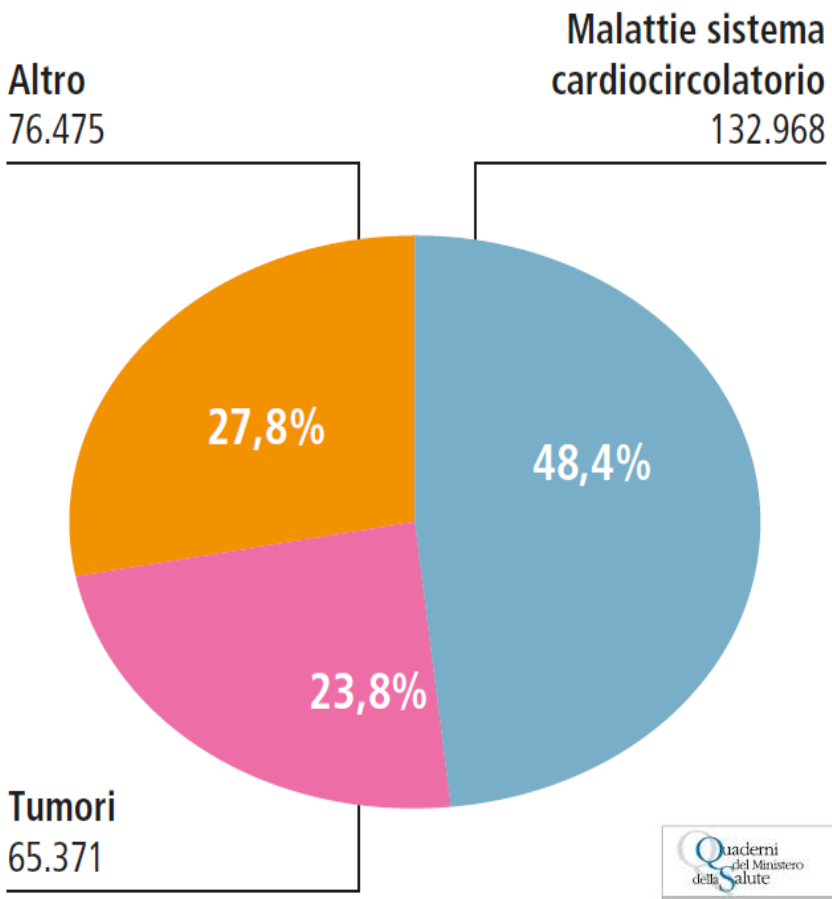
Number of deaths, percentage of total deaths by gender (U.S.A. 2013)

		Male		Female		
Rank	**Cause of death**	**Number**	**Total deaths (%)**	**Number**	**Total deaths (%)**	**Higher mortality for**
1	Heart disease	321,347	24.6	289,758	22.4	♂
2	Malignant neoplasms	307,559	23.5	277,322	21.5	♂
3	Chronic lower respiratory diseases	70,317	5.4	78,888	6.1	♀
4	Accidents (unintentional injuries)	81,916	6.3	48,641	3.8	♂
5	Cerebrovascular diseases	63,691	4.1	75,287	5.8	♀
6	Alzheimer's disease	25,836	2.0	58,931	4.6	♀
7	Diabetes mellitus	39,841	3.1	35,737	2.8	♂
8	Influenza and pneumonia	26,804	2.1	30,175	2.3	♀
9	Kidney diseases	23,493	1.8	23,619	1.8	=
10	Suicide	32,055	2.5	9,094	0.7	♂
11	Septicaemia	17,994	1.4	20,162	1.6	♀
12	Chronic liver disease and cirrhosis	23,709	1.8	12,718	1.0	♂
13	Essential hypertension-related diseases	12,963	1.0	17,807	1.4	♀
14	Parkinson's disease	15,088	1.2	10,108	0.8	♂
15	All other causes	253,421	19.4	302,707	23.5	♂

Uomini



Donne



Principali cause di morte in Italia (Rapporti ISTISAN).

- La sintomatologia clinica dell'infarto può presentare delle differenze nella donna: dolore atipico localizzato non al petto ma all'addome, o zona interscapolare, o alle mascelle oppure anche assenza di dolore ma solo ansia, nervosismo, dispnea lieve, oppure astenia.
- Per questo le donne arrivano tardi al pronto soccorso e non sempre vengono inquadrate correttamente nel corretto livello di gravità
- La mortalità in fase acuta, a 6 mesi dall'infarto e dopo 6 anni dalla rivascolarizzazione e maggiore nella donna

- Molti centri le donne vengono meno sottoposte a coronarografia, angioplastica, stent, bypass e la terapia farmacologica alla dimissione e spesso meno completa (persone piu anziane? scarsa *compliance*?).

- I test strumentali per la diagnostica non invasiva della cardiopatia ischemica hanno specificità e sensibilità differenti nella donna rispetto all'uomo.

Sex differences in stroke: a socioeconomic perspective

Clinical Interventions in Aging 2016:11 1207–1212

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Number of times this article has been viewed

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Background: A number of studies have explored the issue of sex differences in stroke from biomedical perspective; however, there are still large gaps in the existing knowledge. The purpose of this study was to assess whether the differences in socioeconomic status and living conditions between men and women may explain the part of the sex differences in incidence and outcomes of stroke.

Methods: All stroke participants aged ≥60 years admitted in Vaseie Hospital in Sabzevar, Iran, from March 21, 2013, until March 20, 2014, were included in this study. Computerized tomography and magnetic resonance imaging were used to confirm stroke. A series of χ^2 tests were performed and Statistical Program for Social Sciences, Version 21.0, was used to investigate the potential differences between older men and women in stroke incidence and outcomes.

Results: A total of 159 incident stroke cases were documented during 1 year. The annual rate of stroke was statistically significantly higher in elderly women than in elderly men (401 vs 357 per 100,000; $P<0.001$). Female elderly participants had significantly lower socioeconomic status, poorer living conditions, and higher lifetime history of depression, hypertension, and diabetes mellitus than their male counterparts.

Conclusion: The findings from this study showed that elderly women are more adversely affected by stroke in terms of incidence and outcomes of stroke than elderly men. The most noticeable result is that sex differences in socioeconomic status and living conditions may result in increased incidence of stroke and poorer outcomes in elderly women. Therefore, it is imperative to identify vulnerable elderly women and provide them appropriate treatment and services.

Cerebro and Cardio-vascular responses to energy drink in young adults: is there a gender effect?

	Men		Women		*ANOVA Interaction effect (gender*time)*	*ANOVA Time effect*
	Baseline ED	Δ Responses ED#	Baseline ED	Δ Responses ED#		
Cerebral blood flow velocity, cm • s^{-1}	56 ± 3***	−5.6 ± 0.6***	72 ± 4	−9.0 ± 0.9	< 0.01	< 0.005
Cerebral vascular resistance index, mmHg • s • cm^{-1}	1.6 ± 0.1***	+0.2 ± 0.0	1.2 ± 0.1	+0.2 ± 0.0	0.69	< 0.005
End-tidal carbon dioxide, mmHg	38.5 ± 0.6	−0.6 ± 0.2*	36.9 ± 0.6	−1.4 ± 0.2	< 0.01	< 0.005
Breathing frequency, breaths • min^{-1}	14.4 ± 0.6*	+1.1 ± 0.3	16.4 ± 0.5	+1.3 ± 0.2	0.60	< 0.005
Systolic BP, mmHg	119 ± 2***	+2.3 ± 0.9	112 ± 2	+3.7 ± 1.1	0.80	< 0.005
Diastolic BP, mmHg	76 ± 1	+2.4 ± 0.7	73 ± 2	+2.4 ± 0.8	0.51	< 0.005
Heart rate, beats • min^{-1}	61 ± 2	+1.9 ± 0.6	62 ± 2	+1.1 ± 0.7	0.34	< 0.005
Stroke volume, mL	82 ± 3	+2.6 ± 0.8	84 ± 3	+2.6 ± 0.9	0.14	< 0.005
Cardiac output, L • min^{-1}	5.0 ± 0.1	+0.3 ± 0.1	5.2 ± 0.2	+0.4 ± 0.1	0.23	< 0.005
Total peripheral resistance, mmHg • min • L^{-1}	18.5 ± 0.4*	−0.6 ± 0.3	17.0 ± 0.6	−0.2 ± 0.3	0.53	0.04

*BP: Blood pressure; # mean responses over 80 min compared to baseline values equivalent to the area under curve presented as a delta; *P< 0.05 and ***P < 0.005, significant different difference comparing men and women using an unpaired t-test.*

Monnard C.R et al. Front Physocol 2016; 7: 348.

Male and female hypertrophic rat cardiac myocyte functional responses to ischemic stress and β-adrenergic challenge are different

Bell *et al. Biology of Sex Differences* (2016) 7:32

Background: Cardiac hypertrophy is the most potent cardiovascular risk factor after age, and relative mortality risk linked with cardiac hypertrophy is greater in women. Ischemic heart disease is the most common form of cardiovascular pathology for both men and women, yet significant differences in incidence and outcomes exist between the sexes. Cardiac hypertrophy and ischemia are frequently occurring dual pathologies. Whether the cellular (cardiomyocyte) mechanisms underlying myocardial damage differ in women and men remains to be determined. In this study, utilizing an in vitro experimental approach, our goal was to examine the proposition that responses of male/female cardiomyocytes to ischemic (and adrenergic) stress may be differentially modulated by the presence of pre-existing cardiac hypertrophy.

Methods: We used a novel normotensive custom-derived hypertrophic heart rat (HHR; vs control strain normal heart rat (NHR)). Cardiomyocyte morphologic and electromechanical functional studies were performed using microfluorimetric techniques involving simulated ischemia/reperfusion protocols.

Results: HHR females exhibited pronounced cardiac/cardiomyocyte enlargement, equivalent to males. Under basal conditions, a lower twitch amplitude in female myocytes was prominent in normal but not in hypertrophic myocytes. The cardiomyocyte Ca^{2+} responses to β-adrenergic challenge differed in hypertrophic male and female cardiomyocytes, with the accentuated response in males abrogated in females—even while contractile responses were similar. In simulated ischemia, a marked and selective elevation of end-ischemia Ca^{2+} in normal female myocytes was completely suppressed in hypertrophic female myocytes—even though all groups demonstrated similar shifts in myocyte contractile performance. After 30 min of simulated reperfusion, the Ca^{2+} desensitization characterizing the male response was distinctively absent in female cardiomyocytes.

Conclusions: Our data demonstrate that cardiac hypertrophy produces dramatically different basal and stress-induced pathophenotypes in female- and male-origin cardiomyocytes. The lower Ca^{2+} operational status characteristic of female (vs male) cardiomyocytes comprising normal hearts is not exhibited by myocytes of hypertrophic hearts. After ischemia/reperfusion, availability of activator Ca^{2+} is suppressed in female hypertrophic myocytes, whereas sensitivity to Ca^{2+} is blunted in male hypertrophic myocytes. These findings demonstrate that selective intervention strategies should be pursued to optimize post-ischemic electromechanical support for male and female hypertrophic hearts.

Puoti *et al. Biology of Sex Differences* (2016) 7:35
DOI 10.1186/s13293-016-0088-4

Biology of Sex Differences

COMMENTARY Open Access

Organ transplantation and gender differences: a paradigmatic example of intertwining between biological and sociocultural determinants

Francesca Puoti[1], Andrea Ricci[1], Alessandro Nanni-Costa[1], Walter Ricciardi[1,2], Walter Malorni[2,3*] and Elena Ortona[2]

Abstract

Organ transplantation, e.g., of the heart, liver, or kidney, is nowadays a routine strategy to counteract several lethal human pathologies. From literature data and from data obtained in Italy, a striking scenario appears well evident: women are more often donors than recipients. On the other hand, recipients of organs are mainly males, probably reflecting a gender bias in the incidence of transplant-related pathologies. The impact of sex mismatch on transplant outcome remains debated, even though donor-recipient sex mismatch, due to biological matters, appears undesirable in female recipients. In our opinion, the analysis of how sex and gender can interact and affect grafting success could represent a mandatory task for the management of organ transplantation.

Transplant activity in Italy 2002-2015

Cadaveric donor transplants

	Donor					
Recipient	Female		Male		Total	
Female	507	18 %	498	17 %	1005	**35 %**
Male	1379	48 %	467	16 %	1846	**65 %**
Total	1886	**66 %**	965	**34 %**	2851	100 %

	Donor					
Recipient	Female		Male		Total	
Female	6636	16 %	6102	15 %	12,738	**31 %**
Male	11,477	28 %	16,254	40 %	27,731	**69 %**
Total	18,113	**45 %**	22,356	**55 %**	40,469	100 %

Heart TX

	Donor					
Recipient	Female		Male		Total	
Female	616	16 %	309	8 %	925	**23 %**
Male	853	22 %	2188	55 %	3041	**77 %**
Total	1469	**37 %**	2497	**63 %**	3966	100 %

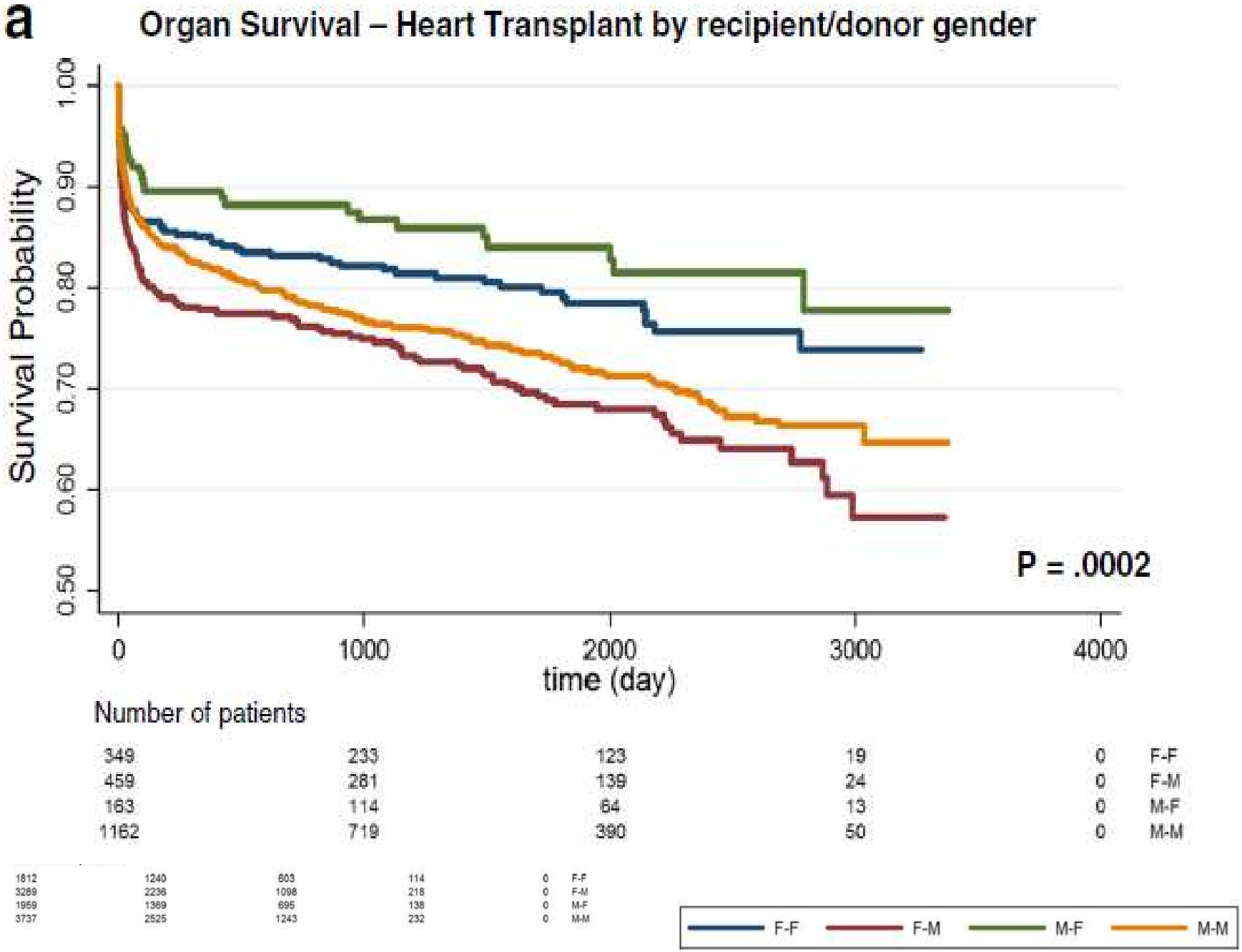
Liver TX

	Donor					
Recipient	Female		Male		Total	
Female	2039	15 %	1532	11 %	3571	**26 %**
Male	4065	30 %	5956	44 %	10,021	**74 %**
Total	6104	**45 %**	7488	**55 %**	13,592	100 %

Kidney TX

	Donor					
Recipient	Female		Male		Total	
Female	3603	17 %	4105	19 %	7708	**36 %**
Male	6271	29 %	7613	35 %	13,884	**64 %**
Total	9874	**46 %**	11,718	**54 %**	21,592	100 %

In living donor transplants, females are two thirds (65 %) of donors and only one thirds (35 %) of recipients. In cadaveric donor transplants, the percentage of female recipients is similar to the previous (31%) while female donors are less than half (45%) of total cadaveric donors.


a
Organ Survival – Heart Transplant by recipient/donor gender
Survival Probability
0.50
0.60
0.70
0.80
0.90
1.00
P = .0002
0
1000
2000
3000
4000
time (day)
Number of patients
349 233 123 19 0 F-F
459 281 139 24 0 F-M
163 114 64 13 0 M-F
1162 719 390 50 0 M-M
1812 1240 603 114 0 F-F
3289 2236 1098 218 0 F-M
1959 1369 695 138 0 M-F
3737 2525 1243 232 0 M-M
F-F
F-M
M-F
M-M

Gender differences in first medical contact and pre-hospital delay times in ST-elevation myocardial infarction

Authors:

S. Sederholm Lawesson [1], R.M. Isaksson [2], K. Hellstrom Angerud [3], M. Ericsson [1], I. Thylen [1], [1]Linkoping University, Depts. of Cardiology &Medical and Health Sciences, Linköping - Linkoping - Sweden, [2]Norrbotten County Council - Lulea - Sweden, [3]Umea University, Cardiology, Heart Centre and Dept. of Nursing - Umea - Sweden,

Topic(s):

Infarction acute phase STEMI

Citation:

European Heart Journal (2016) 37 (Abstract Supplement), 1176

Background: In STEMI, timely administration of reperfusion therapy is critical. Whereas shortening of system delays has been successful pre-hospital delay times [PHDT] have not experienced the same favourable development. [FMC] have s gender and ca

Aims: In STE

Methods: Th which studied admission to l

Results: Women were older (69.8 vs 64.5 years, p<0.001), lower educated (53.6 vs 35.3%, p=0.02), had less chest pain (73.4 vs 92.1%, p<0.001) and more often called Swedish Healthcare Direct as FMC (28.4 vs 18.2%, 0.02). They had longer PHDT to FMC (median 90 [IQR 39–221] vs 66 [28–161] min, p=0.04) and to ECG (146 [67–316] vs. 102 [61–221] min, p=0.03). Stomach pain and low education were associated to PHDT in women whereas smoking was associated to PHDT in men. Cold sweat and bystanders calling 112 were associated with shorter PHDT in both genders. In multivariate analyses the variables accounted for 53% of the variance of PHDT in women but only 35% in men. (Table)

Conclusion: The genders differed in FMC, and women had 26 and 44 min longer delay until FMC and diagnosis, respectively. Factors associated to delay partly differed between the genders. More research is needed on how to shorten these delays in both genders.

Factors associated to pre-hospital delay

	Men	p	Women	p
	Standardized beta		Standardized beta	
Present bystanders called 112	−0.29	***	−0.23	**
Age	0.13	*	–	–
Smoking	0.13	*	–	–
Cold sweat	−0.11	*	−0.34	***
Bystanders recommended calling 112	–	–	-0.28	***
Did not want to worry the family	–	–	−0.24	**

gression.

The genders differed in first medical contact (FMC), and women had 26 and 44 min longer delay until FMC and diagnosis, respectively

ESC 20016

	Maschi	Femmine
Vie aereodigestive superiori	77,4	22,6
Esofago	70	30
Colon-retto	56	44
Fegato	69	31
Colecisti e vie biliari	45,6	54,4
Pancreas	47,2	52,8
Polmone	72,1	27,9
Osso	57,1	42,9
Cute (melanomi)	51,8	48,2
Cute (non melanomi)	58,4	41,6
Mesotelioma	72,2	27,8
Sarcoma di Kaposi	66,7	33,3
Tessuti molli	52,6	47,4
Rene, vie urinarie, pelvi e uretere	65,9	34,1
Parenchima	65,4	34,6
Vescica	81	19
Sistema nervoso centrale	55,2	44,8
Tiroide	25,2	74,8
Linfoma di Hodgkin	56,5	43,5
Linfoma non-Hodgkin	53,9	46,1
Mieloma	51,9	48,1
Leucemie	55,7	44,3

Nuovi casi di tumore stimati (% in funzione del genere) nella popolazione italiana - anno 2014

Sex Differences in Infectious Diseases–Common but Neglected

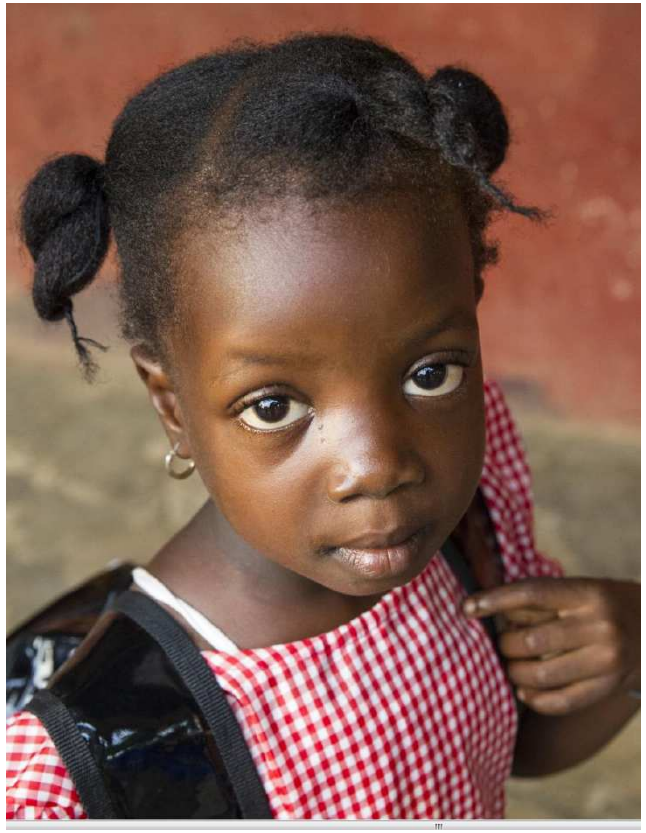
Jan van Lunzen[1,2] and Marcus Altfeld[2,3]

[1]Infectious Diseases Unit, University Medical Center Hamburg-Eppendorf, [2]Heinrich-Pette-Institute, Leibniz Institute for Experimental Virology, Hamburg, Germany; and [3]Massachusetts Institute of Technology and Harvard, Ragon Institute of Massachusetts General Hospital, Boston

Women and men are different—and this fundamental observation extends to their susceptibility and response to different diseases, including autoimmune and infectious diseases. Apart from cultural and behavioral differences between the sexes that play a prominent role in the exposure to pathogens, increasing data show that women and men also differ in their immune responses to infections. This applies to infections with viruses, bacteria, and parasites, including the pathogens most relevant for human health, causing malaria, tuberculosis, AIDS, hepatitis, and influenza. Only recently, the biological pathways responsible for these sex-based differences in the manifestations of infectious diseases have been started to be unveiled. These include immunological pathways affected by sex hormones, as well as consequences of differential expression of X-chromosome–encoded genes on immune responses to pathogens. Further research is required to gain a better understanding of the differences in immunity to infections between women and men in order to develop individualized treatment concepts in infectious diseases that take sex-specific host factors into account.

Differenze tra maschi e femmine

- **nella suscettibilità alle malattie infettive**
- **di esposizione a malattie infettive**
- **di assistenza sanitaria e di trattamento**
- **nelle conseguenze di malattie infettive**



Cause di tale differenza

Implicazioni di differenze di sesso e di genere tra per sorveglianza e risposta all'infezione

Gender Differences in Community-acquired Meningitis in Adults: Clinical Presentations and Prognostic Factors

Lavanya Dharmarajan, **Lucrecia Salazar**, and **Rodrigo Hasbun***
Department of Internal Medicine, University of Texas Health Science Center in Houston, USA

Abstract

J Meningitis. 2016 June ; 1(1): .

Community-acquired meningitis is a serious disease that is associated with high morbidity and mortality. The purpose of this study was to investigate the gender differences involved with the

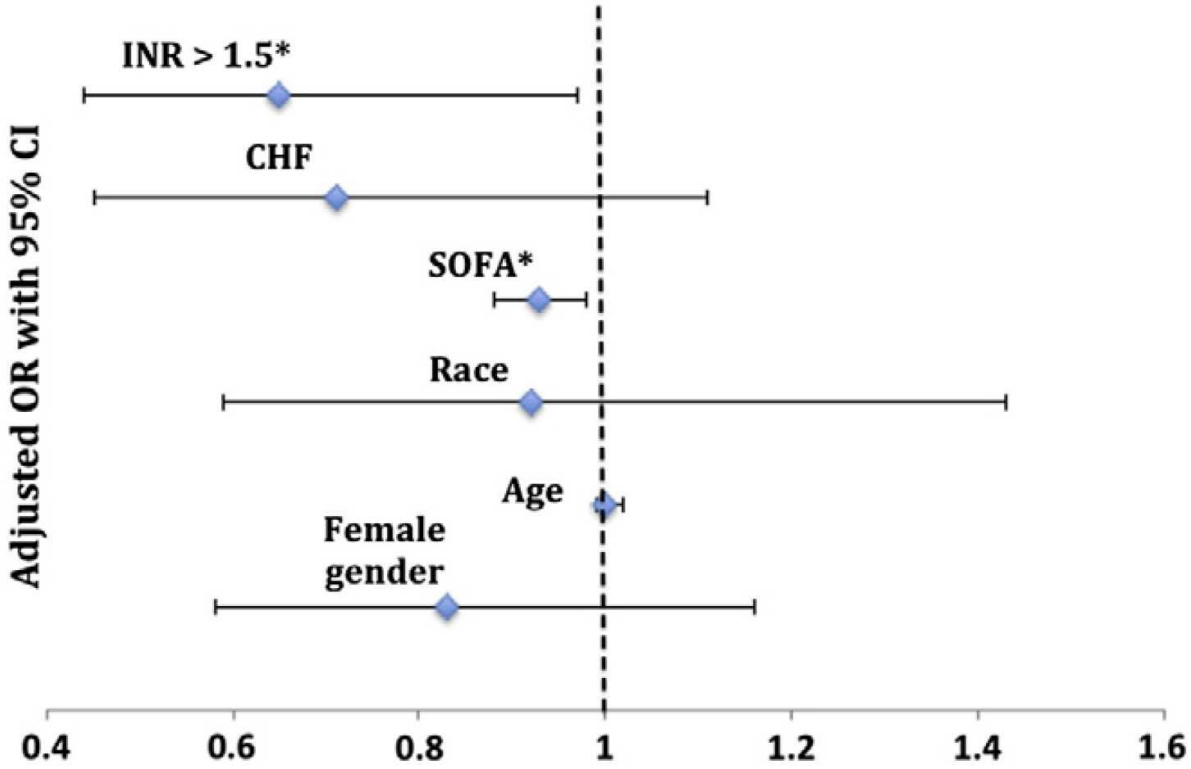
Community-acquired meningitis in males differs significantly from females in regards to comorbidity, presenting symptoms and signs, abnormal laboratory and imaging analysis, and adverse clinical outcomes.

were predictors of an adverse outcome in male patients, while age greater than 60 years and an abnormal neurological examination were associated with a poor prognosis in female patients. Thus, community-acquired meningitis in males differs significantly from females in regards to comorbidities, presenting symptoms and signs, abnormal laboratory and imaging analysis, and predictors of adverse clinical outcomes.

The DISPARITY Study: do gender differences exist in Surviving Sepsis Campaign resuscitation bundle completion, completion of individual bundle elements, or sepsis mortality?☆,☆☆

Tracy E. Madsen, MD [a,b,*], James Simmons, MD [c], Esther K. Choo, MD, MPH [a,b], David Portelli, MD [b], Alyson J. McGregor, MD [a,b], Anthony M. Napoli, MD [a,b]

[a] *Division of Women's Health in Emergency Care, The Alpert Medical School of Brown University, Department of Emergency Medicine, Rhode Island Hospital, Providence, RI*
[b] *The Alpert Medical School of Brown University, Department of Emergency Medicine, Rhode Island Hospital, Providence, RI*
[c] *Boston University School of Medicine, Department of Medicine, Boston Medical Center, Boston, MA*



- 840 patients were enrolled. The mean age was 66 years; 44.8% were women.
- There was no association between gender and bundle completion (OR = 0.83, 95% CI 0.58-1.16), controlling for age, race, Sequential Organ Failure Assessment, congestive heart failure, and coagulopathy.
- In-hospital mortality did not differ by gender.

Journal of Critical Care 29 (2014) 473.e7–473.e11

Gender-related differences

Gender influences both patterns of exposure to infectious agents and the treatment of infectious disease.

- Time spent at home and away from home
- Responsibility for caring for livestock
- Health care received
- Responsibility for caring for the sick
- Scientific knowledge about treatment

DISEASE	INFANTS	YOUNG CHILDREN (AGE 1–5 YEARS)	POSSIBLE REASONS FOR MALE FEMALE DIFFERENCES SUGGESTED BY INVESTIGATORS
Diarrhoeal disease	Incidence higher for males	Mortality rates often higher for females despite similar or slightly higher incidence rates for males.	Higher incidence rates for male children may be caused by greater male mobility. Higher female case-fatality rates found in some countries may be due to poorer health care.
Acute lower respiratory infections and pneumonia	Mortality rates higher for males	Sex differences in mortality for young children vary. Generally only small differences in incidence rates.	Mortality rates higher for males in infancy probably due to less mature lungs in boys during infancy. This disadvantage abates in early childhood.
Neonatal tetanus	Mortality rates higher for males		It is not known why mortality rates are higher for males.
Measles		Similar infection rates, but higher female mortality rates observed.	Possibly less adequate medical care is provided to girls. Possibly girls are exposed to a larger dose in the home.
Dengue		Some evidence to suggest that girls are more likely to have dengue shock syndrome than boys.	Biological reasons, related to a more aggressive immune system response have been cited as possible causes of more severe illness in girls.

Sex differences in morbidity and mortality for selected epidemic-prone infectious diseases amog infants and young children

- A large regional Italian cohort included 3,902 patients (63.5% male). Female were significantly older than male patients (66 ± 16 years vs. 63 ± 16 years, P < 0.001).
- Intensive Care Unit (ICU) mortality was similar in men and women in the whole cohort (20.1% vs. 19.8%, P = 0.834), but in patients with severe sepsis was significantly greater in women than in men (63.5% vs. 46.4%, P = 0.007).

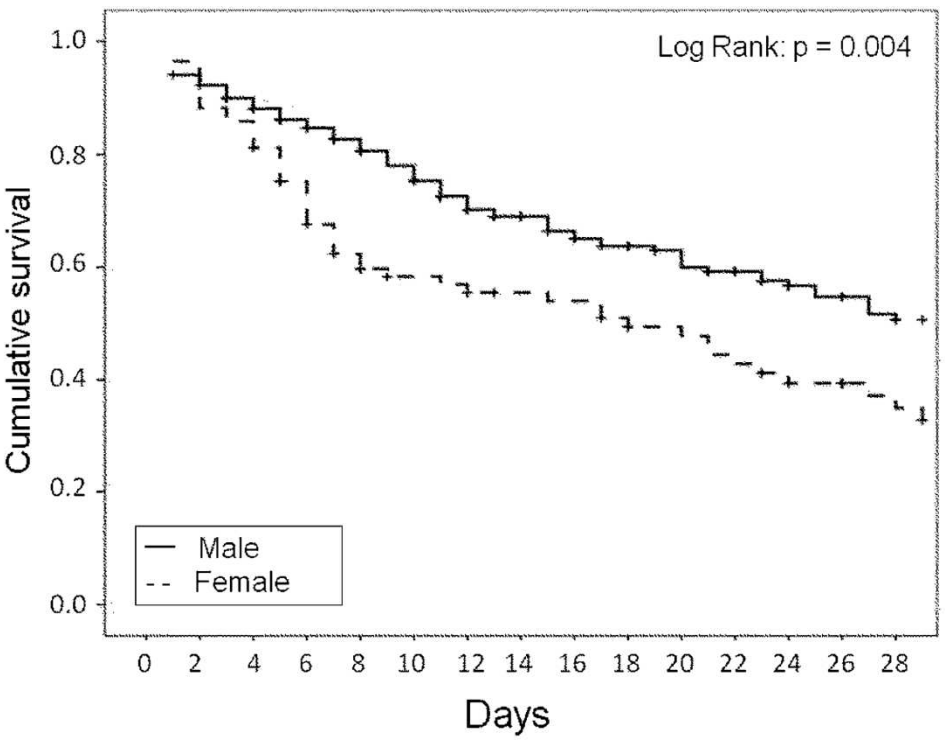


Figure 2 Kaplan-Meier survival curves representing 28-day survival according to gender in patients with severe sepsis.

Female gender was independently associated with a higher risk of ICU death in patients with severe sepsis (odds ratio = 2.33, P = 0.009) but not in the whole cohort (odds ratio = 1.07, 95% CI = 0.87 to 1.34).

The influence of gender on the epidemiology of and outcome from severe sepsis

Sakr *et al. Critical Care* 2013, **17**:R50

Predictors of *Clostridium difficile* infection severity in patients hospitalised in medical intensive care

Nagham Khanafer, Abdoulaye Touré, Cécile Chambrier, Martin Cour, Marie-Elisabeth Reverdy, Laurent Argaud, Philippe Vanhems

World J Gastroenterol 2013 November 28; 19(44): 8034-8041

Factors independently associated with severe *Clostridium difficile* infection among patients in medical intensive care unit

Variables	Unadjusted OR (95%CI)	*P* value	Adjusted OR (95%CI)	*P* value
Glasgow coma score	1.16 (0.99-1.36)	0.15	-	
Diabetes mellitus	4.89 (1.00-23.93)	0.04	-	
Previous PPI exposure	2.55 (0.67-9.66)	0.17	-	
Coamoxiclav (in the previous 8 wk)	2.43 (0.65-9.07)	0.18	-	
Fluoroquinolones (in the previous 8 wk)	6.0 (1.12-32.28)	0.026	9.29 (1.16-74.28)	0.036
C-reactive protein (mg/L; 10 mg/L increments)	1.10 (1.02-1.18)	0.014	1.11 (1.02-1.21)	0.021
Male gender	5.11 (0.95-27.55)	0.045	8.45 (1.06-67.16)	0.044

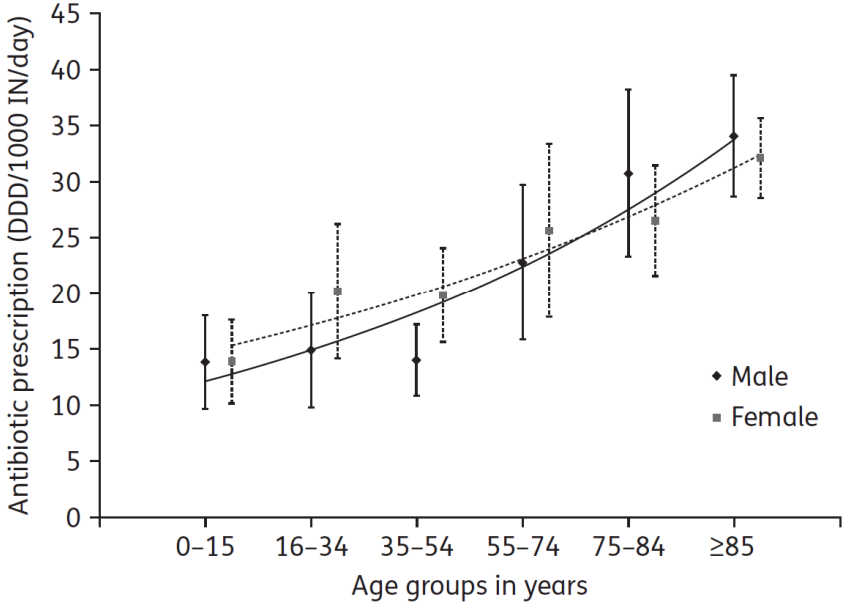
Gender differences in antibiotic prescribing in the community: a systematic review and meta-analysis

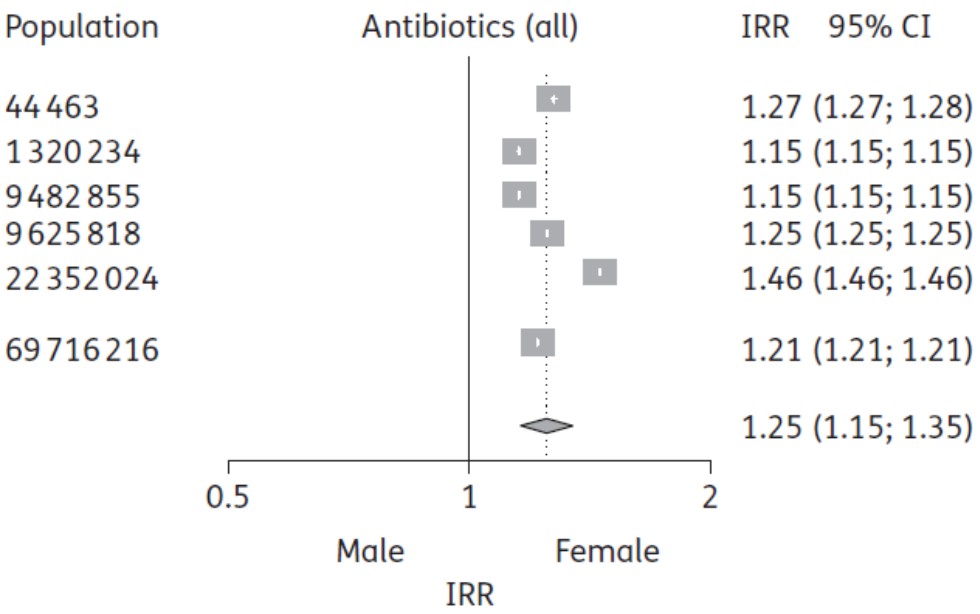
Schroder W. Et al. J Antimicrob Chemother 2016

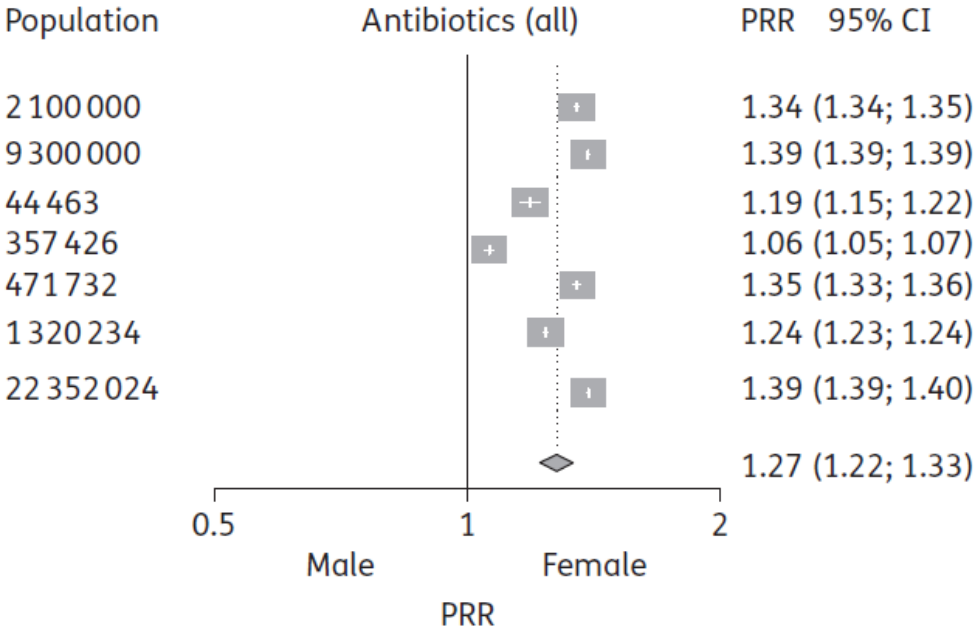
Ricerca su tutti gli studi - pubblicati dal 1976 al 2013 - che hanno analizzato la prescrizione di antibiotici nelle cure primarie (5 nazionali e 6 regionali).

Le donne avevano una probabilità superiore del 27% rispetto agli uomini di ricevere una prescrizione di antibiotici nella loro vita.

La quantità di antibiotici prescritti alle donne è risultata superiore del 36% rispetto a quella rilasciata agli uomini nella fascia di età dai 16 ai 34 anni e maggiore del 40% dai 35 ai 54 anni. In particolare, la quantità di cefalosporine e macrolidi prescritti per le donne erano più elevate del 44% e del 32% rispetto a quelli prescritti per gli uomini.







Possibili spiegazioni:

le donne si rivolgono più spesso al medico curante, forse sentendo più dei maschi la necessità di dover guarire subito e quindi insistendo maggiormente per ottenere una prescrizione.

Inoltre, le donne commettano più spesso degli uomini l'errore di trattare con antibiotici una comune patologia virale come l'influenza, favorendo ulteriormente il fenomeno della resistenza batterica agli antibiotici.

Fonte - Istituto Superiore di Sanità

Gender Differences in Rates of Carriage and Bloodstream Infection Caused by Methicillin-Resistant *Staphylococcus aureus*: Are They Real, Do They Matter and Why?

Hilary H

[1]Departme

Molecular

- Males are more prone to bacterial sepsis, but some studies suggest females may have a poorer prognosis from BSI.
- Hand-hygiene behavior varies according to gender.
- Males are less compliant, which in turn may predispose them to higher colonization and infection rates.
- Female hormones such as estrogen affect the expression of virulence factors in Pseudomonas aeruginosa, and although not studied, this may also apply to S. aureus.

There is

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Female

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specific infection prevention campaigns, and other factors such as the possible role of contact sports and occupation.

Problema

44 anni, Impiegato/a, fuma 15 sigarette al di, mai ricoverato in ospedale. Tosse e febbre da 3 giorni. Questa notte vomito e nausea

Altezza 180 cm
Peso 89 Kg, BMI 27,5

Altezza 160 cm
Peso 57 Kg, BMI 23

Siamo sicuri che i percorsi diagnostico terapeutici che abitualmente applichiamo siano corretti?

CONSIDERAZIONI CONCLUSIVE

- Esiste un rischio diverso di incidenza, di manifestazione clinica per diverse condizioni patologiche nei due sessi
- Cause di tale differenza
- Esiste un diverso rischio di morte per patologia tra sessi

CONSIDERAZIONI CONCLUSIVE

- I fattori che potrebbero spiegare le differenze tra i sessi nelle malattie sono molteplici e comprendono fattori sociali, comportamentali e biologici.
- L'individuazione dei percorsi biologici sottostanti le differenze di sesso nelle manifestazioni di malattia possono non solo consentire una comprensione migliore della patogenesi e patologia, ma anche lo sviluppo di interventi e terapie che prendano in considerazione queste differenze sessuali
- Nuovi approfondimenti sulle differenze di sesso-based possono svolgere un ruolo importante nello sviluppo di trattamenti individualizzati che non solo prendono in considerazione la diversità patogeno e la suscettibilità, ma anche peculiarità legate al sesso.
- E' noto il bias degli uomini inseriti negli studi clinici, pertanto le prove di efficacia nella ricerca di differenze sesso-specifici sono ancora molto critiche.