

Sind Frauen in der Gesundheitsversorgung benachteiligt?

PD Dr med et Dr phil Berna Özdemir

03.11.2025



Die Frauenorganisation der Migros
L'organisation féminine de Migros
L'organizzazione femminile della Migros

Interessen

Honoria for lectures/advisory boards to my institution: Merck, Roche, Pierre Fabre, BMS, MSD, Ipsen, Novartis, Janssen, Pfizer, Immunocore, Sanofi, Astellas, Iovance, Johnson&Johnson

Grundlagenbericht für den Postulatsbericht Fehlmann Rielle 19.3910

Schlussbericht

«Gesundheit der Frauen. Bessere Berücksichtigung ihrer Eigenheiten.»

Interdisziplinäres Zentrum für Geschlechterforschung (IZFG) der Universität Bern

Prof. Dr. Michèle Amacker, Dr. Tina Büchler, Dr. Christine Bigler, Katharina Nydegger MSc

unter Mitarbeit der

Berner Fachhochschule (BFH), Departement Gesundheit, F&E Pflege

Prof. Dr. Eva Soom Ammann, Fabienne Renggli MSc, Tannys Helfer MSc

In Zusammenarbeit mit Expertinnen Gender Health/Medicine:

Prof. Dr. Anelis Kaiser Trujillo, Gender Studies in MINT, Albert-Ludwigs-Universität Freiburg i. Br.

Dr. med. et phil. Berna Özdemir, Universitätsklinik für Medizinische Onkologie, Inselspital Bern

Dr. Joëlle Schwarz, Unité Santé et genre, Département des polycliniques, Département médecine de famille, Centre universitaire de médecine générale et santé publique (Unisanté) Lausanne

86 Seiten!

Bern, Mai 2023

Geschlecht- verschiedene Ebenen der Diskussion

nature
human behaviour

LETTERS
<https://doi.org/10.1038/s41562-017-0235-e>

One and a half million medical papers reveal a link between author gender and attention to gender and sex analysis

Mathias Wullum Nielsen^{1*}, Jens Peter Andersen², Londa Schiebinger¹ and Jesper W. Schneider²



FORBES > INNOVATION > SCIENCE

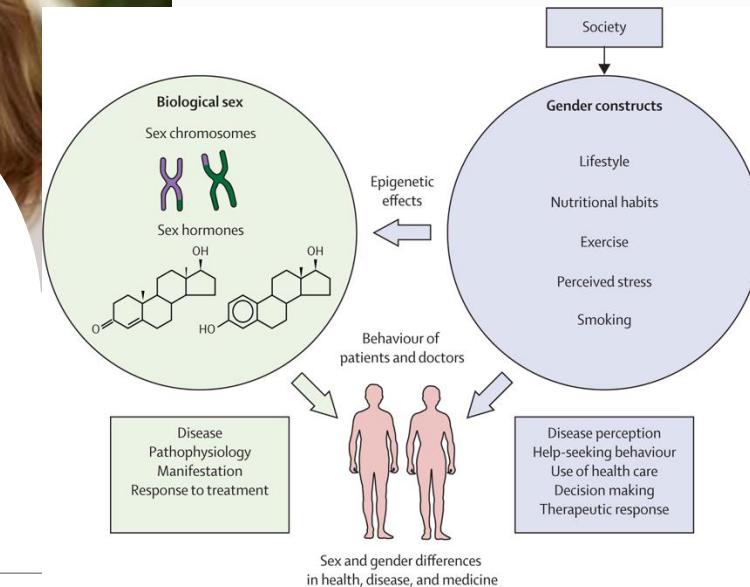
Fewer Deaths Among Patients Of Female Doctors: Are Male Doctors Doing Something Wrong?

Rebecca Coffey Contributor

I'm interested in evolution, health, the environment, and behavior.

Follow

Jul 16, 2021, 11:00am EDT



Inhalt

- Definitionen “Sex” und “Gender”
- Einfluss von Geschlecht und Geschlechterrolle auf Krebserkrankungen
- Geschlechtsunterschiede in Wirksamkeit und Toxizitäten von onkologischen Therapien
- Die Datenlücke!
- Fazit

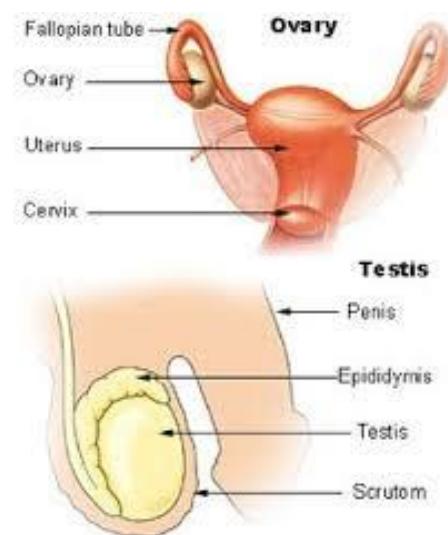
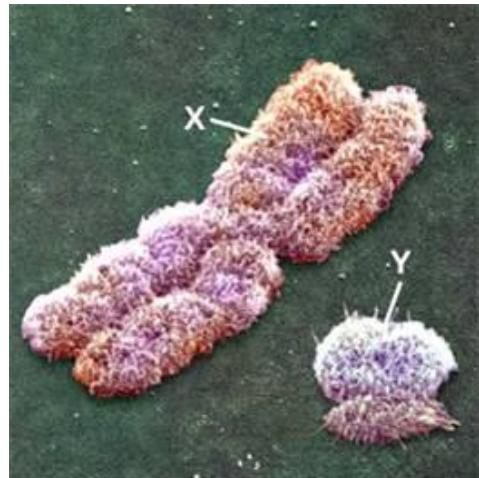
Definitionen

Geschlecht “Sex”:

Biologische Variable

Binär (männlich/weiblich)

Chromosomen + Gonaden



Geschlechterrolle “Gender”:

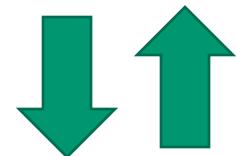
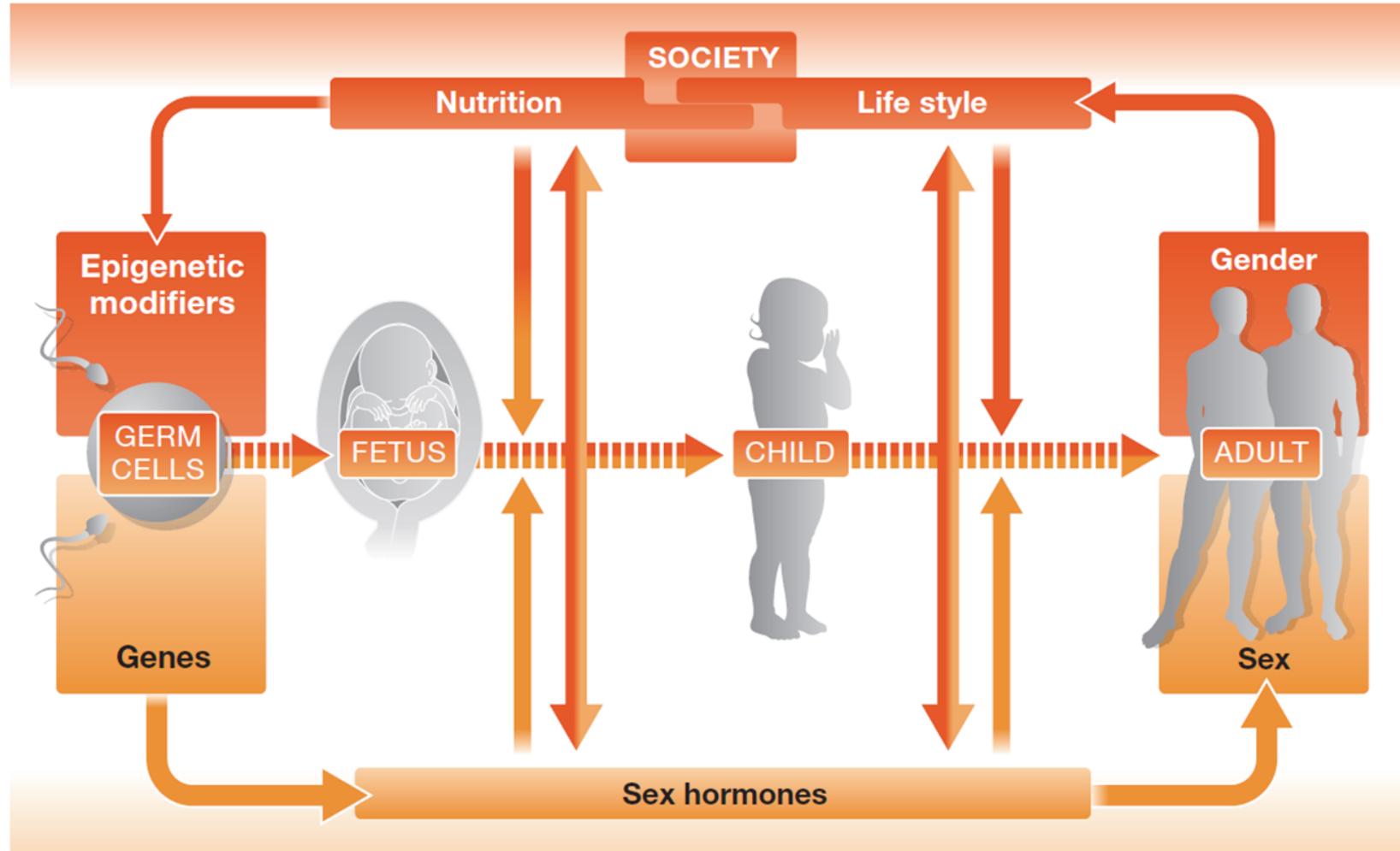
Soziales Konstrukt

Spektrum von Charakteristiken

Rollen und Stereotypen

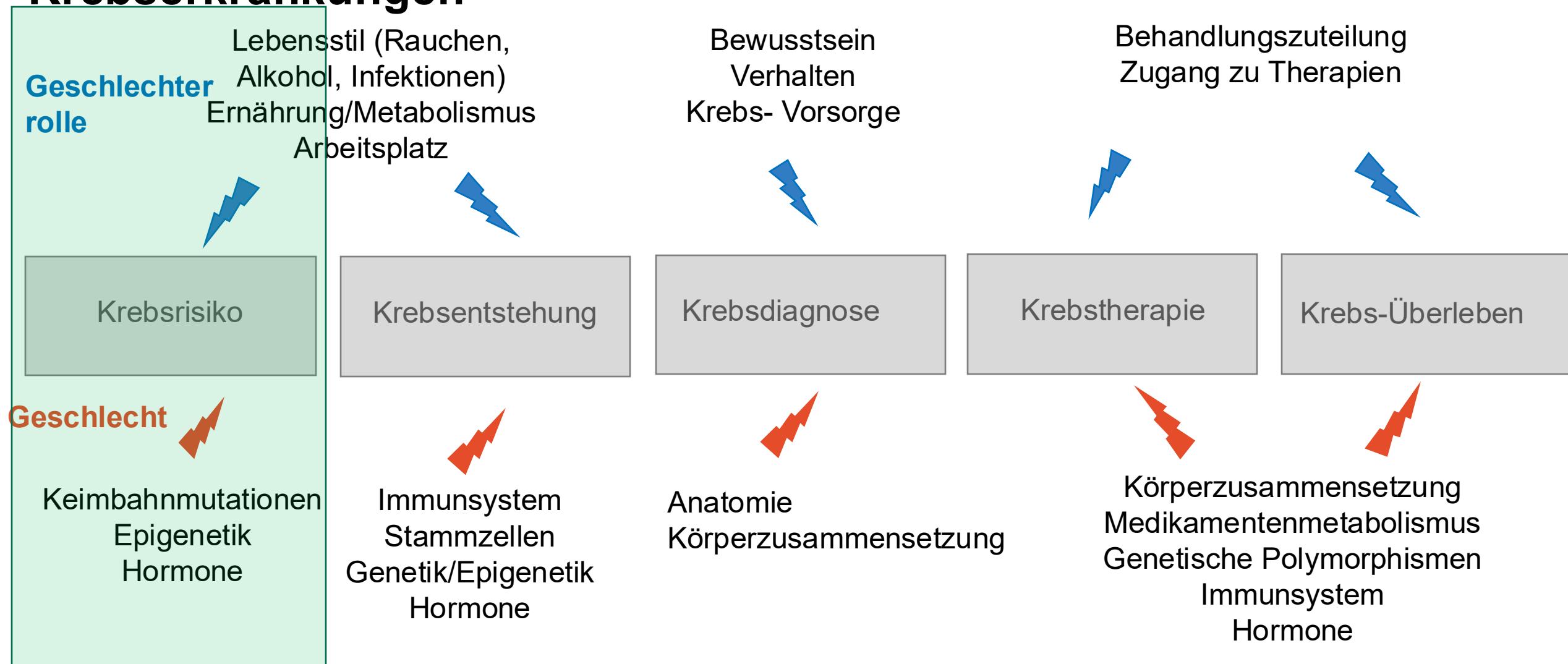


“Sex&gender” beeinflussen einander



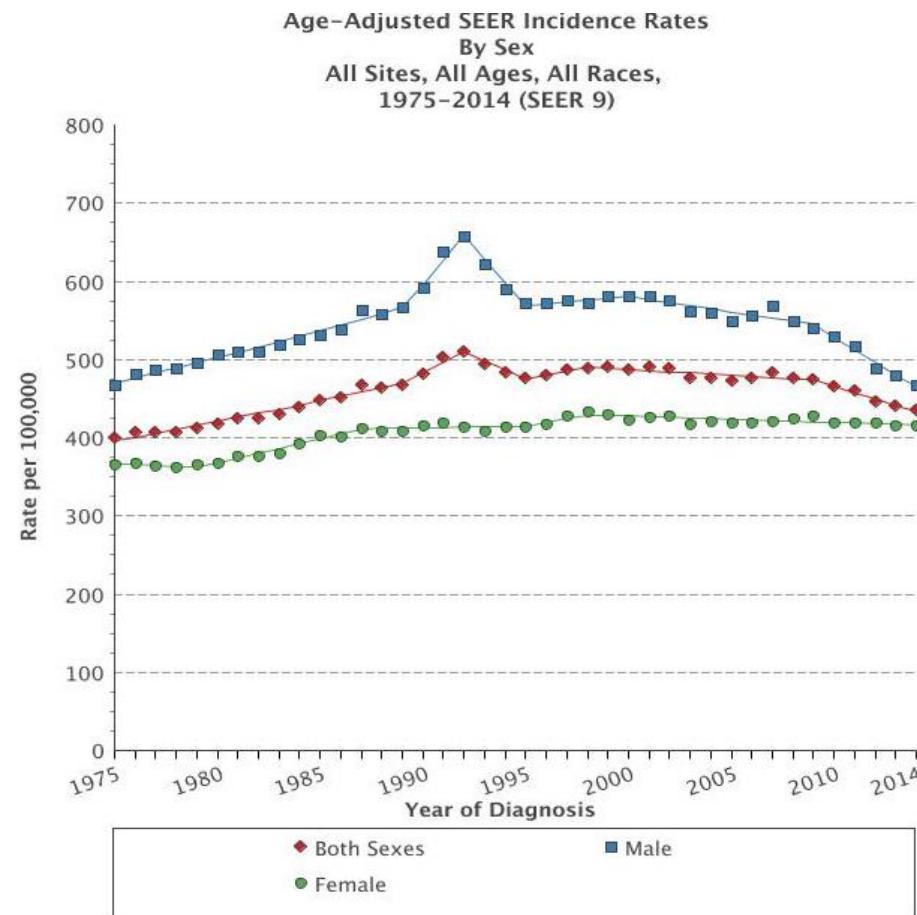
Regitz-Zagrosek V, EMBO Reports, 2012

Einfluss von Geschlecht und Geschlechterrolle auf Krebskrankungen



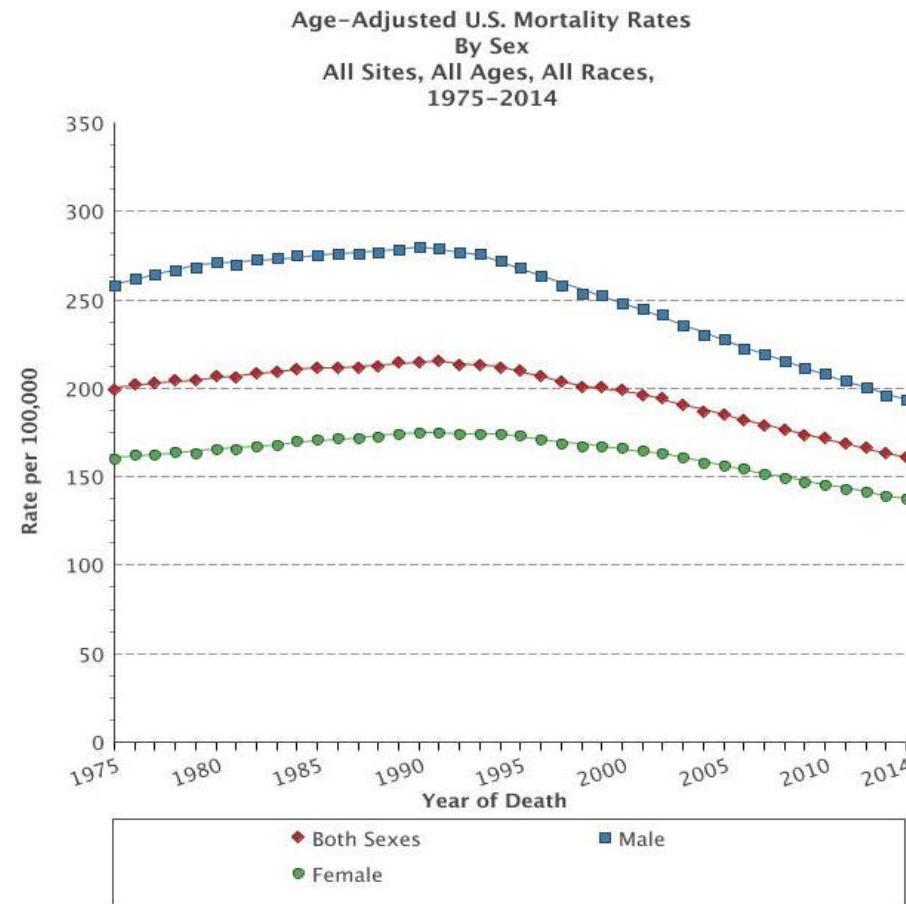
Männliches Geschlecht ist ein Risikofaktor für Krebs

Inzidenz



Cancer sites include invasive cases only unless otherwise noted.

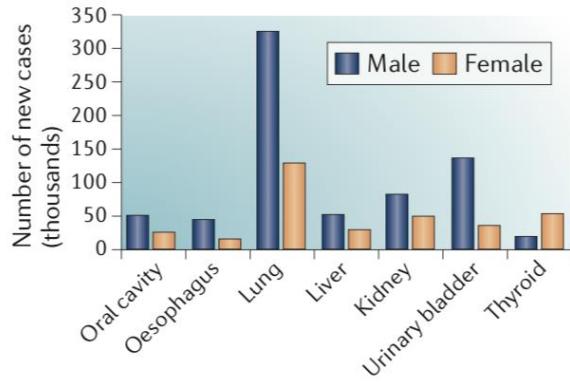
Mortalität



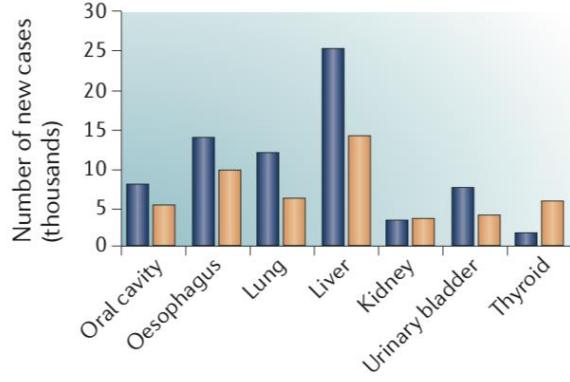
Cancer sites include invasive cases only unless otherwise noted.

Männliches Geschlecht ist ein Risikofaktor für Krebs

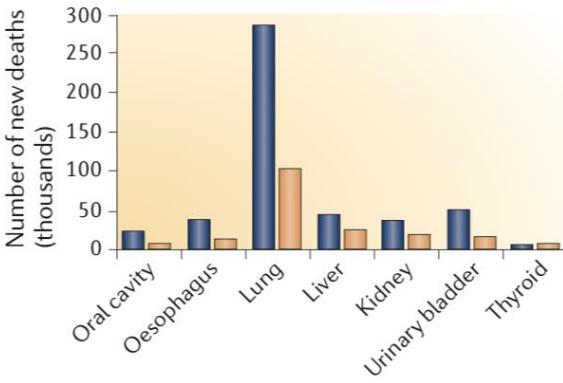
a Incidence: European region



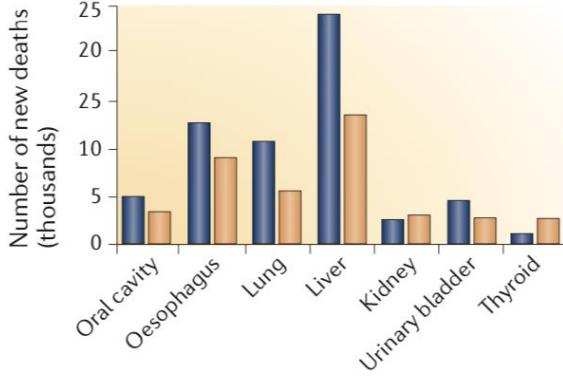
Incidence: African region



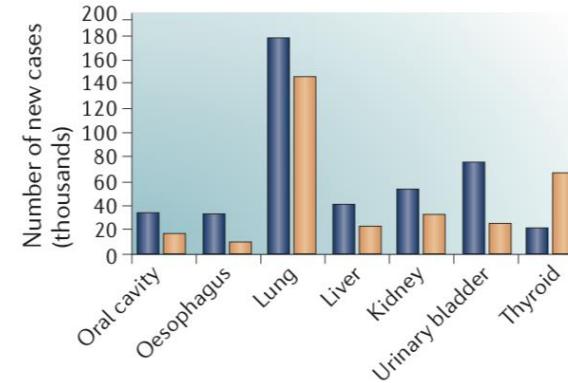
b Mortality: European region



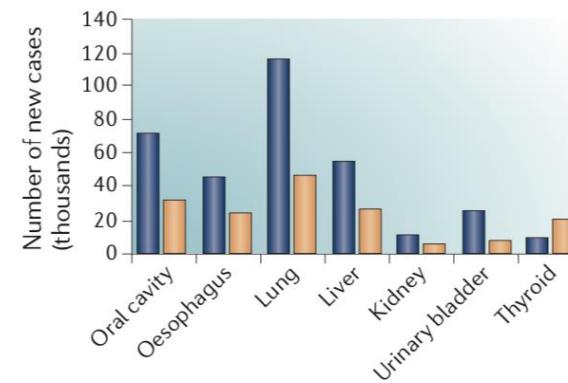
Mortality: African region



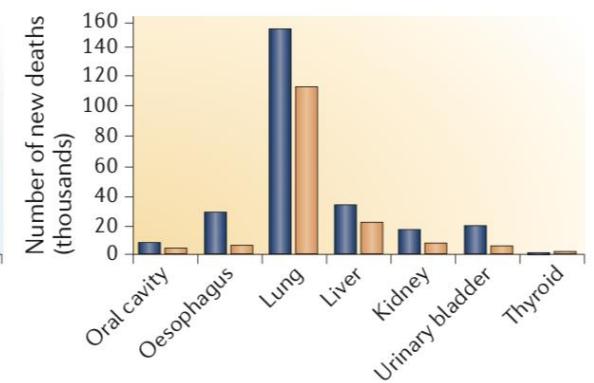
Incidence: Americas region



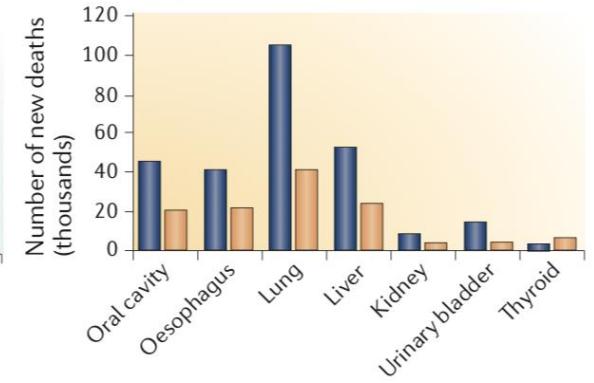
Incidence: Southeast Asia region



Mortality: Americas region



Mortality: Southeast Asia region



Clochiatti A et al. Nat Rev Can 2016

Gründe für Geschlechtsdifferenzen

Historische Perspektive

- Exposition am Arbeitsplatz
- Unterschiedliches Risikoverhalten
(Alkohol und Rauchen)
- Unterschiedliches Konsultationsverhalten



Aktuell

- Auch nach Normalisierung für diese Faktoren vorhanden
- Biologische Faktoren spielen eine Rolle
- Mann und Frau sind nicht gleich!

Radkiewicz C et al. JCO 2018
Dorak T & Karpuzoglu E, Front Genet 2012

Einfluss von Geschlecht und Geschlechterrolle auf Krebserkrankungen

Geschlechterrolle
Lebensstil (Alcohol,
Rauchen, Infektionen)
Ernährung/Metabolismus
Arbeitsplatz



Krebsrisiko

Krebsentstehung

Geschlecht

Keimbahnmutationen
Epigenetik
Hormone

Immunsystem
Stammzellen
Genetik/Epigenetik
Hormone

Bewusstsein
Verhalten
Krebs- Vorsorge

Krebsdiagnose

Anatomie
Körperzusammensetzung

Behandlungszuteilung
Zugang zu Therapien



Krebstherapie

Krebs-Überleben

Körperzusammensetzung
Medikamentenmetabolismus
Genetische Polymorphismen
Immunsystem
Hormone

Frauen haben grösseres Bewusstsein für Melanom

Table 2. Skin Cancer Prevention and Skin Self-examination Practices and Use of Health Information by Men With Newly Diagnosed Melanoma and Their Unaffected Female Spouses^a

Characteristic ^b	Men (n=158)	Female Spouses (n=158)	P Value ^c
Heard of the ABCD rule for melanoma	18	31	.004
Used sunscreen regularly	32	55	<.001
Regularly wore a hat or long-sleeved shirt to protect from the sun	45	32	.02
Carefully examined all of your own moles	46	58	.04
Were instructed or given materials on how to look at your skin for signs of melanoma	25	38	.004
Read information about skin cancer detection	65	85	<.001
Requested educational materials about skin cancer detection from your physician	3	8	.05

Sex Differences in Age at Primary Melanoma Diagnosis in a Population-Based Analysis (US Surveillance, Epidemiology, and End Results, 2005–2011)

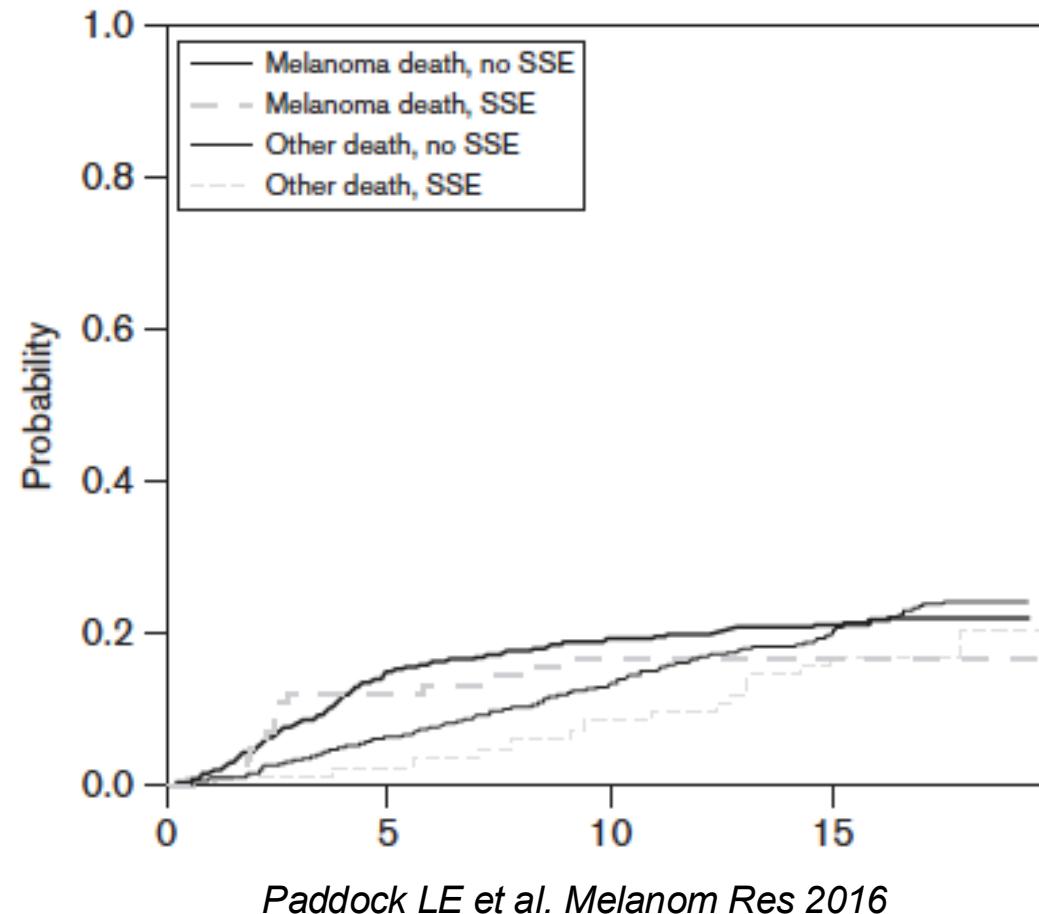
Characteristic	Female N = 43,631	Male N = 58,464	
Age at diagnosis (y)			
Mean (SD)		56.5 (17.2)	62.6 (15.1)
Median (Min–Max)		56 (0–85)	64 (2–85)
SEER stage			
Localized		40,091	91.9
Regional		3,540	8.1
T category (mm)		52,307	89.5
≤1.00, T1		37,178	63.6
1.01–2.00, T2		8,900	15.2
2.01–4.00, T3		5,494	9.4
4.01+, T4		3,726	6.4

Frauen untersuchen ihre Haut häufiger

Table 1 Comparison of skin self-examination and no skin self-examination by patient characteristics at baseline

Characteristics	n (%)		
	No SSE	SSE	P-value
Sex			
Male	307 (54.4)	36 (41.9)	0.03
Female	257 (45.6)	50 (58.1)	
Education			
HS and less	223 (39.5)	25 (29.1)	0.06
More than HS	341 (60.5)	61 (70.9)	
Stage			
Localized	542 (96.0)	82 (95.4)	0.72
Regional	11 (2.0)	2 (2.3)	
Distant	11 (2.0)	2 (2.3)	
Age group (years)			
< 30	24 (4.3)	7 (8.1)	0.07
30–39	78 (13.8)	17 (19.8)	
40–49	102 (18.1)	17 (19.8)	
50–59	118 (20.9)	17 (19.8)	
60–69	110 (19.5)	19 (22.1)	
≥ 70	132 (23.4)	9 (10.4)	
Breslow's depth (mm)			
< 1.00	326 (57.8)	56 (65.1)	0.30
1.01–2.00	115 (20.4)	18 (20.9)	
2.01–4.00	80 (14.2)	6 (7.0)	
> 4.00	43 (7.6)	6 (7.0)	

SSE= skin self-examination



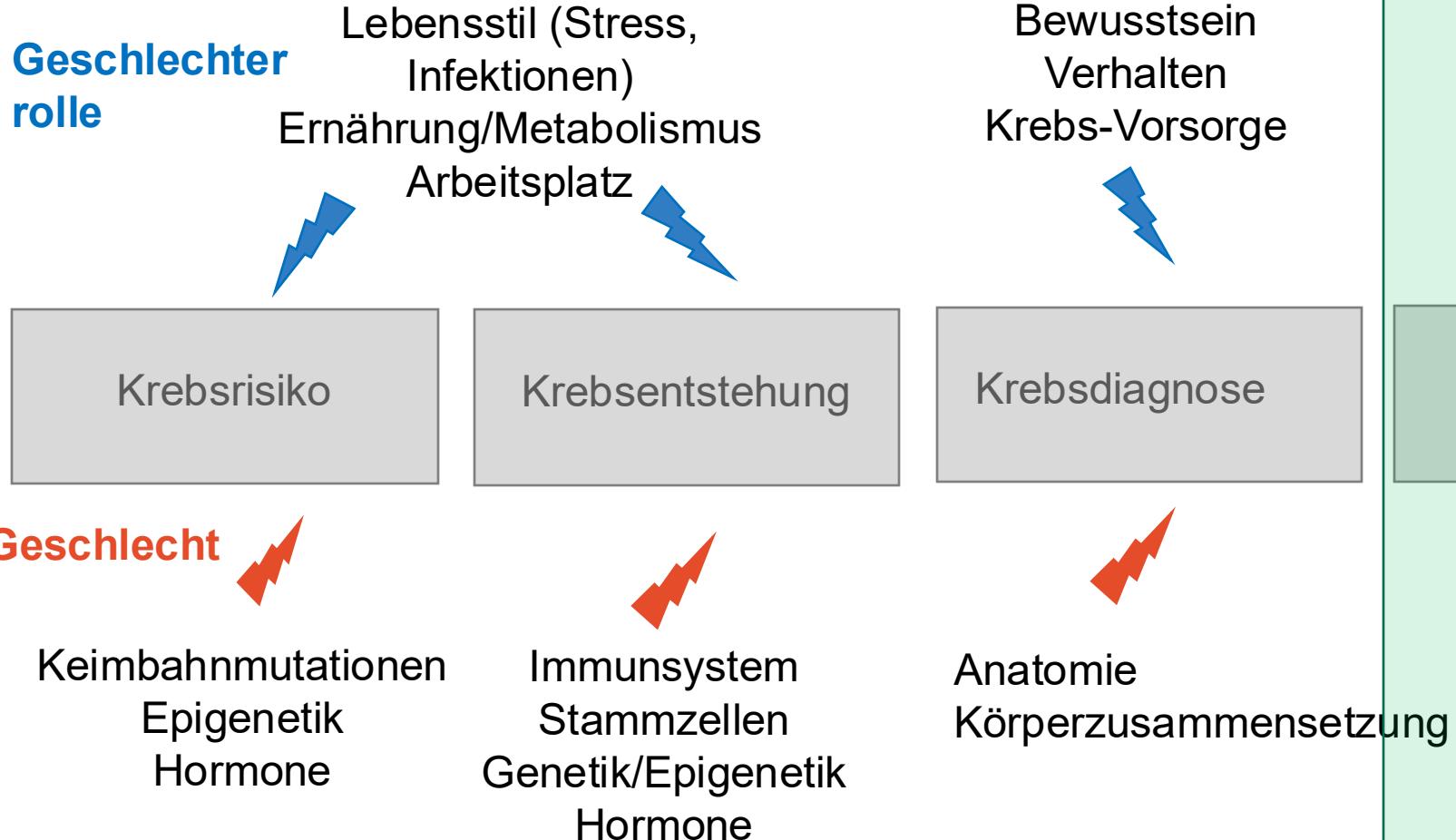
Melanomlokalisation unterscheidet sich zwischen Männern und Frauen

Characteristic	Female N = 43,631		Male N = 58,464	
Site				
Lower extremity	13,150	30.1	5,244	9.0
Scalp/neck	1,801	4.1	6,400	10.9
Trunk	11,396	26.1	22,690	38.8
Upper extremity	12,811	29.4	14,161	24.2
Other	4,473	10.3	9,969	17.1



Stanienda-Sokol K et al. Asian Pac J Cancer Prev 2017

Einfluss von Geschlecht und Geschlechterrolle auf Krebserkrankungen



Behandlungszuteilung
Zugang zu Therapien

Einschluss von Frauen in klinische Studien ist ungenügend

August 26, 2021

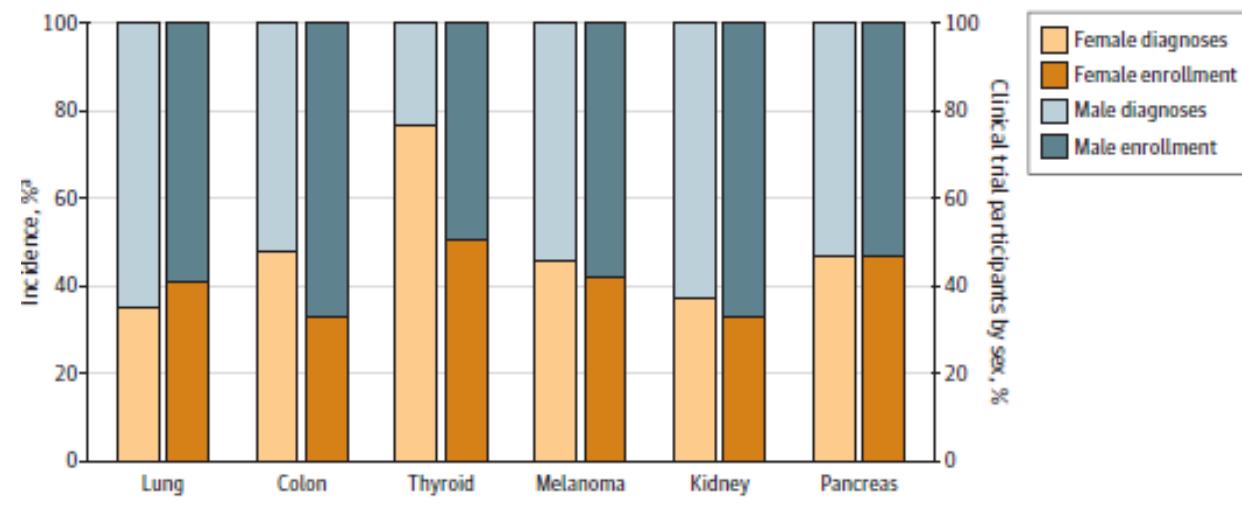
The Inclusion of Women in Global Oncology Drug Trials Over the Past 20 Years

Kristina Jenei, BSN, MSc¹; Daniel E. Meyers, MD, MSc²; Vinay Prasad, MD, MPH³

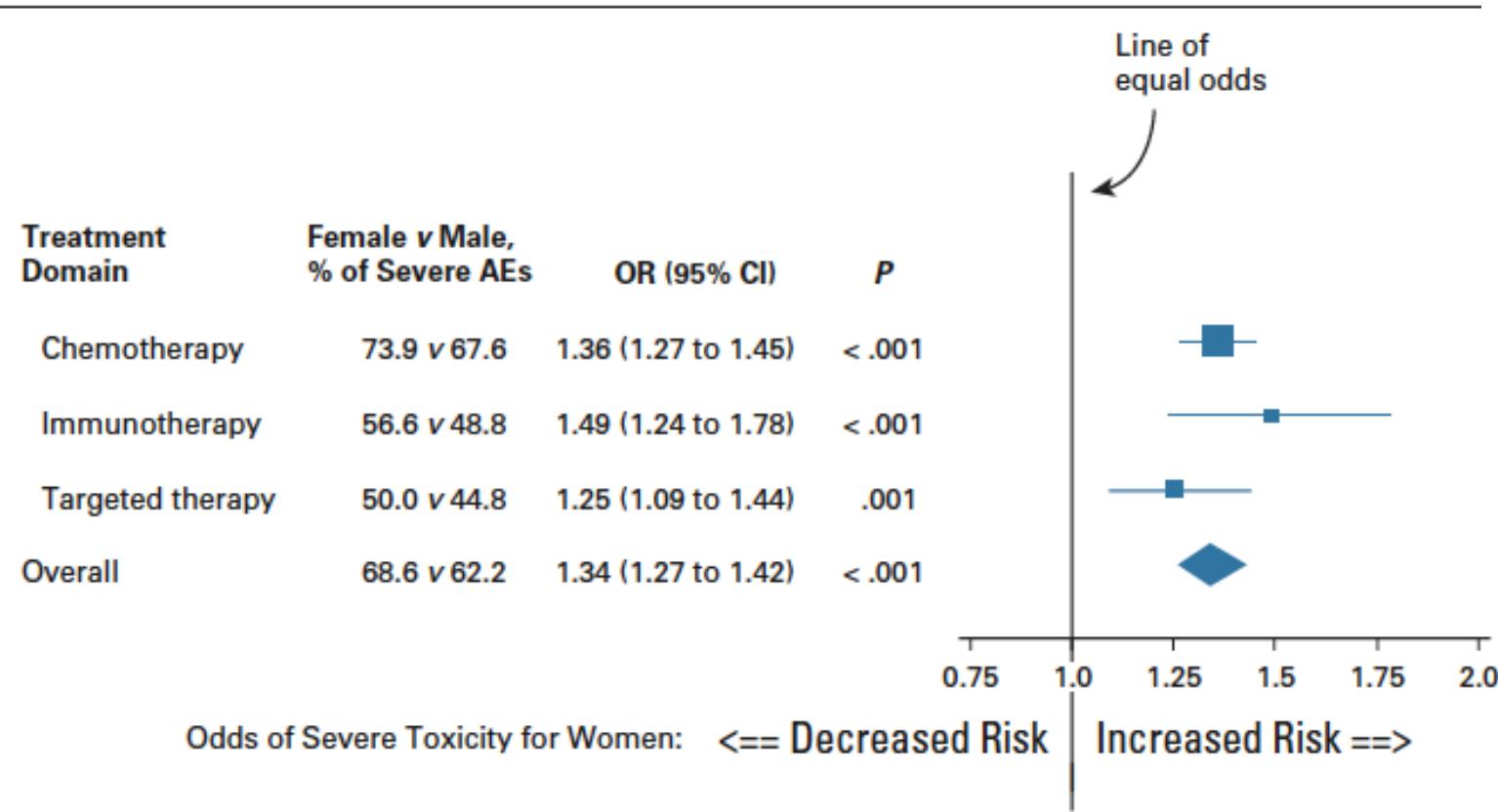
Table. Comparison Between Sex-Specific Enrollment and Clinical Trial Characteristics

Characteristic	Sex, No. (%)		P value ^a
	Female	Male	
Total enrolled	73 103 (40)	109 313 (60)	<.001
Trial phase			
1	3034 (48)	3322 (52)	.001
2	18 838 (43)	24 508 (57)	<.001
3	40 139 (38)	66 611 (62)	<.001
Year			
2000–2010	23 350 (40)	34 745 (60)	
2011–2020	49 753 (42)	68 022 (58)	<.001
Tumor type			
Lung	40 829 (41)	57 979 (59)	<.001
Colon	7600 (33)	15 266 (67)	<.001
Thyroid	904 (51)	875 (49)	.50
Melanoma	11 317 (42)	15 529 (58)	<.001
Kidney	6586 (33)	13 127 (67)	<.001
Pancreas	5867 (47)	6537 (53)	<.001
Sites			
US	49 911 (40)	75 755 (60)	<.001
Canada	29 603 (39)	45 372 (61)	<.001
China	23 456 (41)	33 645 (56)	<.001
United Kingdom	28 472 (39)	44 478 (61)	<.001
Australia	28 505 (39)	44 332 (61)	<.001
Funding (US)			
Industry	41 391 (41)	60 473 (59)	<.001
NIH	6828 (48)	7285 (52)	

Figure. Composition of Trial Enrollment and Incidence by Sex per Tumor Type



Frauen haben ein höheres Risiko für Therapietoxizität



^a Sex Differences in Risk of Severe Adverse Events in Patients Receiving Immunotherapy, Targeted Therapy, or Chemotherapy in Cancer Clinical Trials

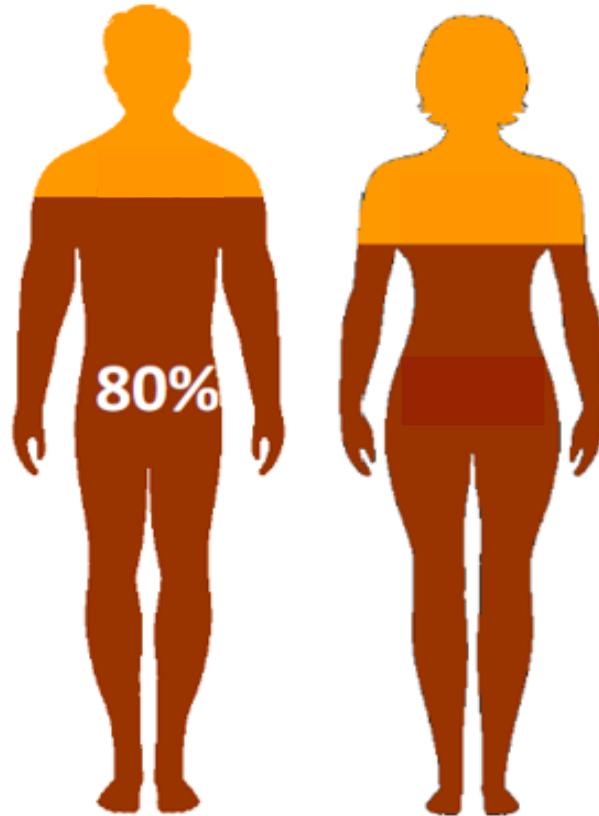
Joseph M. Unger, PhD¹; Riha Vaidya, PhD²; Kathy S. Albain, MD²; Michael LeBlanc, PhD¹; Lori M. Minasian, MD³; Carolyn C. Gotay, PhD⁴; N. Lynn Henry, MD, PhD⁵; Michael J. Fisch, MD⁶; Shing M. Lee, PhD⁷; Charles D. Blanke, MD⁸; and Dawn L. Hershman, MD, MS⁹

original reports

Unger JM et al. JCO 2022

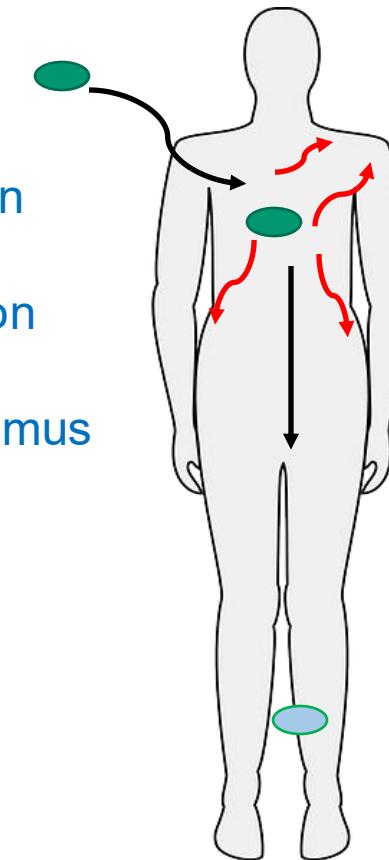
Gründe für diese Geschlechtsunterschiede - Medikamentenmetabolismus

Körperzusammensetzung
Sexualhormone
Sexualchromosome



Pharmacokinetik

Absorption
Distribution
Metabolismus
Exkretion



Pharmacodynamik

Medikamentenwirkung
Dosis-Wirkungs-Verhältnis



Özdemir BC et al. JCO 2018

Gründe für diese Geschlechtsunterschiede - Medikamentenmetabolismus

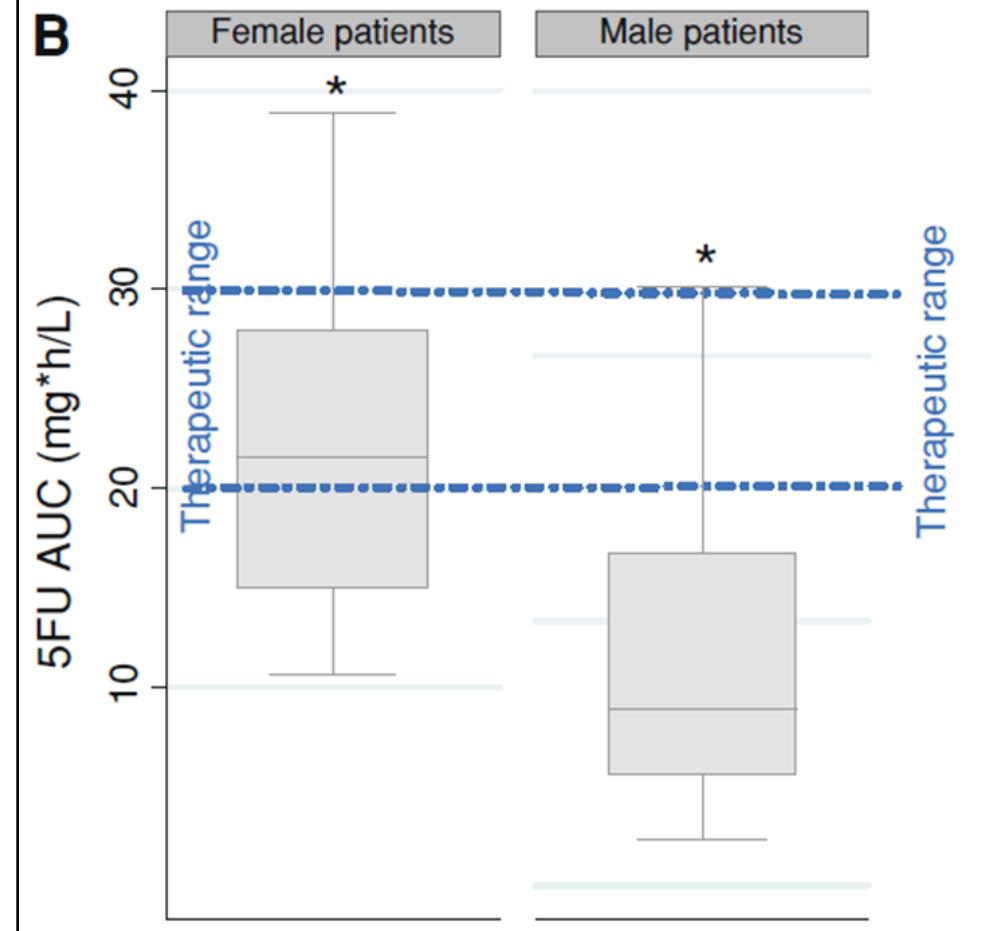
Männer haben eine 26% schnellere Elimination von 5-FU

BSA basierte Dosierung resultiert in:

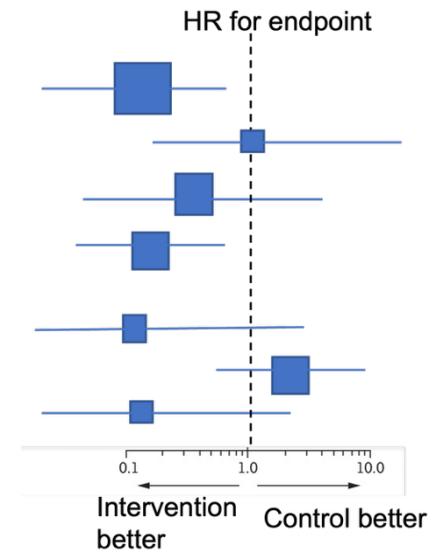
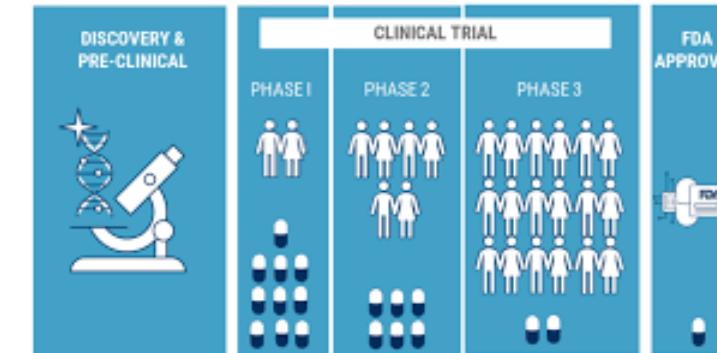
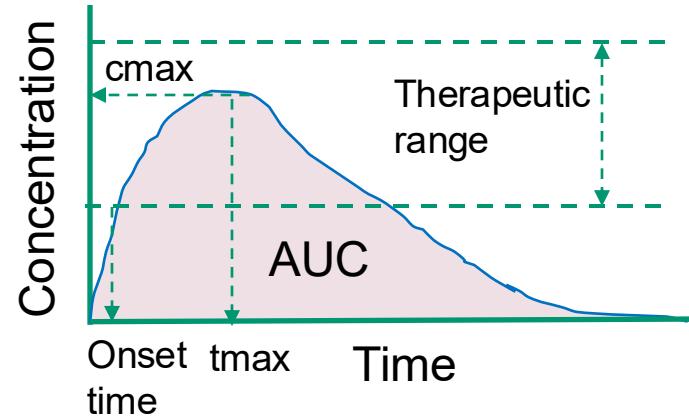
- 60% der Patienten sind unterdosiert
- 15% der Patienten sind überdosiert
- nur 25% sind im therapeutischem Fenster

Beumer, JH Clin Pharmacol Ther 2018;
Mueller, F Cancer Chemotherapy and Pharmacology 2013

32 patients with gastrointestinal malignancies; 68% women



Gründe für diese Geschlechtsunterschiede - Medikamentenentwicklung/Studien



Zelllinien ??
Männchen

Referenz: M, 70 kg, Weiss

M: W≈60:40

Endpunkte nach
Geschlecht?

Özdemir BC et al., *iScience* 2023

Özdemir BC et al *JCO* 2018

Wagner AD ... Özdemir BC *Ann Oncol* 2019

Jenei K et al. *JAMA Oncol* 2021

Die Datenlücke (Data gap) hat Konsequenzen– Das Beispiel der BILCAP Studie

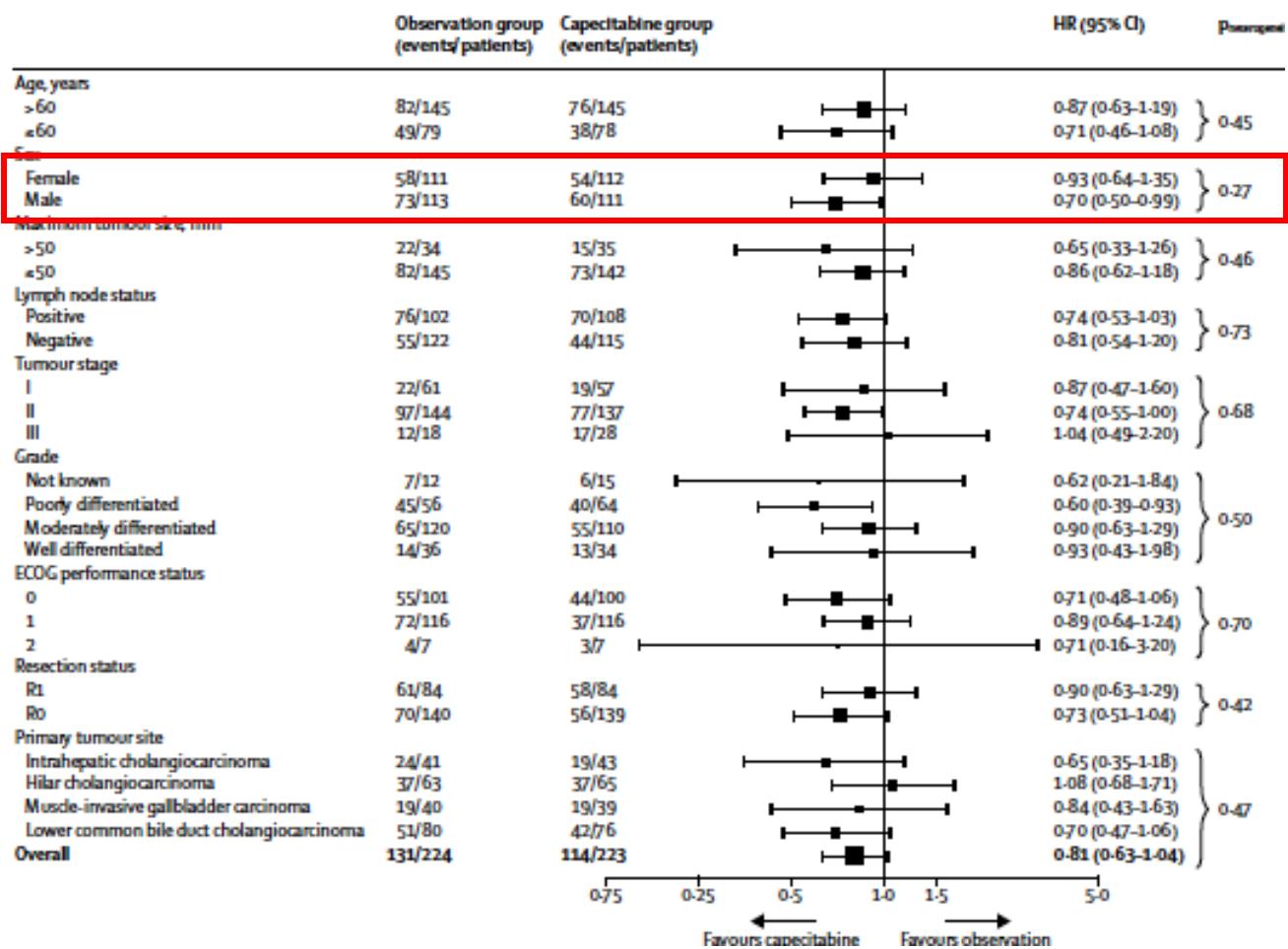
Capecitabine compared with observation in resected biliary tract cancer (BILCAP): a randomised, controlled, multicentre, phase 3 study

John N Primrose, Richard P Fox, Daniel H Palmer, Hassan Z Malik, Raj Prasad, Darius Mirza, Alan Anthony, Pippa Corrie, Stephen Falk, Meg Finch-Jones, Harpreet Wasan, Paul Ross, Lucy Wall, Jonathan Wadsley, Jeff T R Evans, Deborah Stocken, Raaj Paseedom, Yuk Ting Ma, Brian Davidson, John P Neoptolemos, Tim Iveson, James Raftery, Shihua Zhu, David Cunningham, O'James Garden, Clive Stubbs, Juan W Valle, John Bridgewater, on behalf of the BILCAP study group

Lancet Oncol 2019

	Capecitabine group (n=223)	Observation group (n=224)
Sex		
Female	112 (50%)	111 (50%)
Male	111 (50%)	113 (50%)
Age, years	62 (55-68)	64 (55-69)

Interpretation Although this study did not meet its primary endpoint of improving overall survival in the intention-to-treat population, the prespecified sensitivity and per-protocol analyses suggest that capecitabine can improve overall survival in patients with resected biliary tract cancer when used as adjuvant chemotherapy following surgery and could be considered as standard of care. Furthermore, the safety profile is manageable, supporting the use of capecitabine in this setting.

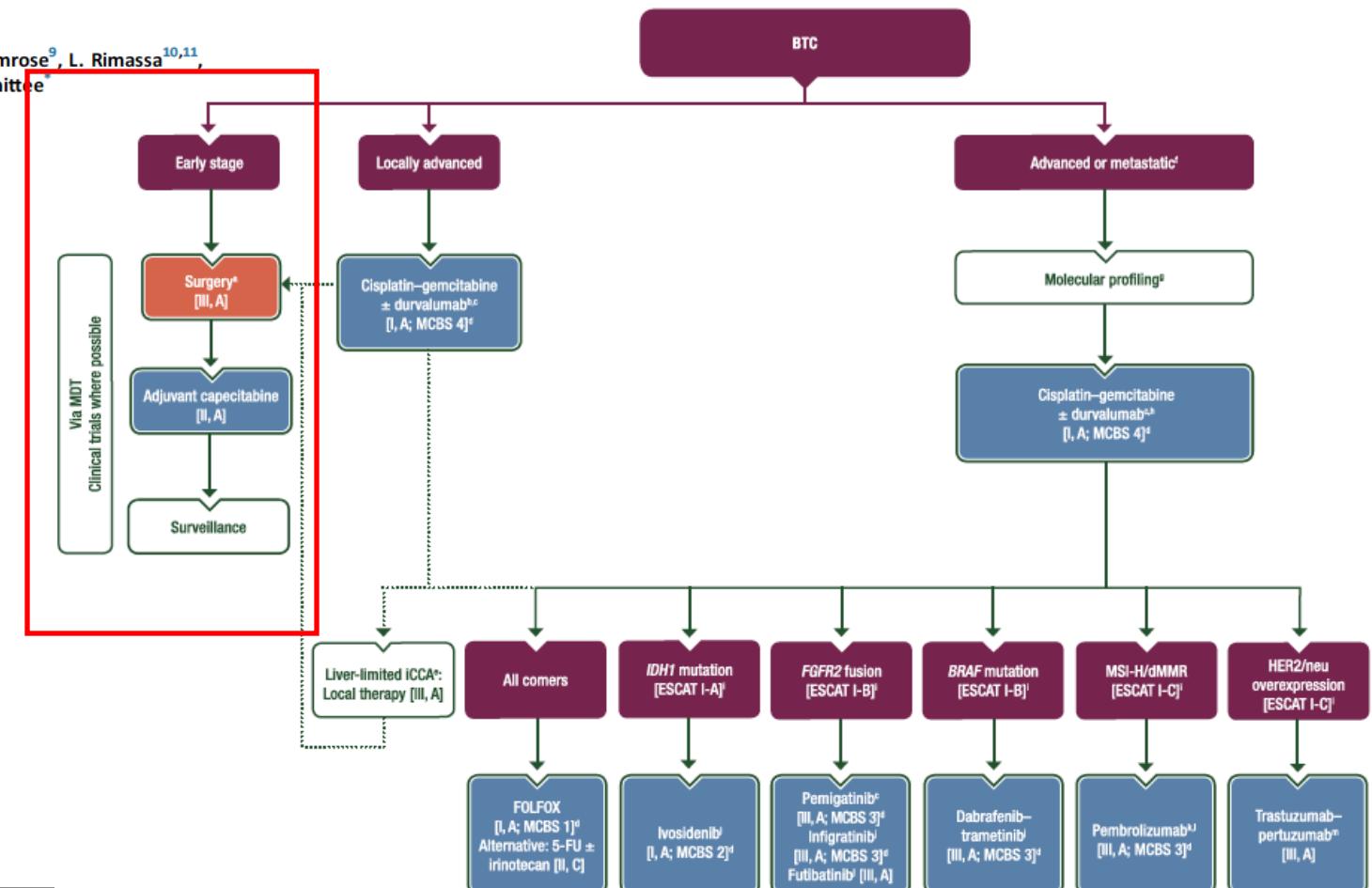


Wegen der Datenlücke (Data gap): Guidelines sind nicht Geschlechts-spezifisch!

Biliary tract cancer: ESMO Clinical Practice Guideline for diagnosis, treatment and follow-up[☆]

A. Vogel¹, J. Bridgewater², J. Edeline^{3,4}, R. K. Kelley⁵, H. J. Klümpen⁶, D. Malka^{7,8}, J. N. Primrose⁹, L. Rimassa^{10,11},
 A. Stenzinger¹², J. W. Valle^{13,14} & M. Ducreux^{8,15}, on behalf of the ESMO Guidelines Committee¹⁶

Ann Oncol 2022



Strukturelle Barrieren verhindern Geschlechts-spezifische Dosierungen und Therapien..

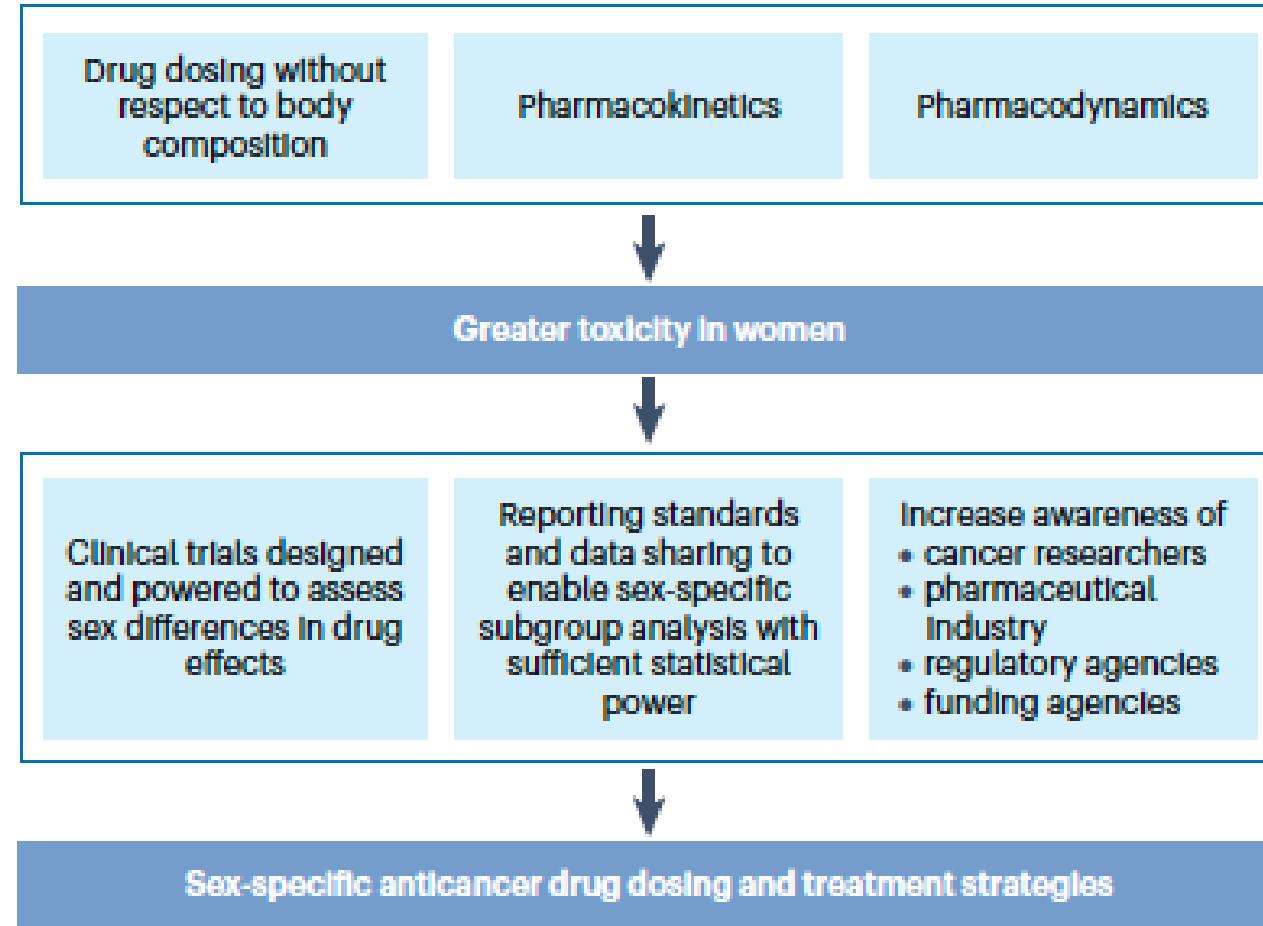
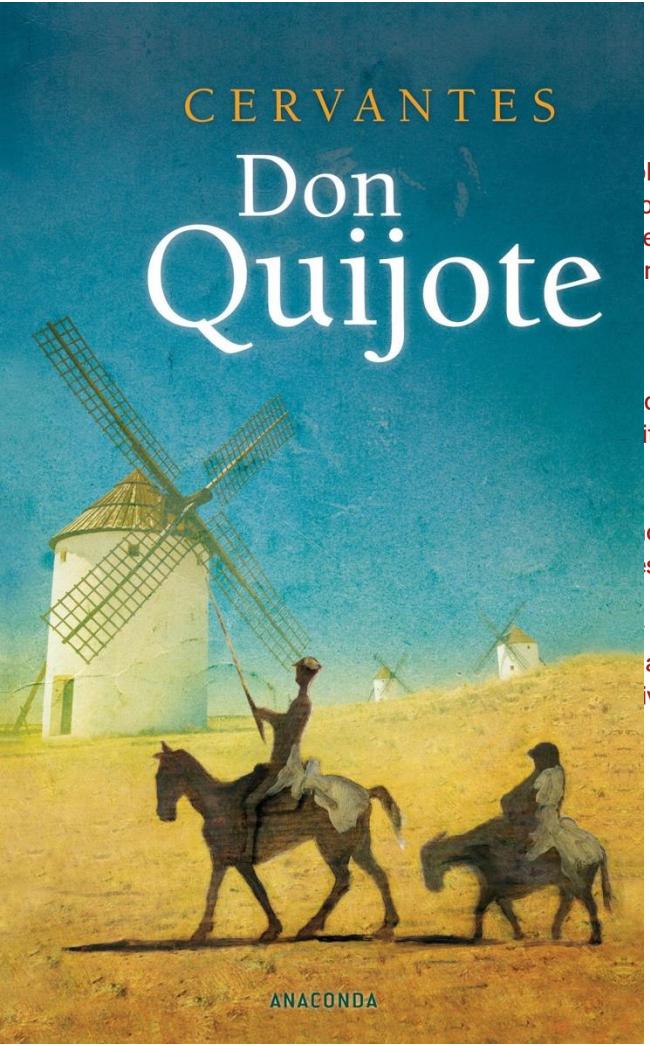


Fig. 1| Barriers and solutions for sex-specific anticancer drug dosing.

Özdemir BC, Nat Rev Cancer 2023

Sich mit Geschlecht zu befassen, ist wichtiger denn je..

accessible	discriminated	inclusion
activism	discrimination	inclusive
activists	discriminatory	inclusive leadership
advocacy	disparity	inclusiveness
advocate	diverse	inclusivity
advocates	diverse backgrounds	increase diversity
affirming care	diverse communities	increase the diversity
all-inclusive	diverse community	indigenous communities
allyship	diverse group	inequalities
anti-racism	diverse groups	inequality
antiracist	diversified	inequitable
assigned at birth	diversify	inequities
assigned female at birth	diversifying	inequity
assigned male at birth	diversity	injustice
at risk	enhance the diversity	institutional racism
barrier	enhancing diversity	intersectionality
barriers	environmental quality	key groups
belong	equal opportunity	key people
bias	equality	key populations
biased	equitable	Latinx
biased toward	equitableness	LGBT
biases	equity	LGBTQ
biases towards	ethnicity	marginalize
biologically female	excluded	marginalized
biologically male	exclusion	men who have sex with women
BIPOC	expression	



female	men
females	mental health
feminism	minorities
fostering inclusivity	minority
GBV	most risk
gender	MSM
gender based	multicultural
gender based violence	Mx
gender diversity	Native American
gender identity	non-binary
gender ideology	nonbinary
gender-affirming care	oppression
genders	orientee
Gulf of Mexico	people + uterus
hate speech	people-centered care
health disparity	person-centered
health equity	person-centered care
hispanic minority	polarization
historically	political
identity	pollution
immigrants	pregnant people
implicit bias	pregnant person
implicit biases	pregnant persons
	women
	women and underrepresented

Fazit

1. Das Geschlecht und die Geschlechterrolle beeinflussen das Krebsrisiko und das Überleben.
2. Wichtige Geschlechtsunterschiede sind vorhanden in Therapieansprechen und –toxizität.
3. Die optimale Dosis eines Medikamentes ist wahrscheinlich unterschiedlich für Männer und Frauen.
4. Aktuell besteht eine grosse Datenlücke oft zum Nachteil der Frauen!
→ Ja Frauen sind in der Gesundheitsversorgung oft benachteiligt

Zusammenfassung Bericht Postulat Fehlmann-Rielle

Forschung und Medikamente sind oft nach Männern ausgerichtet.

Frauen bekommen manche Diagnosen später.

Vorbeugung beachtet Unterschiede zwischen Geschlechtern zu wenig.

Frauen nutzen Reha seltener und leiden öfter unter Einsamkeit im Alter.

In der Ausbildung fehlt Wissen zu Geschlecht.

Frauen haben im Gesundheitswesen schlechtere Karrierechancen und erleben mehr Belästigung.

Vielen Dank für Ihre Aufmerksamkeit!

Berna.oezdemir@insel.ch