McKinsey Health Institute

Laying the Foundation: Insights on Data and Gaps in Women's Cancers

WCC

September 2024

These findings are a result of a collaboration with a coalition spearheaded by the Centre for Health and Healthcare at the World Economic Forum

McKinsey Health Institute

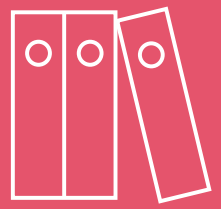
WORLD ECONOMIC FORUM

Disclaimer

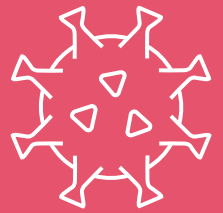
Throughout this presentation, the term “women” is used to mean cisgender women, and individuals with female biology. We acknowledge the importance and need for more research into the challenges facing the transgender, genderfluid, and non-binary communities

Our findings are based on a rigorous research process

650+ papers reviewed, covering 180 interventions related to…

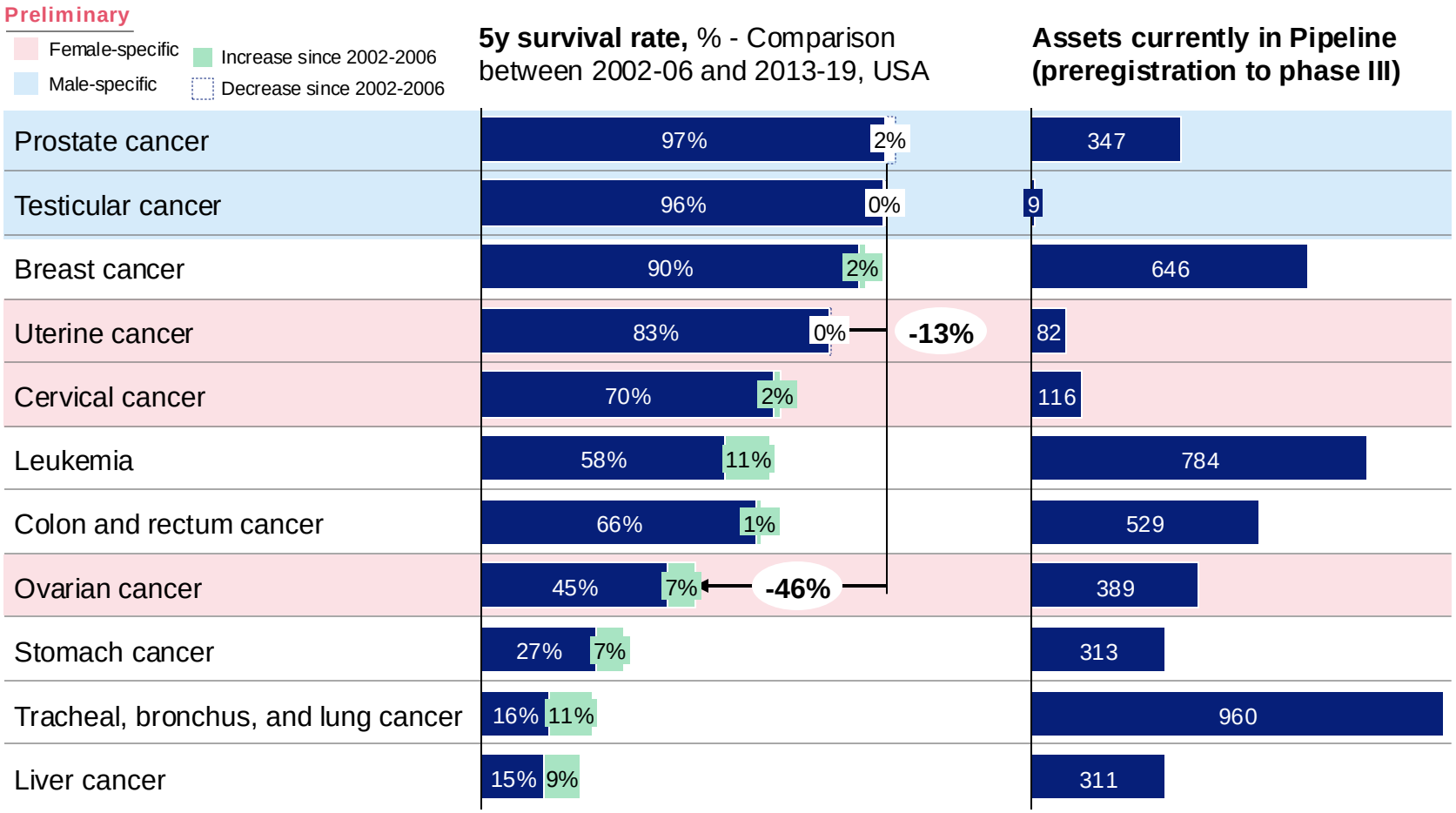


…64 conditions representing…



…86% of global women's disease burden

Important health outcome improvements for several cancers, yet women-only cancers require further research



1. Research shows that women in general have a "cancer survival advantage" for cancers such as, lung, liver, colorectal, pancreatic, stomach, and esophageal cancer. This advantage is commonly associated with (i) reduced level of risk factors among women, e.g., reduced share of smoking enabling better prognosis for lung cancer which accounts for x% of female cancer suffering, (2) biological factors such as gene expression, hormonal regulation, immune function, oxidative damage, and autophagy, and (3) endocrine related benefits (He, Y., Su, Y., Zeng, J., Chong, W., Hu, X., Zhang, Y., & Peng, X. (2022). Cancer-specific survival after diagnosis in men versus women: A pan-cancer analysis. MedComm, 3(3), e145. https://doi.org/10.1002/mco2.145)

Note: Includes pipeline of assets (including the assets that have previously been approved for other conditions) across 67 conditions, mapped to their respective Years of Life Lost rate and Years of Life lived with disability rate from the Global Burden of Disease dataset

Source: IHME (2019), SEER Relative survival Medco mm Statistics, USA, Pharmaprojects (May 2023), IHME

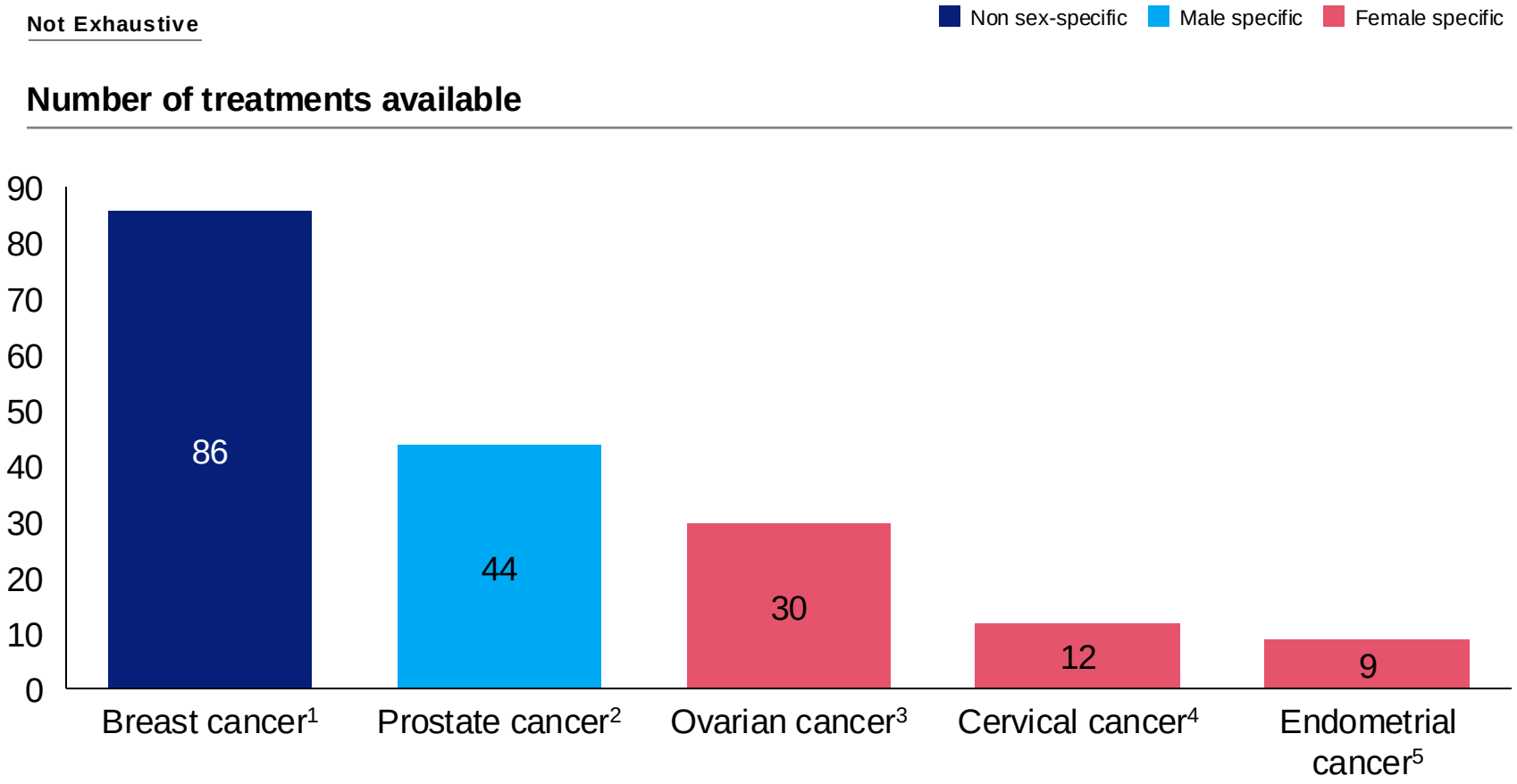
There have been **improvements in overall survival rates since 2000 of several cancers,** for both men and women[1], driven by increased level of innovation

However, **non-sex-specific cancers had greater improvements than sex-specific cancers**

Continued research is required to ensure continued progress to further avoid suffering, especially in sex specific cancers.

When it comes to number of available treatments, female specific cancers are underserved

Not Exhaustive



1 Includes Ibrance, Docetaxel, Tecentriq

2 Includes Keytruda, Provenge

3 Includes Avastin, Elahere, Hycamtin

4 Includes Avastin, Hycamtin, Zirabev

5 Includes Jemperli , Imfenzi, Keytruda

Source: National Cancer Institute 2024

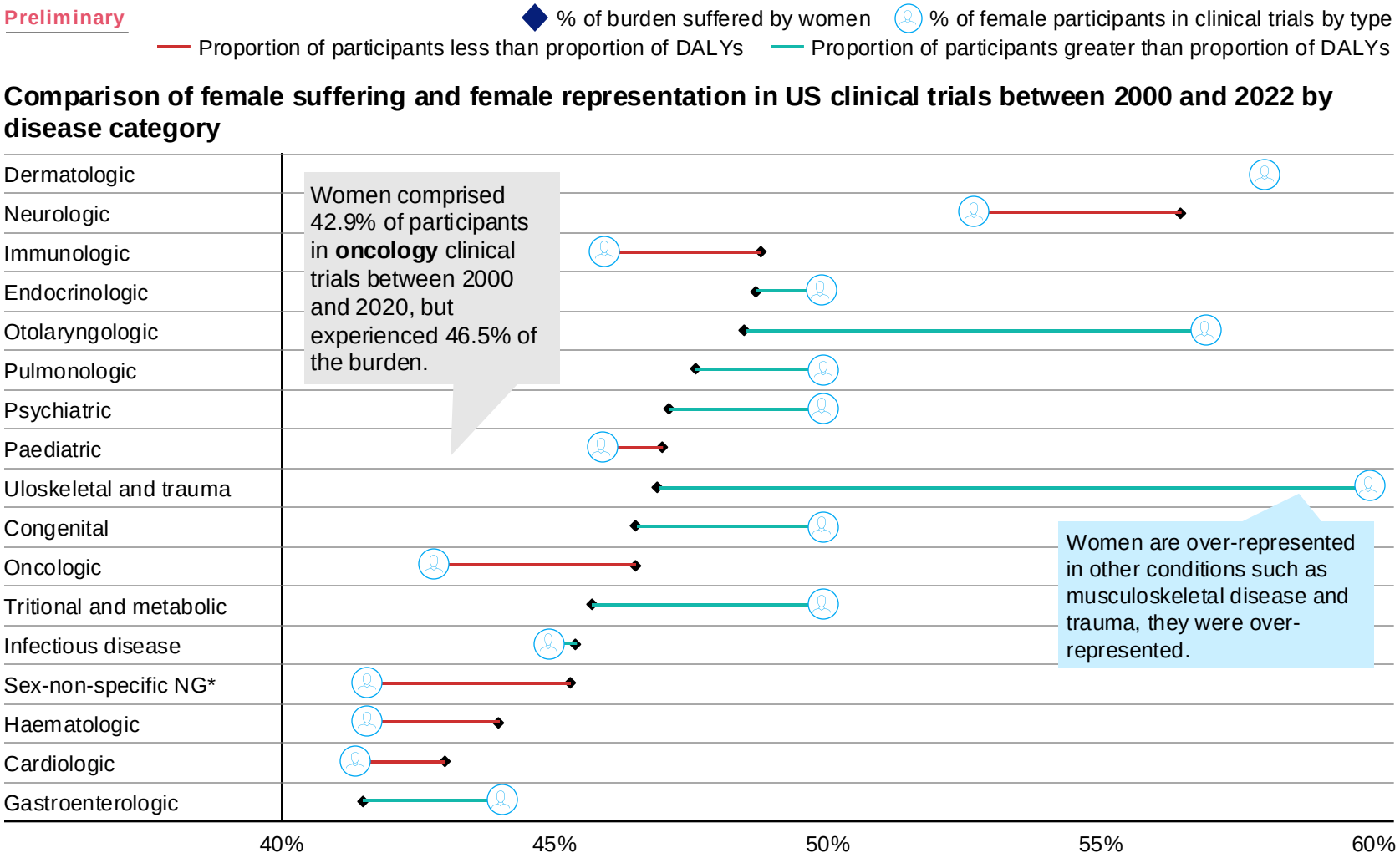
Female-specific cancers tend to have **fewer FDA-approved drugs**

Prostate cancer and breast cancer both have higher 5-year survival rates than ovarian, cervical, or endometrial cancer, indicating a **potential link between number of available treatments and survival rates**

The lack of treatments for female-specific cancers may be resulting in **lower survival rates and worse outcomes**

Women's representation in clinical trials has improved

Preliminary



Source: Steinberg JR, Turner BE, Weeks BT, Magnani CJ, Wong BO, Rodriguez F, Yee LM, Cullen MR. Analysis of Female Enrollment and Participant Sex by Burden of Disease in US Clinical Trials Between 2000 and 2020. JAMA Netw Open. 2021 Jun 1;4(6):e2113749. doi: 10.1001/jamanetworkopen.2021.13749. PMID: 34143192; PMCID: PMC8214160.; Mayor JM, Preventza O, McGinigle K, Mills JL Sr, Montero-Baker M, Gilani R, Pallister Z, Chung J. Persistent under-representation of female patients in United States trials of common vascular diseases from 2008 to 2020. J Vasc Surg. 2022 Jan;75(1):30-36. doi: 10.1016/j.jvs.2021.06.480. Epub 2021 Aug 24. PMID: 34438003.; Nirosha D Perera, Tiffany R Bellomo, Walker M Schmidt, Henry K Litt, Margaret Shyu, MaKenna A Stavins, Max M Wang, Alexander Bell, Massoud Saleki, Katherine I Wolf, Ruxandra Ionescu, Jacqueline J Tao, Sunjong Ji, Ryan M O'Keefe, Matthew Pun, Jordan M Takasugi, Jecca R Steinberg, Ronald S Go, Brandon E Turner, Amit Mahipal, Analysis of Female Participant Representation in Registered Oncology Clinical Trials in the United States from 2008 to 2020, The Oncologist, 2023;, oyad009, https://doi.org/10.1093/oncolo/oyad009

Women were underrepresented in clinical trials within **oncology, cardiology, neurology, immunology, urology, cardiology, and hematology,** where the first 2 confirm historical patterns

- **Oncology:** Participation of women has seen slight improvements since 2008, yet underrepresentation remains especially for surgical trials and in bladder, head/neck, stomach, and esophageal cancer trials

But historically, clinical research often did not track gender and may have disadvantaged women

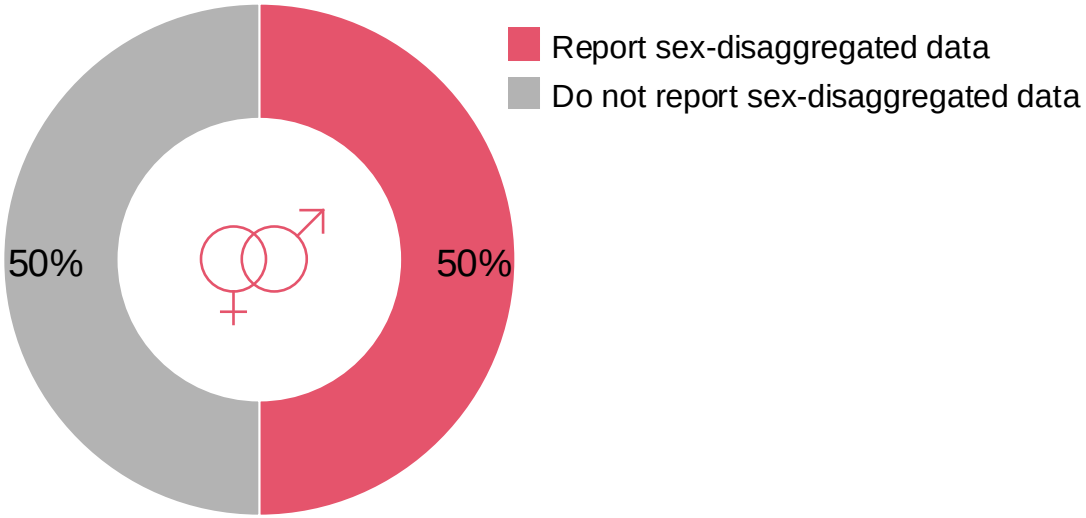
Sex-disaggregated research

50% of studies report sex-disaggregated data

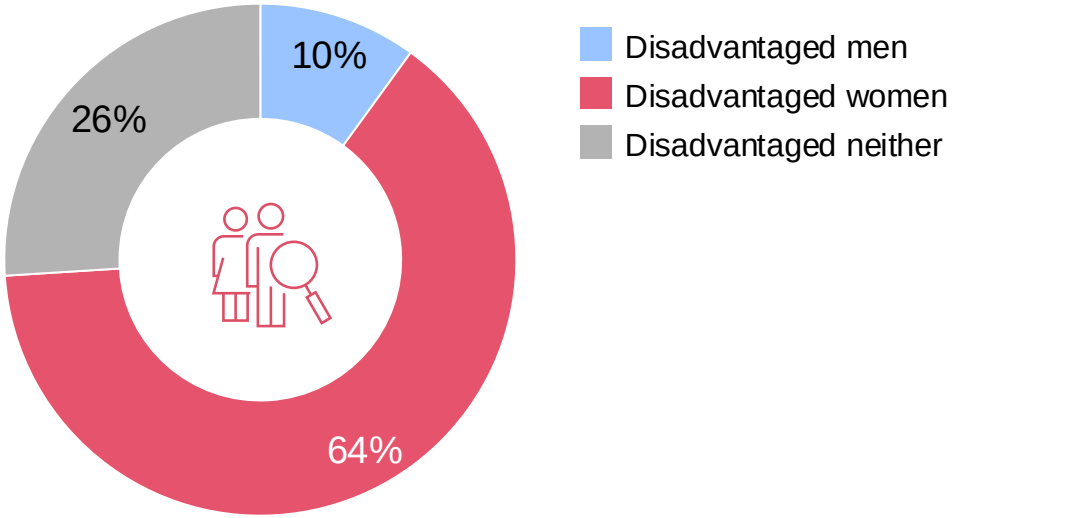
Outcomes by gender

In studies with sex-disaggregated data, 64% of interventions put women at a disadvantage

Studies reporting sex of participants, %



Intervention outcomes by gender advantage, %

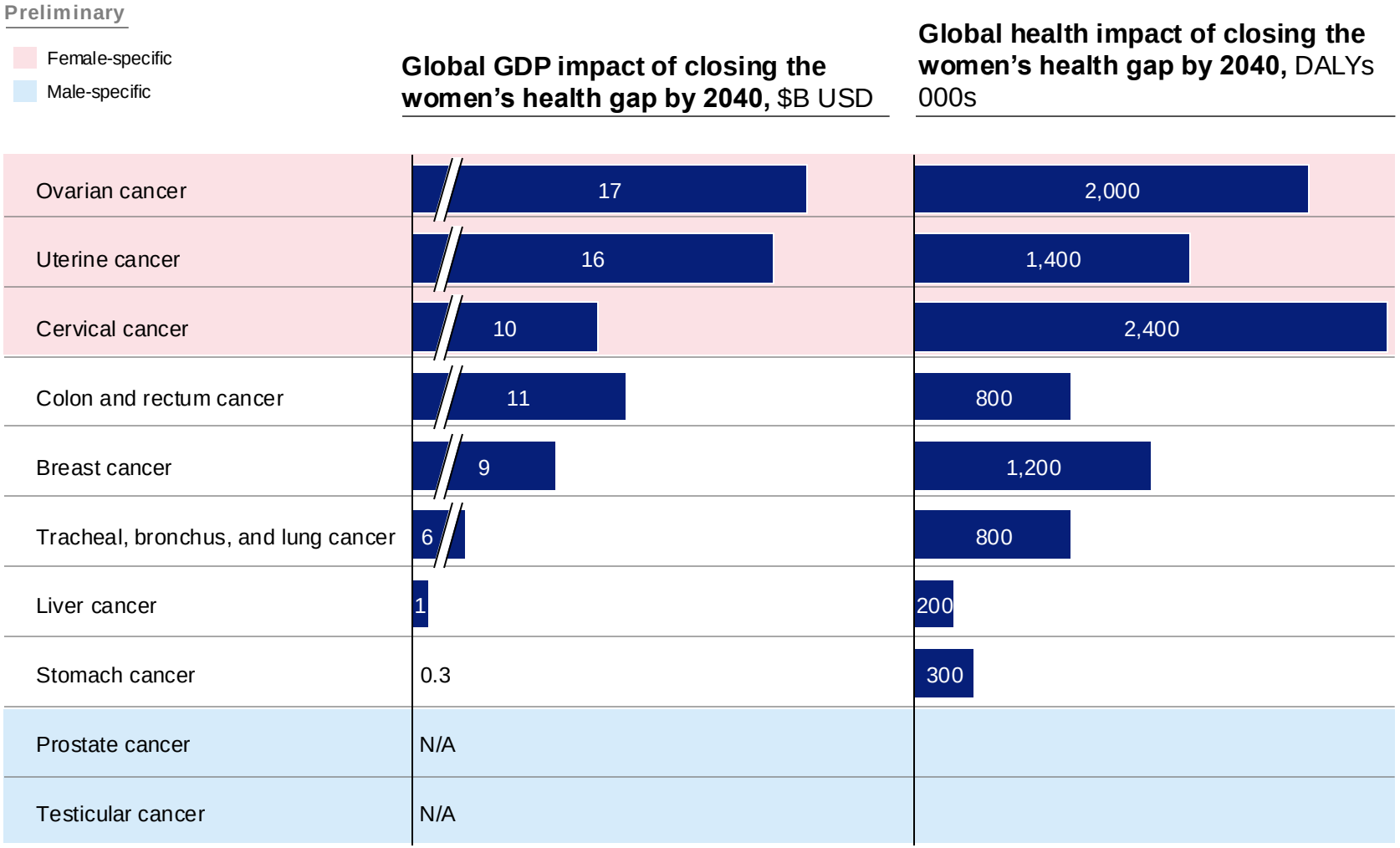


Source: Perez, L. et al "Closing the Women's Health Gap: A $1 Trillion Opportunity" 2024.

NB: Interventions include, but are not limited to, interventions for cancer

There is meaningful potential GDP and health burden impact by improving women's outcomes for cancer

Preliminary



Source: IHME (2019), McKinsey analysis

Addressing **female-specific cancers,** including **uterine, cervical, and ovarian** will have a **significant global GDP impact**

Non-female specific cancers pose a **greater health burden on women** than female-specific cancers.

Overall, these findings point to **continued need for research and investment** and improving care delivery, access and outcomes for women across **all cancer types globally to close the women's health gap**

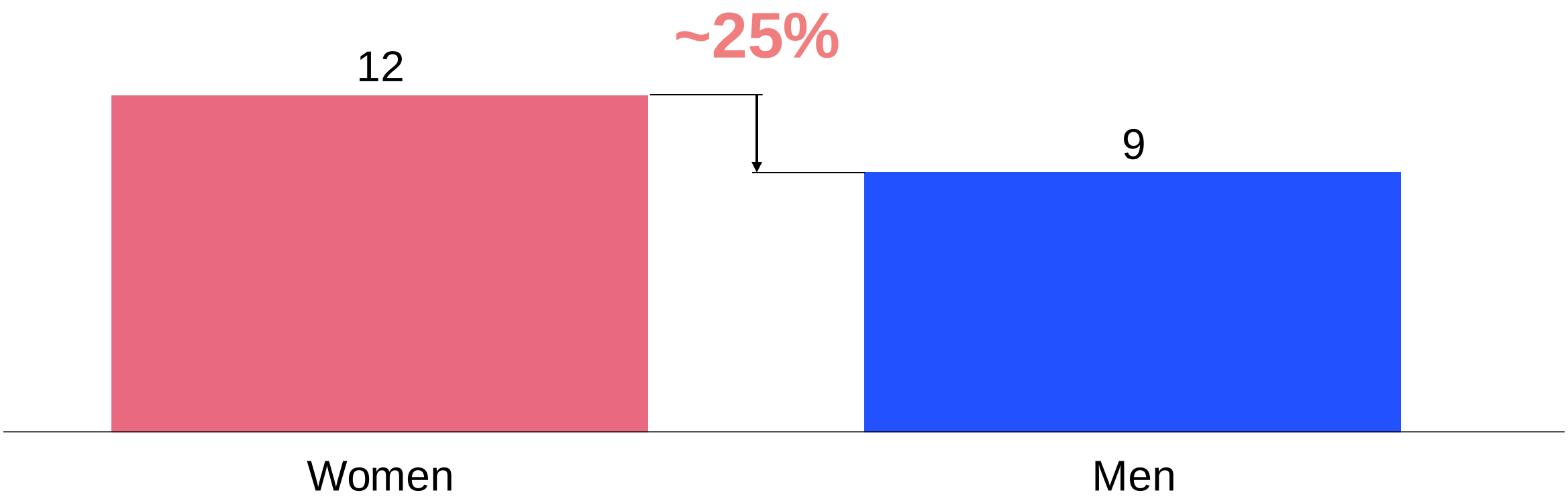
Appendix

Women spend 25% more time in poor health than men

Global view – excluding injuries

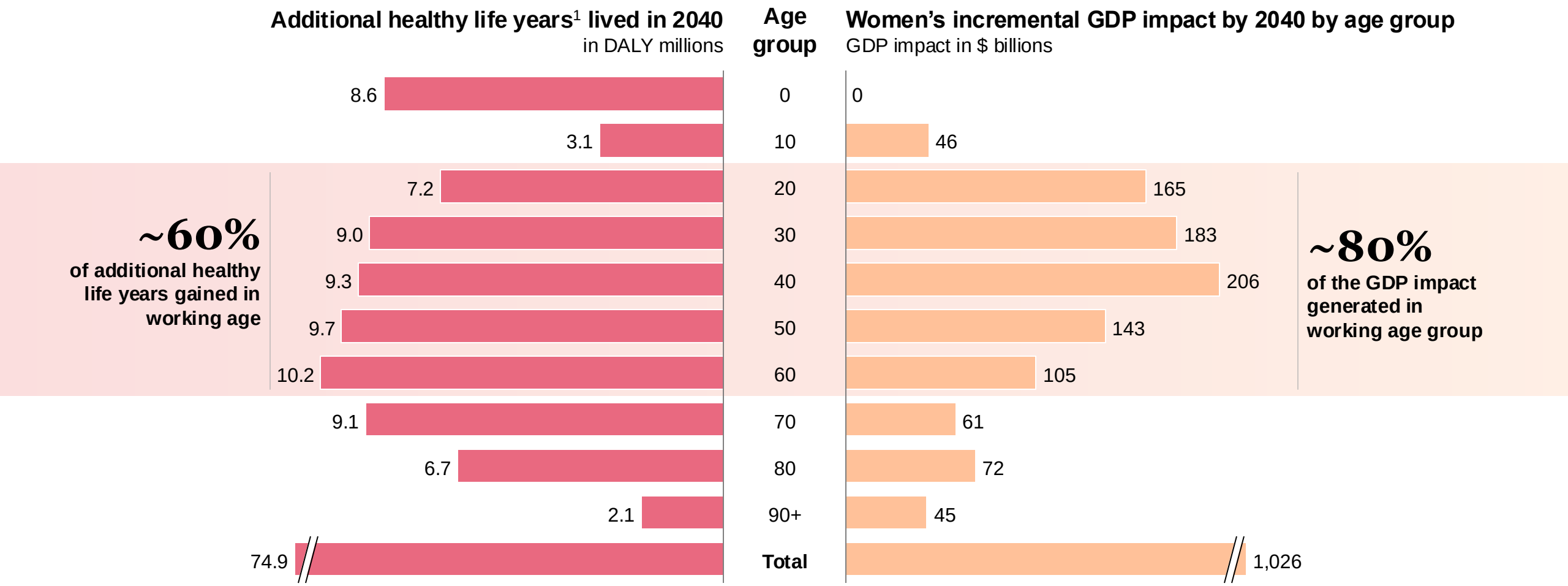
Years lived with disability

YLD per 100 capita



Note: Calculated as the years lived with disability (YLD) for men and women per capita in 2019, with the gap defined as relative share of time women spend in poor health versus men
Source: Global Burden of Disease (2019), World Bank population data (2019)

More than half of the women's health gap affects women during their working years, which significantly impacts global GDP



1. Additional healthy life years of women by closing the women's health gap by 2040.

Source: Institute for Health Metrics and Evaluation 2019, used with permission, all rights reserved; Oxford Economics; ILOSTAT; OECD; Eurostat; National Transfer Accounts project; McKinsey Health Institute analysis

At least 56% of DALYs stem from conditions which impact women differently or disproportionately

Total global women's health burden

Breakdown of conditions, 2019, % of total global DALYs[1]

5%
are related to **women–specific conditions**[2] (e.g., menopause)

4%
are related to **conditions that affect women differently** (e.g., cardiovascular disease)

47%
are related to **conditions that affect women disproportionately** (e.g., autoimmune disease, migraines)

43%
are **conditions for which there is no current evidence that women are affected disproportionately or differently** (e.g., leukemia)

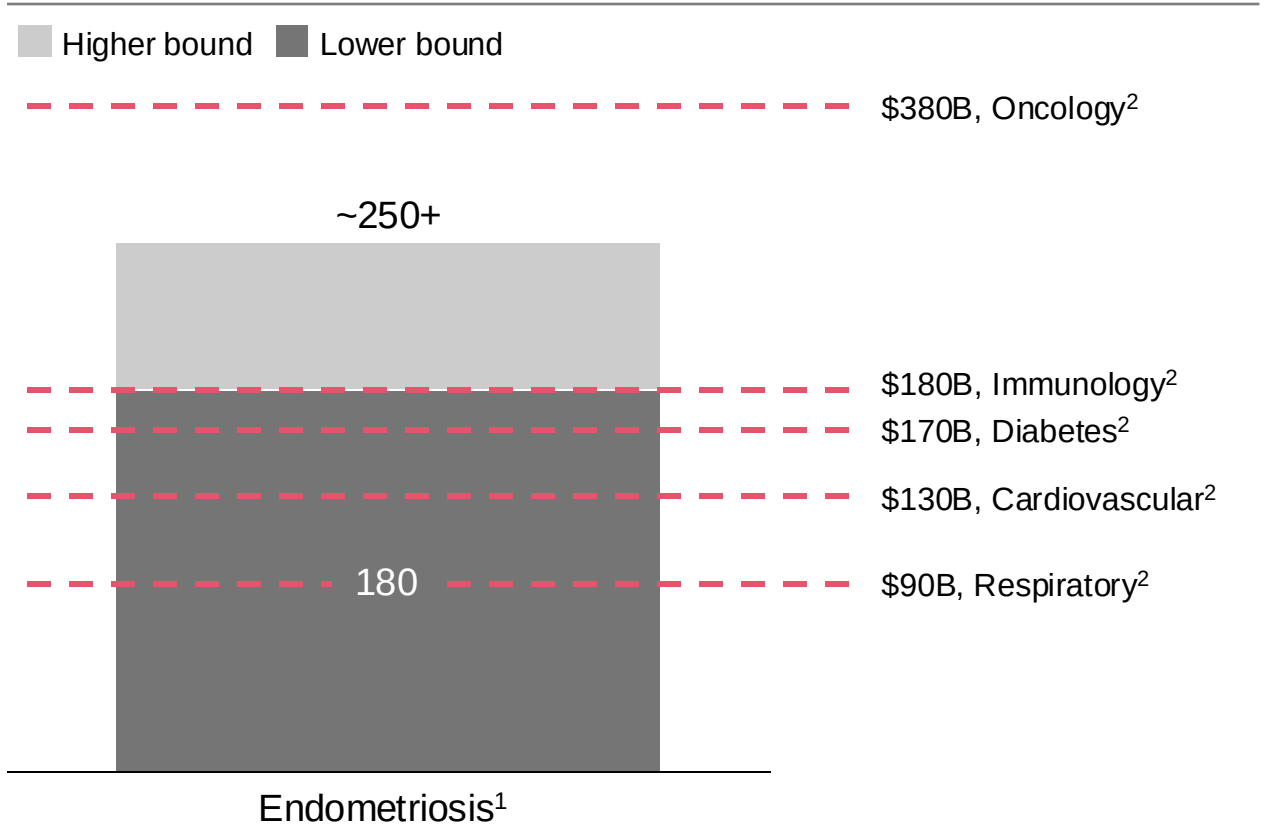
1. Rate per 100,000 people, Global Burden of Disease data (2019)
2. Including maternal conditions such as maternal hemorrhage, Maternal sepsis and other maternal infections, Maternal hypertensive disorders, Maternal obstructed labor and uterine rupture, Maternal abortion and miscarriage, Ectopic pregnancy, Indirect maternal deaths, Late maternal deaths, Maternal deaths aggravated by HIV/AIDS; Gynecological diseases such as, Uterine fibroids, Polycystic ovarian syndrome, Female infertility, Endometriosis, Genital prolapse, Premenstrual syndrome and female cancers such as uterine cancer, ovarian cancer, and cervical cancer

Source: McKinsey analysis based on the Global Burden of Disease (2019)

Women's health conditions have large market potential and are highly prevalent, yet the asset pipeline does not reflect this

Endometriosis market potential compared to top five therapeutic areas by global annual spend

Projected 2026 spending, $B (billion)



1 in 10 Women globally has endometriosis

~20 Assets are in the pipeline[3]

In comparison…

1 in 10 Adults globally has diabetes mellitus

~580 Assets are in the pipeline[3]

1. Market potential estimate for endometriosis treatments based on prevalence of 190M women, existing unmet need and share of women on contraceptives and other medication to treat endometriosis was considered to determine targetable patient group. Share of endometriosis patients undergoing surgery and IVF further considered to triangulate revenue. 2. Global spend from IQVIA. 3. Includes assets pre-registration through phase III, including assets previously approved for other conditions

Source: WHO; Various academic journals and reports; The World Bank; additional press search; WHO (2023) International Diabetes Foundation (IDF); Pharmaprojects (May 2023); IHME

What are the underlying reasons for the women's health gap ?

1.

Limited understanding of sex-based differences

2.

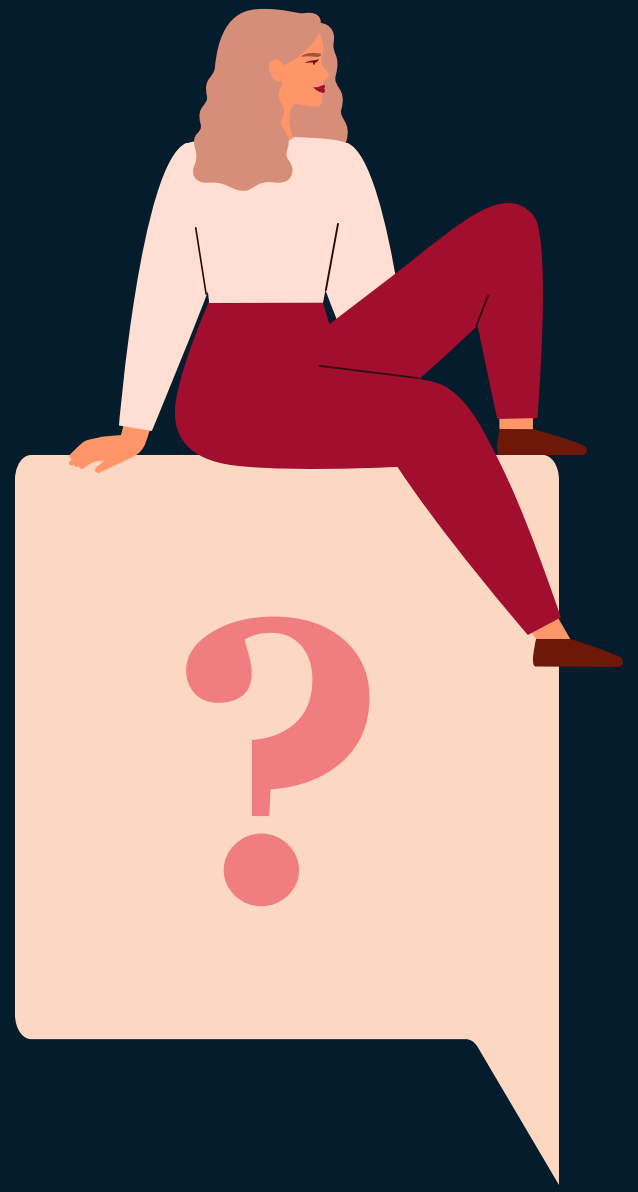
Constrained access to sex-appropriate care

3.

Data gaps resulting in women's health burden being undercounted

4.

Low investment limiting scale of innovation



Closing the women's health gap requires action on 6 fronts

- Increase **awareness** of the women's health gap
- Enhance **access to sex-appropriate care**
- Systematically **collect and analyze sex-, ethnicity-and gender-specific data**
- Close **research gaps** in women's health
- **Increase funding and** incentivize **new financing models**
- **Supporting policies** that will advance women's health

Thank you!

If you want to learn more, please email us at:

womens-health@mckinsey.com

For access to our full report, scan here