Eighth Annual World Health Continuing Medical Education Conference

Health Disparities Impacting Global and Local Populations

June 6, 2025

SUNY Downstate Health Sciences University
Alumni Auditorium
395 Lenox Road
Brooklyn, New York 11203

Jointly provided by Healthfirst, Howard University College of Medicine, Howard University College of Pharmacy Office of Continuing Professional Education, MediNova, and SUNY Downstate Health Sciences University

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DOWNSTATE HEALTH SCIENCES UNIVERSITY

Eighth Annual World Health Continuing Medical Education Conference: "Health Disparities Impacting Global And Local Populations"

Program Overview

This Continuing Medical Education activity is designed to update primary care and specialty practices on evolving strategies for implementing evidence-based medicine to meet the needs of local, regional, and global communities. The intent is to inform the attendees on innovations in treating special patient populations. Using evidence-based prevention, chronic-disease management, pharmacotherapy, and cutting-edge treatment options, participants will be introduced to advanced approaches to improve patient outcomes.

Program Objectives

At the conclusion of this activity, participants will be able to:

- **Outline** pragmatic tools and innovations that can be used in practice to address health equity in the communities they serve
- **Explain** the cause for increased prevalence of chronic conditions amongst vulnerable populations and recognize care models that are in place to address these disparities
- **Discuss** the role of cultural factors in trauma experiences and responses and how to integrate trauma-informed care into practice to address mental and behavioral health needs of marginalized communities
- **Identify** solutions and resources available to address the needs of the communities discussed

Target Audience

This activity is designed for physicians, physician assistants, nurse practitioners, registered nurses, pharmacists, social workers, residents, fellows, medical students, graduate students, and practice leaders that serve high-risk populations.

Joint Providership Accreditation

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the State University of New York (SUNY) Downstate Health Sciences University and Healthfirst. The State University of New York Downstate Health Sciences University is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Designation Statement

SUNY Downstate Health Sciences University designates this live activity for a maximum of 6.75 *AMA PRA Category 1 Credit(s)™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Nursing: SUNY Downstate Health Sciences University is approved as a provider of nursing continuing professional development by the Northeast Multistate Division Education Unit, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation. Attendance of at least 90% of the live activity is required for nursing contact credits.

Social Workers: SUNY Downstate Health Sciences University is recognized by the New York State Education Department's State Board for Social Work as an approved provider of continuing education for licensed social workers #SW-0469.

Eighth Annual World Health Continuing Medical Education Conference: "Health Disparities Impacting Global And Local Populations"

Disclosure Summary

SUNY Downstate Health Sciences University Office of CME (OCME) and its affiliates are committed to providing educational activities that are objective, balanced, and as free of bias as possible. The OCME has established policies to identify and mitigate conflicts of interest prior to this educational activity. As an accredited provider, we are required to mitigate and disclose to the activity audience the financial relationships of the planners, presenters, and authors involved in the development of accredited content. A financial relationship exists if he or she has a financial relationship in any amount occurring in the past 24 months with an ineligible company whose products or services are discussed in the accredited activity content over which the individual has control. All financial relationships have been fully disclosed and mitigated. No commercial support is being received for this event. This educational activity does not include any content that relates to the products and/or services of an Ineligible company with whom there is a financial relationship.

ADA Statement

Special Needs: In accordance with the Americans with Disabilities Act, SUNY Downstate Health Sciences University seeks to make this conference accessible to all. If you have a disability that might require special accommodation, please email your need(s) to Angela Sullivan at asullivan@healthfirst.org or call 917-748-8455.

ACPE Pharmacist CE Credit Available

Howard University College of Pharmacy, (COP) is accredited by the Accreditation Council for Pharmacy Education (ACPE) as a provider of continuing pharmacy education. This program meets ACPE criteria for 7.75 contact hours (0.775 CEUs) for Pharmacists. CE credit will be awarded through the CPE Monitor within 3–4 weeks of the seminar to those who successfully complete the program by registering for this event, attending the webinar, obtaining a score ≥ 70% on the POST-TEST and completing the evaluation. The UANs for each educational CE activity are listed in the program brochure. The deadline to claim CE for this program is August 1, 2025.

Registration

If you need additional information or to register for the conference, please email Angela Sullivan, Healthfirst, at ASullivan@healthfirst.org or call 917-748-8455.

AGENDA

7:30AM – 8:15AM	Breakfast and Registration
8:15AM – 8:30AM	Welcome and Introduction into CME Activity **Karen M. Costley, MD, MPH, CHCQM** *Assistant Vice President, Medical Director, Healthfirst* **Shelly McDonald-Pinkett, MD, FACP, CPHQ** *Director, Howard University Health and Wellness Center* **Henry R. Paul, MD** *President, MediNova* **Moro O. Salifu, MD, MPH, MBA, MACP** *Chair of the Department of Medicine* *Tenured Professor of Medicine* *Department of Medicine, Division of Nephrology,* *SUNY Downstate Health Sciences University*
	Session 1
8:30AM – 10:30AM	Advancing Justice: Historical Roots and Future Solutions for Health Equity **Torian Easterling, MD, MPH** *Senior Vice President for Population and Community Health* *Chief Strategic and Innovation Officer, One Brooklyn Health* Patient Engagement and Cultural Competence: Road Map to Achieve Health Equity **Mauvareen Beverley, MD, PLLC** *Patient Engagement and Cultural Competence Specialist* Ethical Decision Making in Diverse Populations **Karen Roberts Turner, JD, MA** *Senior Associate General Counsel for Health Sciences* *Adjunct Assistant Professor of Ethics, Howard University* The Cost of Getting it Wrong **Brenda D. McDonald, RN, BSN, JD, MBA, CPHRM** *Chief Risk Advisor, National Healthcare Practice, Aon*
10:30AM - 10:45AM	Question and Answer Session
10:45AM - 11:00AM	Break: 15-minutes

AGENDA

	Session 2
11:00AM - 12:30PM	Ensuring Optimal Kidney Health for All: The Past, the Present, and the Future **Dinushika Mohottige, MD, MPH** *Assistant Professor, Institute of Health Equity Research* *Icahn School of Medicine at Mount Sinai* *Mount Sinai Barbara T. Murphy Division of Nephrology* Equity in Kidney Care: Reducing Nephrotoxin Burden and Improving Acute Kidney Injury Outcomes **Dhakrit (Jesse) Rungkitwattanakul, PharmD, BCPS, FNKF** *Associate Professor, Nephrology Pharmacist* *Howard University College of Pharmacy* Bridging the Gap: Addressing Disparities in Access to Kidney Transplantation **Anthony C. Watkins, MD, FACS** *Surgical Director, Kidney & Pancreas Transplant Program* *Tampa General Hospital Transplant Institute*
12:30PM - 12:45PM	Question and Answer Session
12:45PM - 1:30PM	Lunch: 45-minutes
	Session 3
1:30PM - 3:00PM	Advances in Hypertension Control: New Concepts and Approaches **Keith C. Ferdinand, MD, FACC, FAHA, FASPC, FNLA, FPCNA (hon.)** *Gerald S. Berenson Endowed Chair in Preventative Cardiology* *Professor of Medicine,* *Tulane University School of Medicine* Global Burden of Disease of Benign Gynecological Conditions **Christina Pardo, MD, MPH, FACOG** *Assistant Professor, Weill Cornell Medicine* *Medical Director, Women's Health Practice* *NewYork-Presbyterian - Ambulatory Care Network* Uterine Myomas **Ambereen Sleemi, MD, MPH, MSc, FACOG, FURPS** *Co-Founder, Executive Director and Surgical Director* *International Medical Response Foundation*
3:00PM - 3:15PM	Question and Answer Session

AGENDA

3:15PM - 3:30PM	Break: 15-minutes
	Panel Discussion: Mental Health and Trauma-informed Care
3:30PM - 4:30PM	Wisdom, Courage and Hope: Effective Interdisciplinary Care for Survivors of Torture and Forced Migrant Populations Hawthorne E. Smith, PhD *Director, Bellevue Program for Survivors of Torture* *President - National Consortium of Torture Treatment Programs* Getting to the Root: Examining Trauma Conscious Care from a Decolonized Lens Krystal Miller, LCSW, CIMHP, Spiritual Herbalist *Holistic Practitioner and Clinical Psychotherapist* *Melanated Masks* The Significance of Culturally Informed Care for Vulnerable Populations with Mental Illness Asa T. Briggs, DNP, PMHNP, MA *Psychiatric Nurse Practitioner* *Briggs Psychiatry & Behavioral Health, PC*
4:30PM	Closing Remarks and Adjournment

Advances in Hypertension Control: New Concepts and Approaches

2025 8th Annual World Health CME

Keith C. Ferdinand, MD, FAHA, FACC, FASPC, FNLA, FPCNA (hon.)
Gerald S. Berenson Endowed Chair in Preventative Cardiology
Professor of Medicine
John W. Deming Department of Medicine
Tulane University School of Medicine
New Orleans, LA

Disclosures

- *Speaker's Bureau*- None
- *Consultant*- Novartis, Medtronic, Eli Lilly, Boehringer Ingelheim, Janssen
- *Stocks*- None
- *Patents*- None

Objectives

- Review the impact of uncontrolled hypertension in diverse populations
- Review best practices for clinical care and patient education
- Update consideration new BP goals and patient-centered approaches
- Practical implementation of best practices for hypertension control

Mortality rates by Cardiovascular Disease

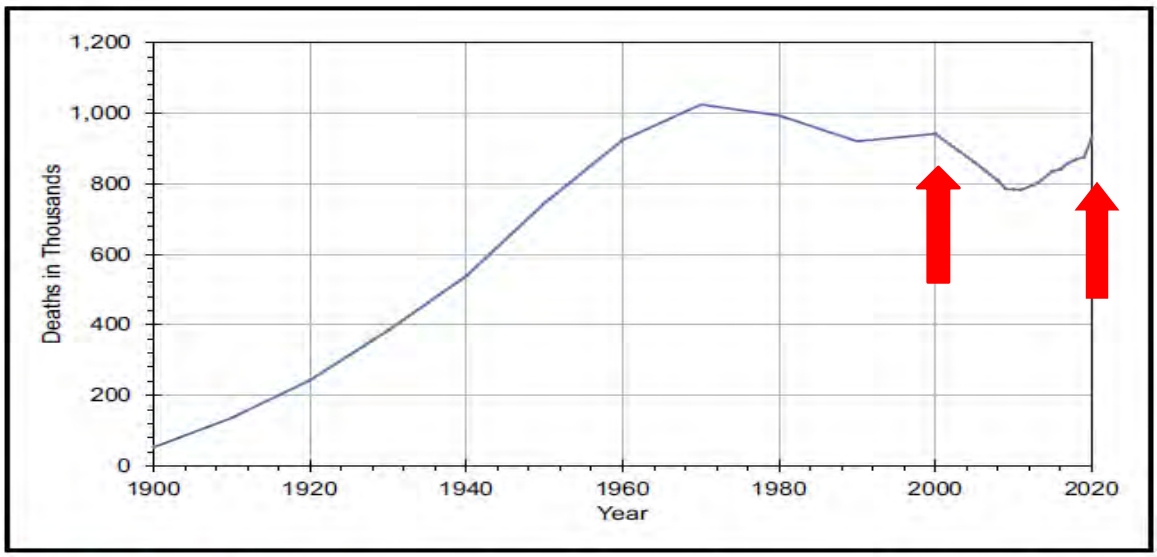
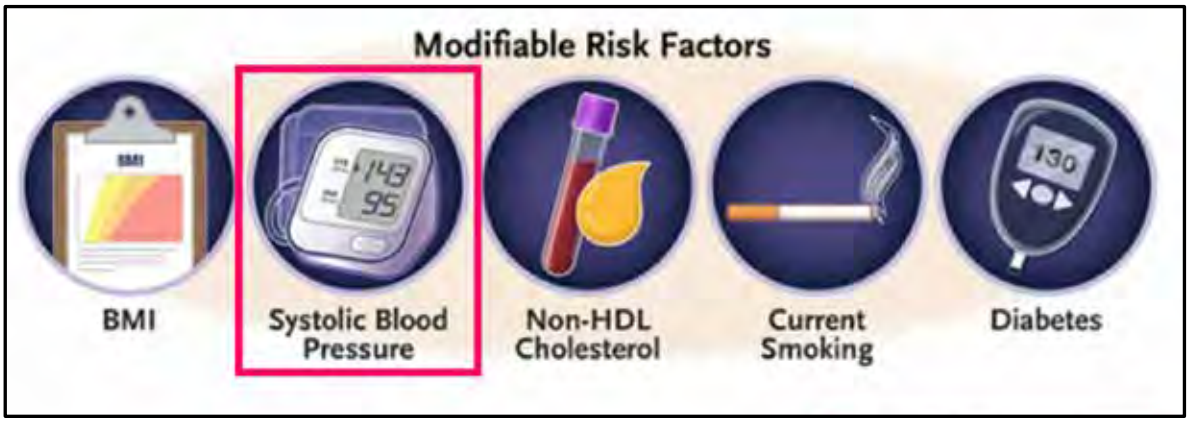


Chart 14-3. Deaths attributable to CVD, United States, 1900 to 2020.

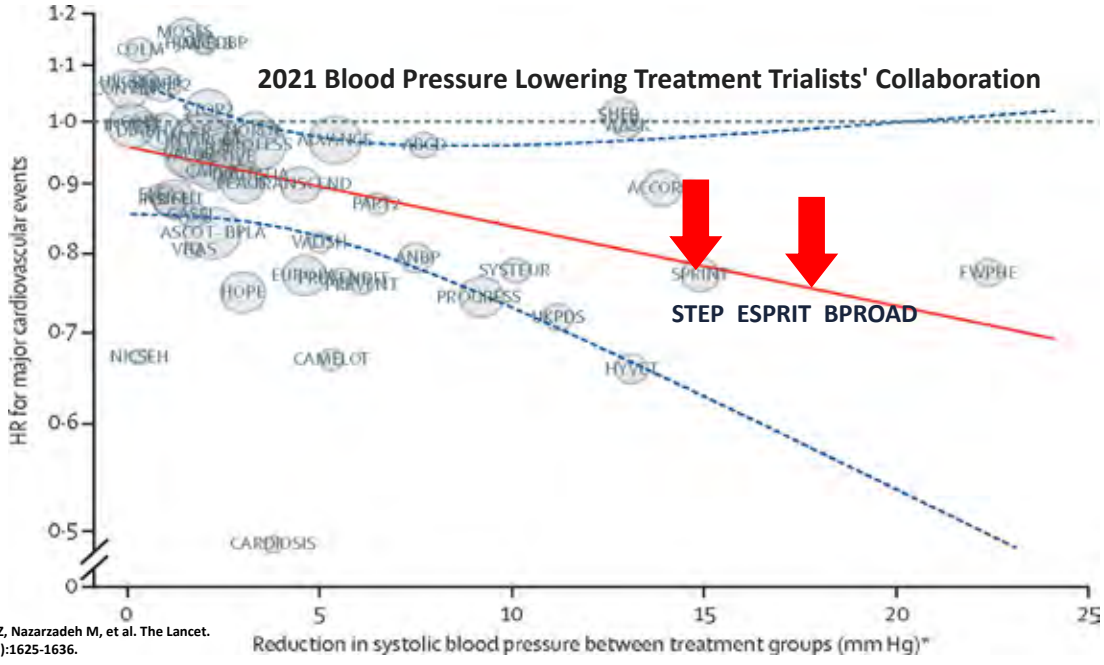
Tsao et al. Circulation. 2023;147 February 21, 2023

Modifiable Risk Factors

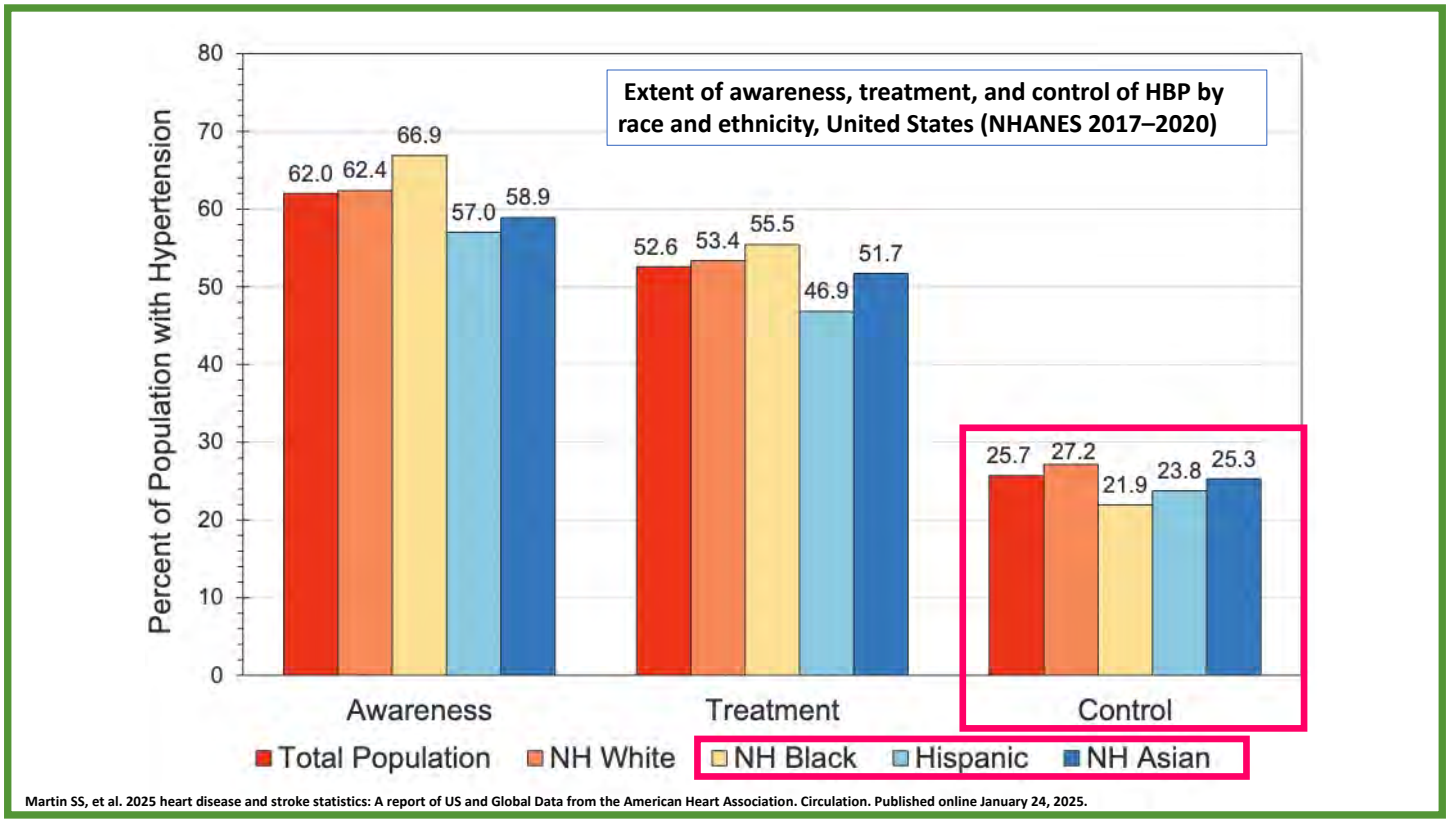


Global Cardiovascular Risk Consortium. "Global effect of modifiable risk factors on cardiovascular disease and mortality ." New England Journal of Medicine 389.14 (2023): 1273-1285.

Association between Intensity of BP Reduction and Relative Treatment Effects for Prevention of Major CV Events

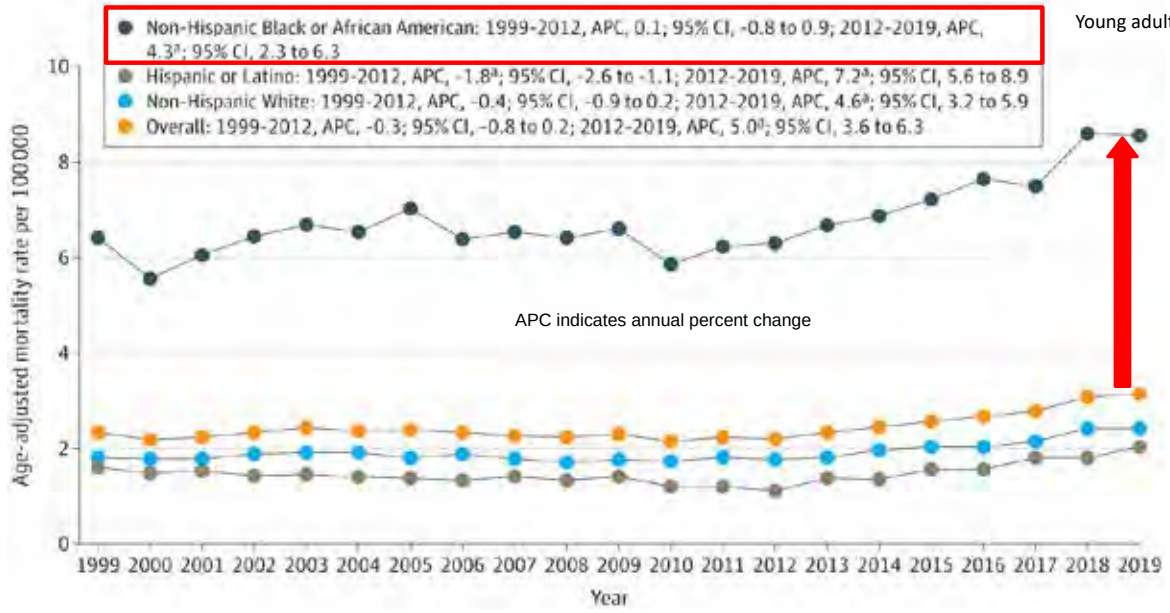


Rahimi K, Bidel Z, Nazarzadeh M, et al. The Lancet. 2021;397(10285):1625-1636.



Martin SS, et al. 2025 heart disease and stroke statistics: A report of US and Global Data from the American Heart Association. Circulation. Published online January 24, 2025.

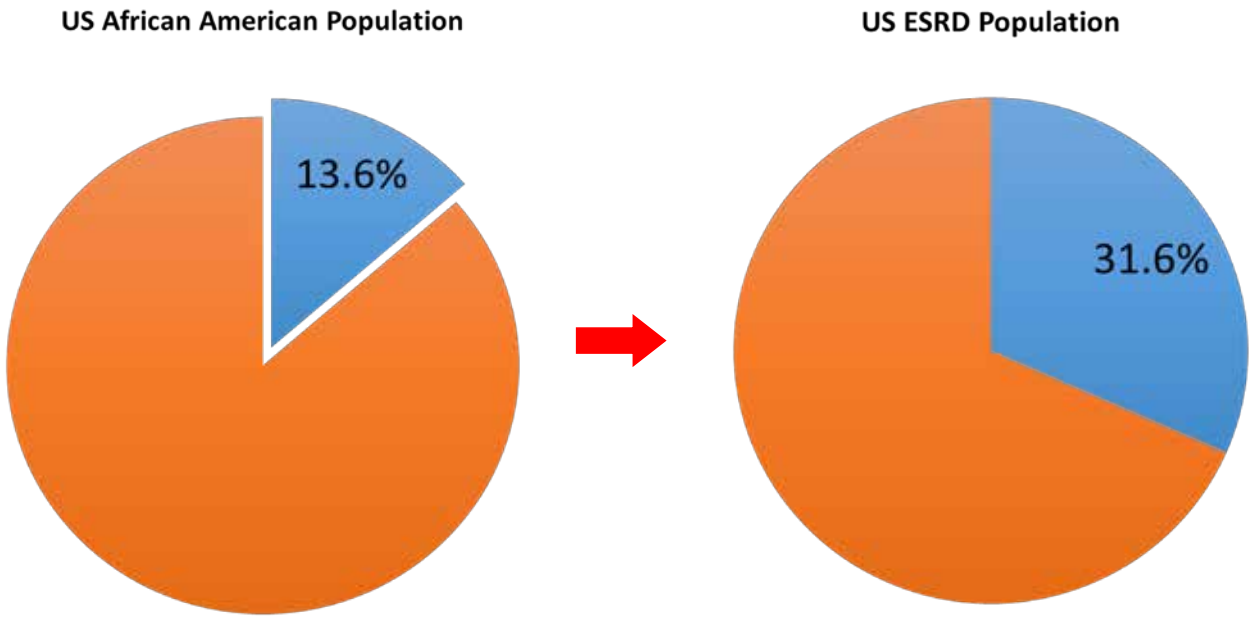
Trends HF–Related Age-Adjusted Mortality Rates, Race/Ethnicity US Young, 1999-2019, [a]P < .05.



Young adults = 15-44 y/o

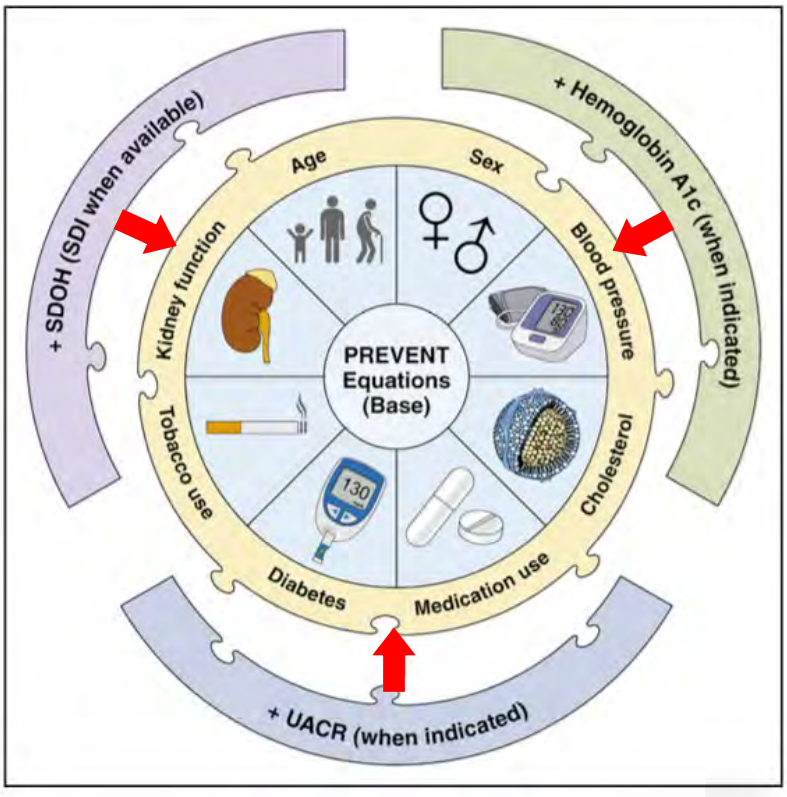
Jain V, et al. JAMA Cardiol. 2022 Jul 27.

ESRD: Racial differences in prevalence USRD, 2019



Access 8/17/24: https://adr.usrds.org/2021/end-stage-renal-disease/1-incidence-prevalence-patient-characteristics-and-treatment-modalities

Intended Use of PREVENT: Intended for **primary prevention (w/o CHD, stroke, or HF) ages 30-79.** Estimating absolute risk may assist & guide clinicians & patients in shared decision-making for interventions targeting lifestyle behaviors & pharmacotherapies

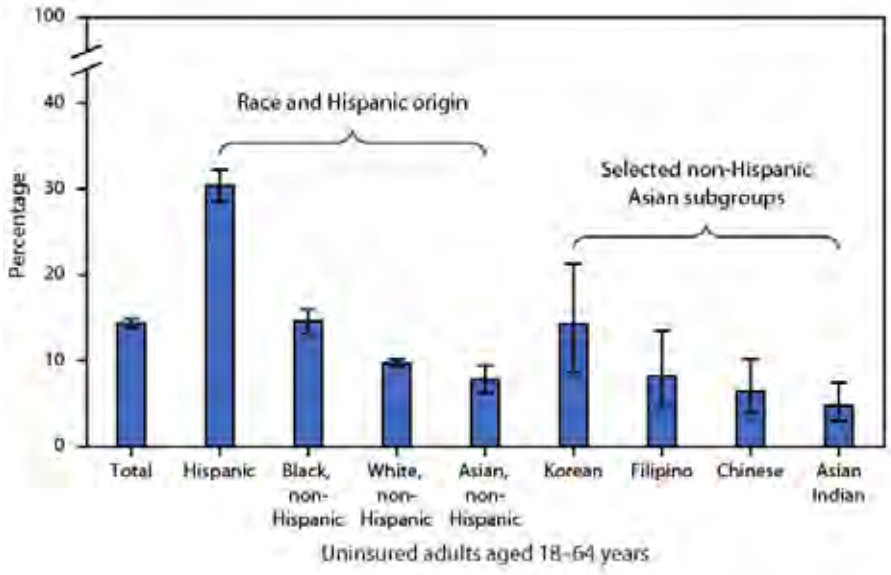


Interpretation of Risk Estimates: 10-year risk for CVD:

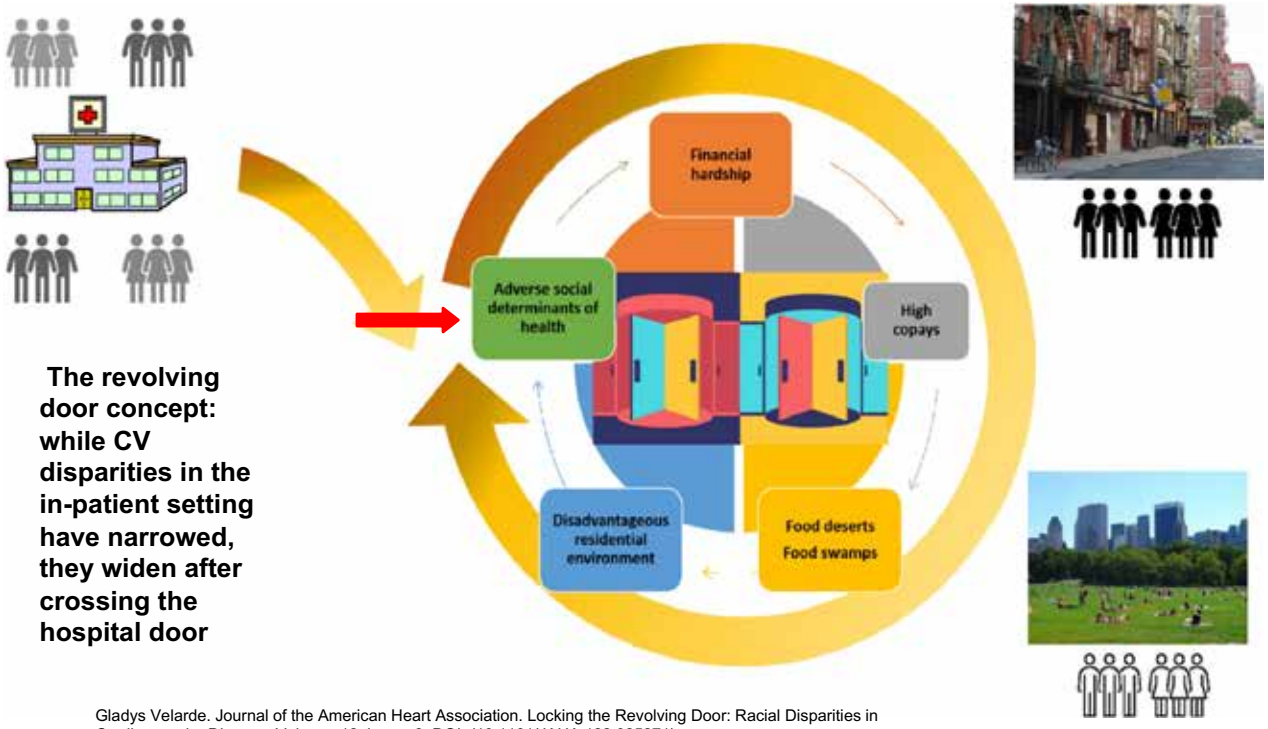
- **Low risk (<5%)**
- **Borderline risk (5%-7.4%)**
- **Intermediate risk (7.5%- 19.9%)**
- **High risk (≥20%**

Khan SS, Coresh J, Pencina MJ, et al. *Circulation*. 2023;148(24):1982-2004.

Percentage of Uninsured Adults Aged 18–64 Years, by Race, Hispanic Origin, and Selected Asian Subgroups



***QuickStats*:— National Health Interview Survey, United States, 2019–2020. MMWR Morb Mortal Wkly Rep 2022;71:910.**



The revolving door concept: while CV disparities in the in-patient setting have narrowed, they widen after crossing the hospital door

Gladys Velarde. Journal of the American Heart Association. Locking the Revolving Door: Racial Disparities in Cardiovascular Disease, Volume: 12, Issue: 8, DOI: (10.1161/JAHA.122.025271)

2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults

Paul K. Whelton, MB, MD, MSc, FAHA, *Chair*
Robert M. Carey, MD, FAHA, *Vice Chair*
***American Society for Preventive Cardiology Representative. †ACC/AHA Representative. ‡Lay Volunteer/Patient Representative. §Preventive Cardiovascular Nurses Association Representative. ‖American Academy of Physician Assistants Representative. ¶Task Force Liaison. #Association of Black Cardiologists Representative. **American Pharmacists Association Representative. ††ACC/AHA Prevention Subcommittee Liaison. ‡‡American College of Preventive Medicine Representative. §§American Society of Hypertension Representative. ‖‖Task Force on Performance Measures Liaison. ¶¶American Geriatrics Society Representative. ##National Medical Association Representative.**

Categories of BP in Adults*

BP Category	SBP		DBP
Normal	<120 mm Hg	and	<80 mm Hg
Elevated	120–129 mm Hg	and	<80 mm Hg
Hypertension			
Stage 1	**130–139 mm Hg**	**or**	**80–89 mm Hg**
Stage 2	≥140 mm Hg	or	≥90 mm Hg

Designated to the higher SBP/DBP category.
BP average of ≥2 careful readings obtained on ≥2 occasions

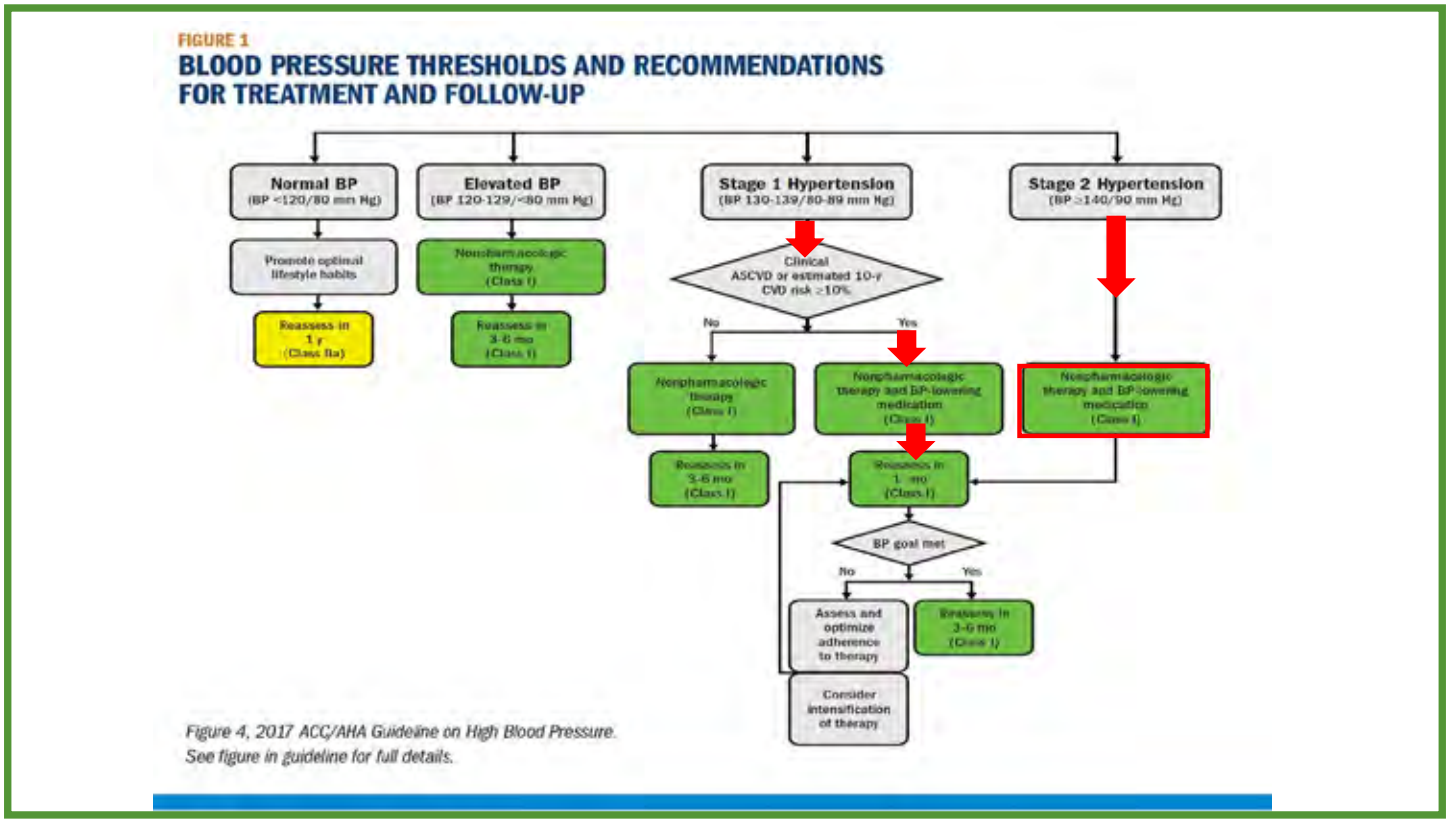
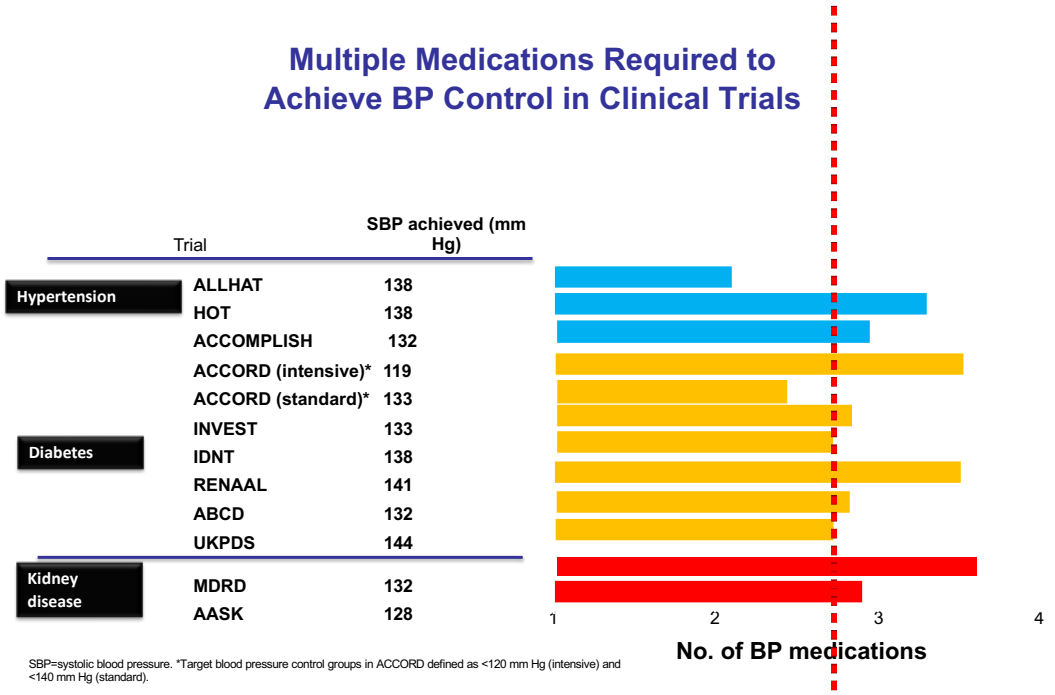


Figure 4, 2017 ACC/AHA Guideline on High Blood Pressure. See figure in guideline for full details.

Drug Classes Used to Treat Hypertension

- Thiazide and Loop Diuretics
- Calcium Channel Blockers
- Angiotensin-converting Enzyme Inhibitors
- Angiotensin Receptor Blockers
- Mineralcorticoid receptor antagonists
- Renin Inhibitors
- Potassium Sparing Diuretics
- Beta-adrenergic Blockers
- Alpha 1 Adrenoreceptor Antagonists
- Direct-acting Vasodilators
- Central Sympatholytic Drugs

Multiple Medications Required to Achieve BP Control in Clinical Trials



SBP=systolic blood pressure. *Target blood pressure control groups in ACCORD defined as <120 mm Hg (intensive) and <140 mm Hg (standard).

The ACCORD Study Group., March 14, 2010. *N Engl J Med*.

Copley JB, Rosario R. Hypertension: a review and rationale of treatment. *Dis Mon*. 2005;51:548-614.

2017 HBP Guideline: First Step Combination

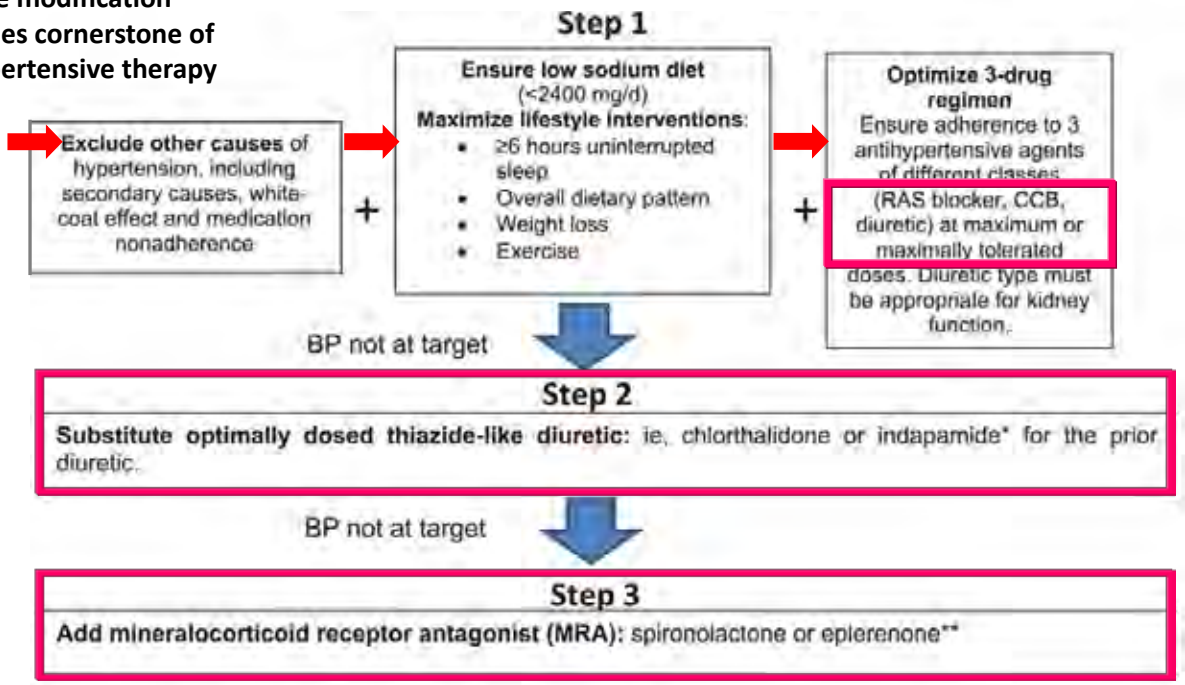
COR	LOE	Recommendations for Race and Ethnicity
I	C-LD	**Two or more anti-HTN** medications are recommended to achieve a **BP target of less than 130/80** mm Hg in **most adults** with HTN, **especially in black adults with HTN.**

Black adults with hypertension (without HF or CKD), initial antihypertensive treatment should include a thiazide diuretic or CCB

Whelton PK, Carey RM, Aronow WS, et al. *Hypertension*. 2018;71(6):1269-1324

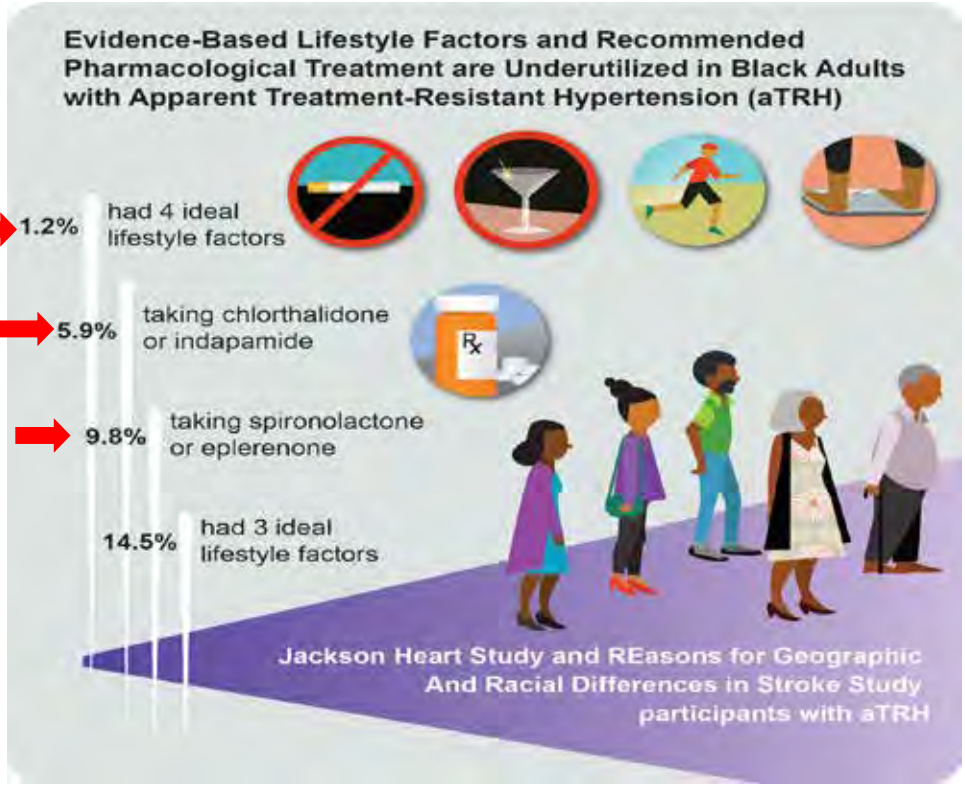
Management of Resistant Hypertension

Lifestyle modification continues cornerstone of antihypertensive therapy



Carey RM, Calhoun DA, Bakris GL, et al. Hypertension. 2018;72(5).

Black Adults With Apparent Treatment-Resistant Hypertension

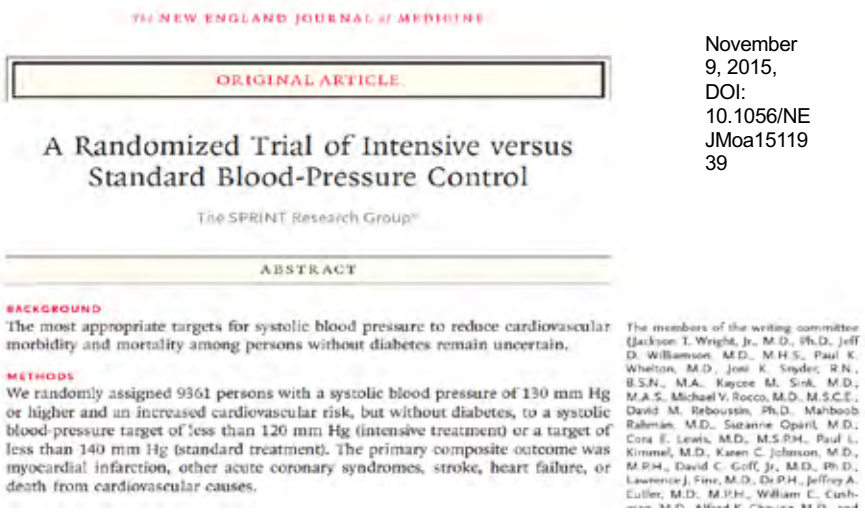


Langford, A. Clinical implications. *Hypertension*. 2020;76(5):1331-1331.

Systolic Blood Pressure Intervention Trial (SPRINT)

67.9 Years
9,361 pts
16.7% with Clinical CVD
26% with CKD
No Diabetes
~30% >age 75

Primary Outcome:
MI, ACS, HF, Stroke, CV Death



THE NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

A Randomized Trial of Intensive versus Standard Blood-Pressure Control

The SPRINT Research Group*

ABSTRACT

BACKGROUND

The most appropriate targets for systolic blood pressure to reduce cardiovascular morbidity and mortality among persons without diabetes remain uncertain.

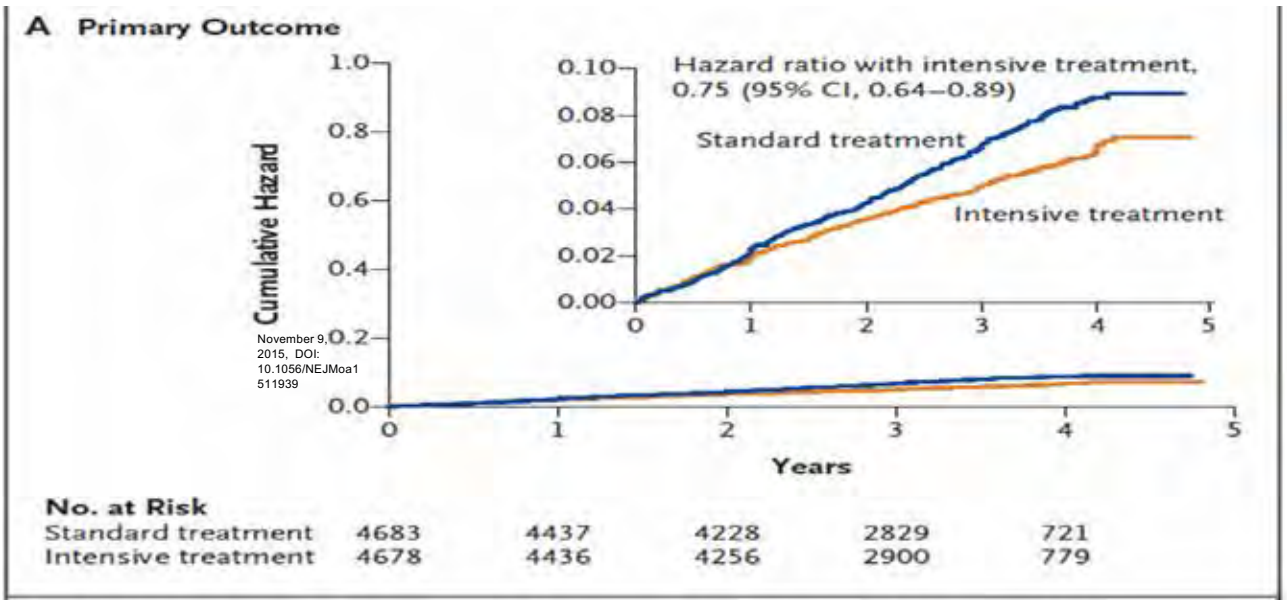
METHODS

We randomly assigned 9361 persons with a systolic blood pressure of 130 mm Hg or higher and an increased cardiovascular risk, but without diabetes, to a systolic blood-pressure target of less than 120 mm Hg (intensive treatment) or a target of less than 140 mm Hg (standard treatment). The primary composite outcome was myocardial infarction, other acute coronary syndromes, stroke, heart failure, or death from cardiovascular causes.

The members of the writing committee (Jackson T. Wright, Jr., M.D., Ph.D., Jeff D. Williamson, M.D., M.H.S., Paul K. Whelton, M.D., Joni K. Snyder, R.N., B.S.N., M.A., Kaycee M. Sink, M.D., M.A.S., Michael V. Rocco, M.D., M.S.C.E., David M. Reboussin, Ph.D., Mahboob Rahman, M.D., Suzanne Oparil, M.D., Cora E. Lewis, M.D., M.S.P.H., Paul L. Kimmel, M.D., Karen C. Johnson, M.D., M.P.H., David C. Goff, Jr., M.D., Ph.D., Lawrence J. Fine, M.D., Dr.P.H., Jeffrey A. Cutler, M.D., M.P.H., William C. Cush-

November 9, 2015, DOI: 10.1056/NEJMoa1511939

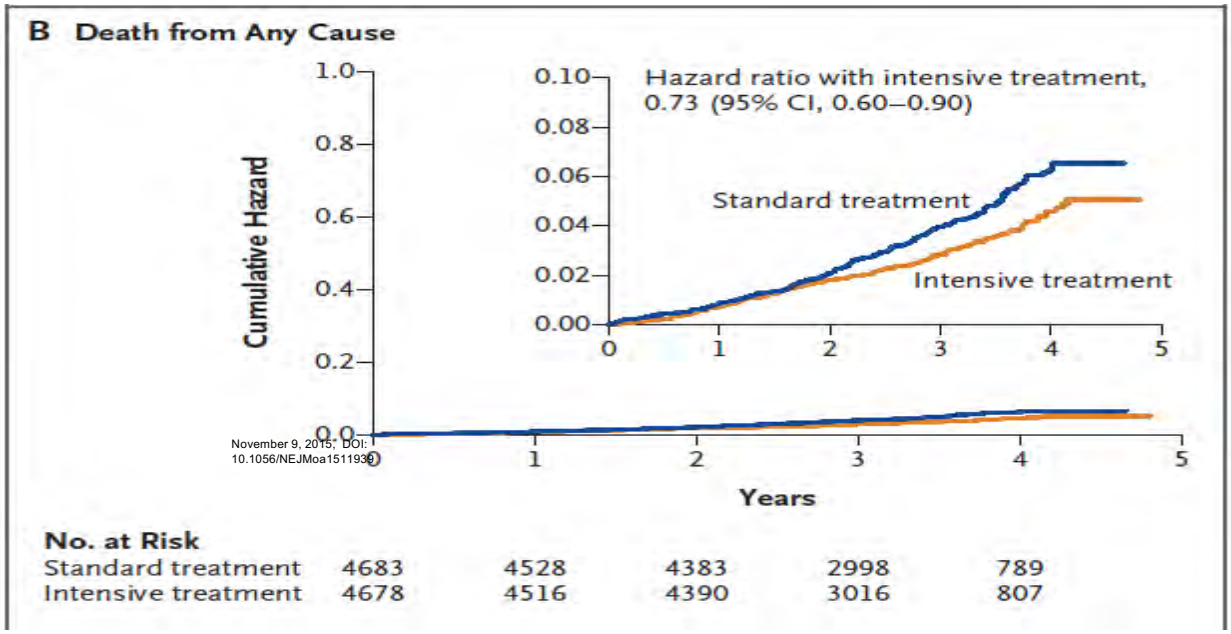
SPRINT Primary Outcome: Composite of MI, ACS, Stroke, HF, or Death from CV causes



November 9, 2015, DOI: 10.1056/NEJMoa1511939

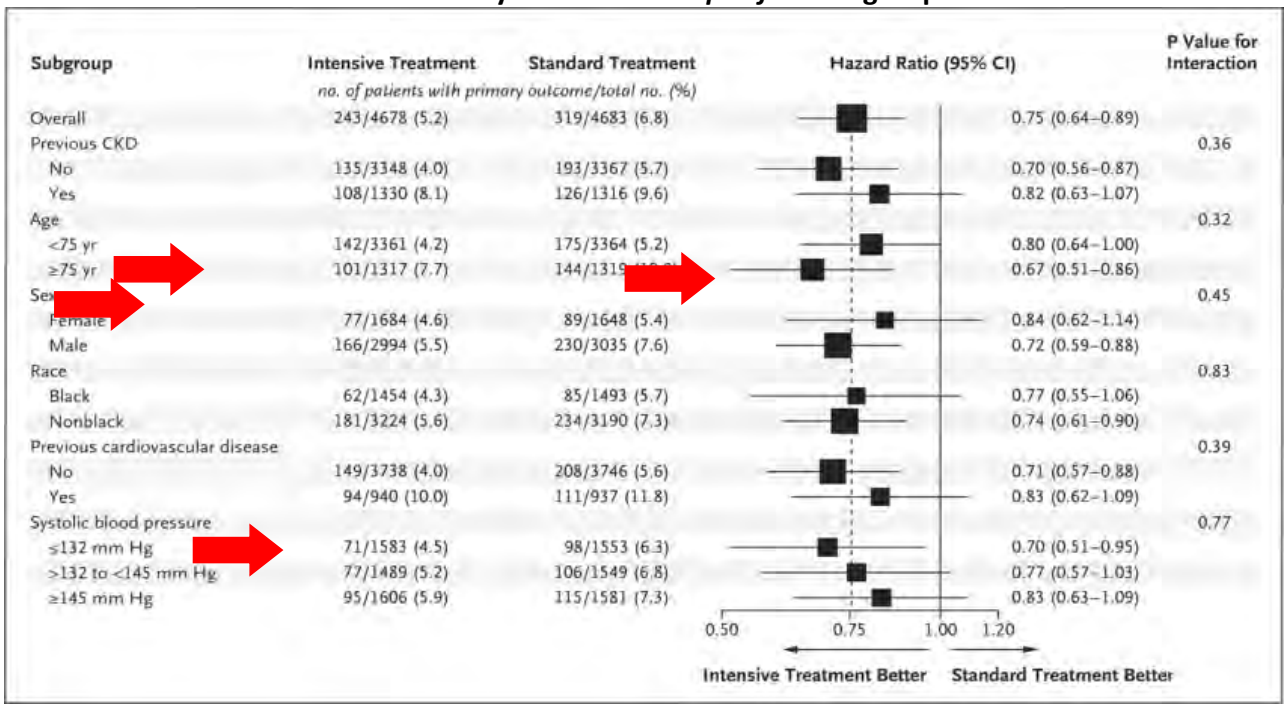
MI=myocardial infarction, ACS=acute coronary syndrome, HF=heart failure

SPRINT: Death from Any Cause



SPRINT Research Group, et al. N Engl J Med. 2015;373(22):2103-16

SPRINT: Primary Outcome *Pre-specified* Subgroups



SPRINT Research Group, et al. N Engl J Med. 2015;373(22):2103-16

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Trial of Intensive Blood-Pressure Control in Older Patients with Hypertension

Weili Zhang, M.D., Ph.D., Shuyuan Zhang, Ph.D., Yue Deng, Ph.D., Shouling Wu, M.D., Jie Ren, M.D., Gang Sun, M.D., Jinfeng Yang, M.D., Yinong Jiang, M.D., Xinjuan Xu, M.D., Tzung-Dau Wang, M.D., Ph.D., Youren Chen, M.D., Yufeng Li, M.D., Lianchen Yao, M.D., Dianfang Li, M.D., Lixin Wang, M.D., Xiaomei Shen, M.D., Xinhua Yin, M.D., Wei Liu, M.D., Xiaoyang Zhou, M.D., Bingpo Zhu, M.D., Zihong Guo, M.D., Hualing Liu, M.D., Xiaoping Chen, M.D., Yingqing Feng, M.D., Gang Tian, M.D., Xiuyin Gao, B.Sc., Kazuomi Kario, M.D., Ph.D., and Jun Cai, M.D., Ph.D., for the STEP Study Group*

n engl j med 385;14 nejm.org September 30, 2021

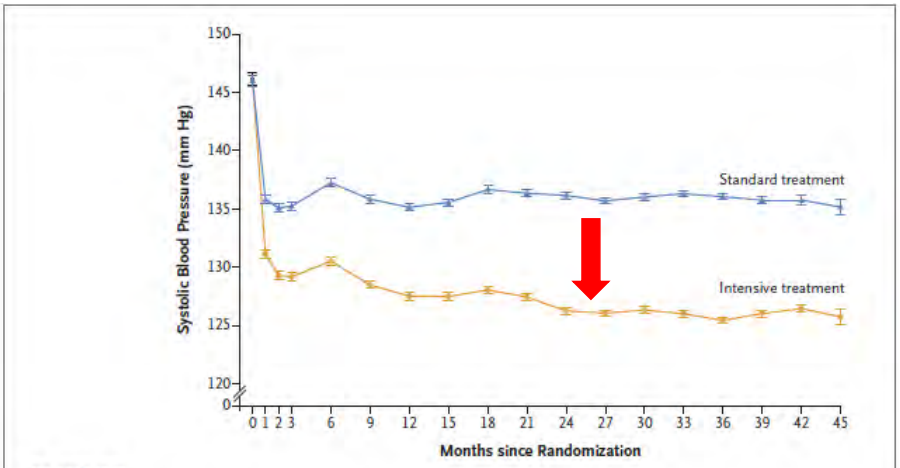
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Trial of Intensive Blood-Pressure Control in Older Patients with Hypertension

CONCLUSIONS

In older patients with hypertension, intensive treatment with a systolic blood-pressure target of 110 to less than 130 mm Hg resulted in a lower incidence of cardiovascular events than standard treatment with a target of 130 to less than 150 mm Hg. (Funded by the Chinese Academy of Medical Sciences and others; STEP ClinicalTrials.gov number, NCT03015311.)

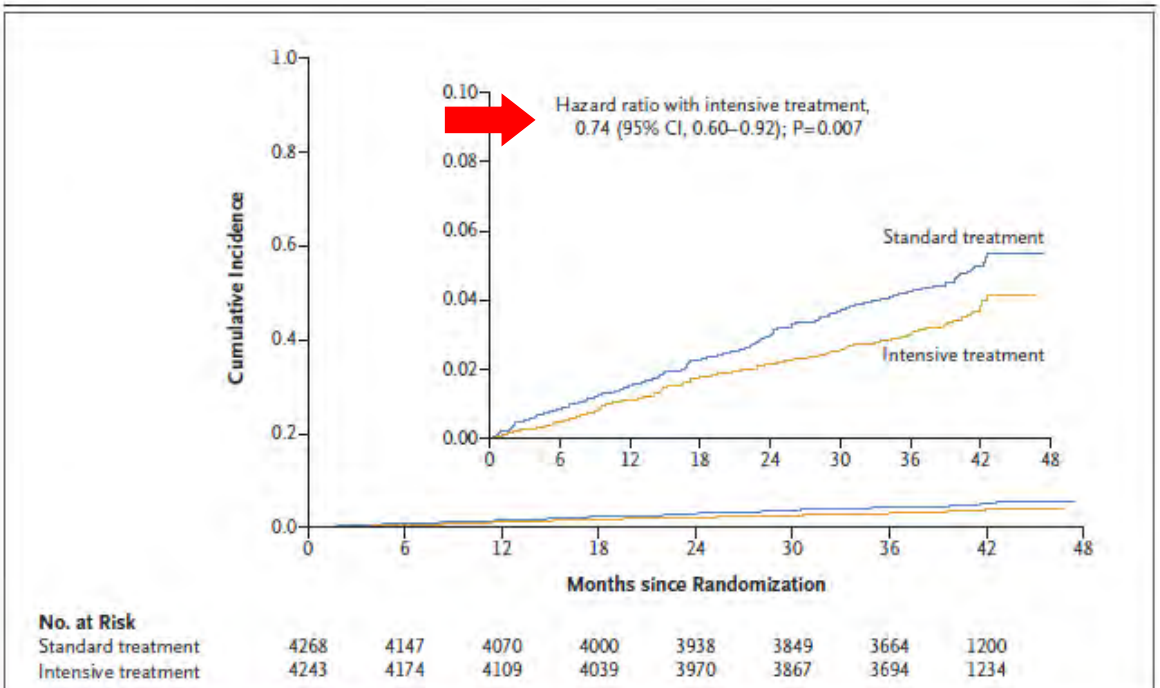


No. with Data								
Standard treatment	4268	4139	4086	4092	4072	3954	3857	1885
Intensive treatment	4243	4128	4086	4049	4050	3969	3894	1850
Mean No. of Medications								
Standard treatment	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Intensive treatment	1.5	1.7	1.8	1.8	1.9	1.9	1.9	1.9

Figure 2. Office Systolic Blood-Pressure Measurements.

The systolic blood-pressure target was 110 to less than 130 mm Hg in the intensive-treatment group and 130 to less than 150 mm Hg in the standard-treatment group. The mean number of medications is based on the number of blood-pressure medications administered at each visit per patient. I bars indicate 95% confidence intervals.

n engl j med 385;14 nejm.org September 30, 2021



No. at Risk								
Standard treatment	4268	4147	4070	4000	3938	3849	3664	1200
Intensive treatment	4243	4174	4109	4039	3970	3867	3694	1234

Figure 3. Cumulative Incidence for the Primary Outcome.

n engl j med 385;14 nejm.org September 30, 2021

Lowering systolic blood pressure to less than 120 mm Hg versus less than 140 mm Hg in patients with high cardiovascular risk with and without diabetes or previous stroke: an open-label, blinded-outcome, randomised trial

Jiamin Liu*, Yan Li*, Jinzhao Ge*, Xiaofang Yan*, Haibo Zhang, Xin Zheng, Jiapeng Lu, Xi Li, Yan Gao, Lubi Lei, Jing Liu, Jing Li, on behalf of the ESPRIT Collaborative Group†

Interpretation For hypertensive patients at high cardiovascular risk, regardless of the status of diabetes or history of stroke, the treatment strategy of targeting systolic blood pressure of less than 120 mm Hg, as compared with that of less than 140 mm Hg, prevents major vascular events, with minor excess risk.

ESPRIT Trial China
n=11,255

Liu J, Li Y, Ge J, et al. Lancet. 2024;404(10449):245-255.

ESPRIT Trial China

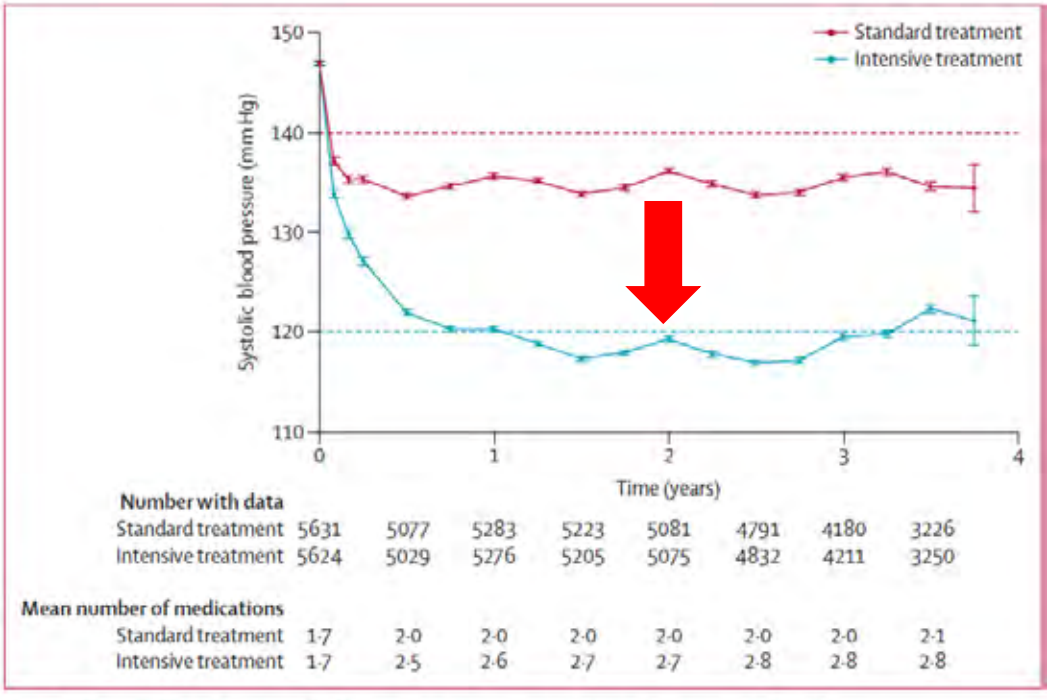


Figure 2: Systolic blood pressure in the two treatment groups over the course of the trial

Liu J, Li Y, Ge J, et al. Lancet. 2024;404(10449):245-255.

ESPRIT Trial China

	Intensive treatment (n=5624)	Standard treatment (n=5631)	Hazard ratio (95% CI)	p value
Myocardial infarction	82 (1·5%)	91 (1·6%)	0·90 (0·67–1·22)	0·50
Stroke	262 (4·7%)	303 (5·4%)	0·86 (0·73–1·02)	0·083
Heart failure	57 (1·0%)	78 (1·4%)	0·73 (0·52–1·03)	0·072
Death from cardiovascular causes	59 (1·1%)	97 (1·7%)	0·61 (0·44–0·84)	0·0027
Major vascular events without revascularisation	**417 (7·4%)**	**495 (8·8%)**	**0·84 (0·74–0·96)**	**0·010**
Coronary revascularisation	183 (3·3%)	182 (3·2%)	1·01 (0·82–1·24)	0·94
Non-coronary revascularisation	23 (0·4%)	22 (0·4%)	1·05 (0·58–1·88)	0·88
Major vascular events (primary outcome)	**547 (9·7%)**	**623 (11·1%)**	**0·88 (0·78–0·99)**	**0·028**
Death from any cause	160 (2·8%)	203 (3·6%)	0·79 (0·64–0·97)	0·025
Primary outcome or death from any cause	**637 (11·3%)**	**714 (12·7%)**	**0·89 (0·80–0·99)**	**0·039**

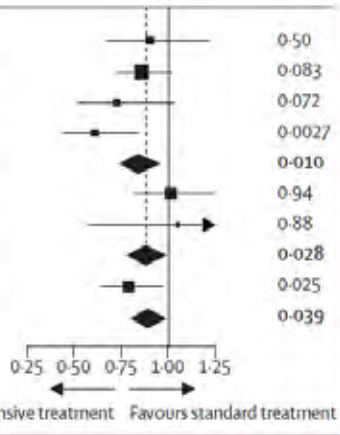


Figure 4: Primary outcome and secondary outcomes

Liu J, Li Y, Ge J, et al. Lancet. 2024;404(10449):245-255.

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Intensive Blood-Pressure Control in Patients with Type 2 Diabetes

Y. Bi, M. Li, Y. Liu, T. Li, J. Lu, P. Duan, F. Xu, Q. Dong, Ailiang Wang, T. Wang, R. Zheng, Y. Chen, M. Xu, X. Wang, Xinhuan Zhang, Y. Niu, Z. Kang, C. Lu, Jing Wang, X. Qiu, An Wang, S. Wu, J. Niu, Jingya Wang, Z. Zhao, H. Pan, X. Yang, X. Niu, S. Pang, Xiaoliang Zhang, Y. Dai, Q. Wan, S. Chen, Q. Zheng, S. Dai, J. Deng, L. Liu, G. Wang, H. Zhu, W. Tang, H. Liu, Z. Guo, G. Ning, J. He, Y. Xu, and W. Wang, for the BPROAD Research Group*

DOI: 10.1056/NEJMoa2412006 11/16/24

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Intensive Blood-Pressure Control in Patients with Type 2 Diabetes

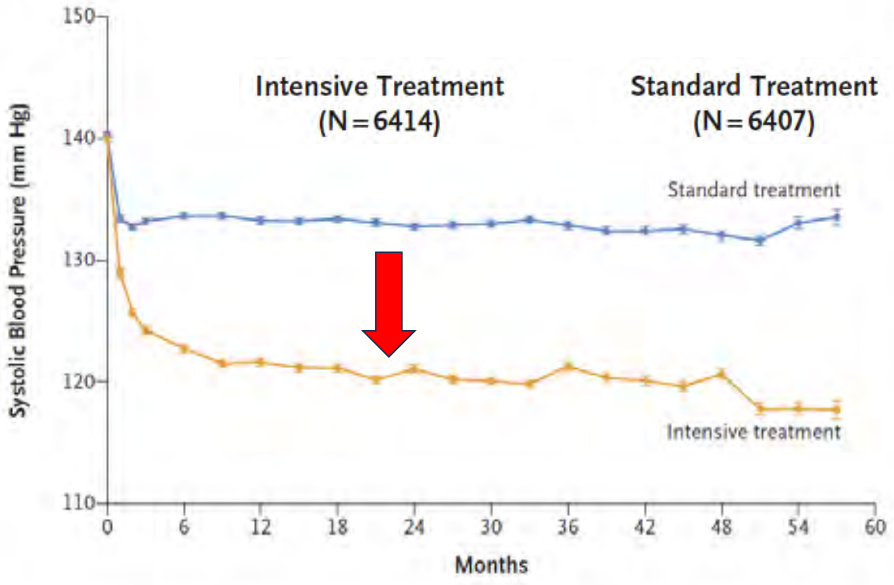
CONCLUSIONS

Among patients with type 2 diabetes, the incidence of major cardiovascular events was significantly lower with intensive treatment targeting a systolic blood pressure of less than 120 mm Hg than with standard treatment targeting a systolic blood pressure of less than 140 mm Hg. (Funded by the National Key Research and Development Program of the Ministry of Science and Technology of China and others; BPROAD ClinicalTrials.gov number, NCT03808311.)

DOI: 10.1056/NEJMoa2412006 11/16/24

5803 (45.3%) women; mean (±SD) age 63.8±7.5 years.

At 1 year of follow-up, mean SBP 121.6 mm Hg in the intensive- group and 133.2 mm Hg standard



No. with Data

Standard treatment	6407	5885	5663	5555	5257	4535	4091	3550	3187	1597
Intensive treatment	6414	5858	5612	5474	5244	4541	4119	3573	3198	1622

DOI: 10.1056/NEJMoa2412006 11/16/24

Dementia: memory , cognitive functions, and behavioral

- HTN is the primary risk factor for small-vessel ischemic disease, cortical white matter abnormalities, cognitive decline and dementia
- Highly predictive of cognitive decline and dementia.
- Better control of SBP reduces Alzheimer's disease and related dementias (ADRD),strongest association for BP lowering in middle age.
- Data support intensive BP treatment as important strategy to prevent cognitive impairment.

Primary prevention dementia

- In adults with HTN, a goal of <130 mm Hg SBP is recommended to prevent mild cognitive impairment and dementia

- **15 minutes**
  - The designated time for the routine clinic visit in not adequate to control conditions which are chronic, ongoing with 80% due to the SDOH*
  - social determinants of health

https://www.uchicagomedicine.org/

2017 ACC/AHA HBP Guideline
Out-of-Office and Self-Monitoring of BP

COR	LOE	Recommendation for Out-of-Office and Self-Monitoring of BP
I	A^{SR}	Out-of-office BP measurements are recommended to confirm the diagnosis of hypertension and for titration of BP-lowering medication, in conjunction with telehealth counseling or clinical interventions. SR indicates systematic review.

Table 8 2017 ACC-AHA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults; *Hypertension; JACC* Nov 2017

Community Based Interventions

HEALTHY HEART
COMMUNITY PREVENTION PROJECT

US BLOOD PRESSURE VALIDATED DEVICE LISTING

AMA

The validation of BP measurement devices for clinical accuracy April 23,2020

Validation Protocol(s): ANSI/AAMI/ISO 81060-2: 2009

Validation Protocol(s): ANSI/AAMI/ISO 81060-2: 2009

Validation Protocol(s): ANSI/AAMI/ISO 81060-2: 2009

→ *https://www.validatebp.org/*

HEALTHY HEART
COMMUNITY PREVENTION PROJECT
https://healthyheartcpp.org

LA CaTS
Addressing health disparities & improving health outcomes in the underserved

Tulane University
Heart & Vascular Institute

ClinicalTrials.gov Identifier: NCT05074173

Simple Text-Messaging & Social Support to Increase Hypertension Medication Adherence

- Adults 18 and older
- Speak or read English
- Diagnosis of hypertension
- Internet and mobile phone access

Participants will be asked to:
- 2 in-person visits at Tulane Cardiology Clinic

Participants will receive:
- Costs for transportation and time

Reddy TK, Ferdinand DP, Wegener M, et al. Abstract 11679. *Circulation*. 2022;146:A11679.

American Heart Journal Plus: Cardiology Research and Practice 26 (2023) 100253

Contents lists available at ScienceDirect

American Heart Journal Plus: Cardiology Research and Practice

journal homepage: www.sciencedirect.com/journal/american-heart-journal-plus-cardiology-research-and-practice

ELSEVIER

AHJO

Research paper

TEXT MY BP MEDS NOLA: A pilot study of text-messaging and social support to increase hypertension medication adherence☆

Daphne P. Ferdinand [a], Tina K. Reddy [b], Madeline R. Wegener [b], Pavan S. Guduri [b], John J. Lefante [c], Saihariharan Nedunchezhian [b], Keith C. Ferdinand [b,*]

[a] Healthy Heart Community Prevention Project (HHCPP), New Orleans, LA, United States of America
[b] Tulane University School of Medicine, New Orleans, LA, United States of America
[c] Tulane University School of Public Health and Tropical Medicine, New Orleans, LA, United States of America

Ferdinand DP, Reddy TK, Wegener M, et al. *American Heart Journal Plus: Cardiology Research and Practice*. 2023;26:100253.

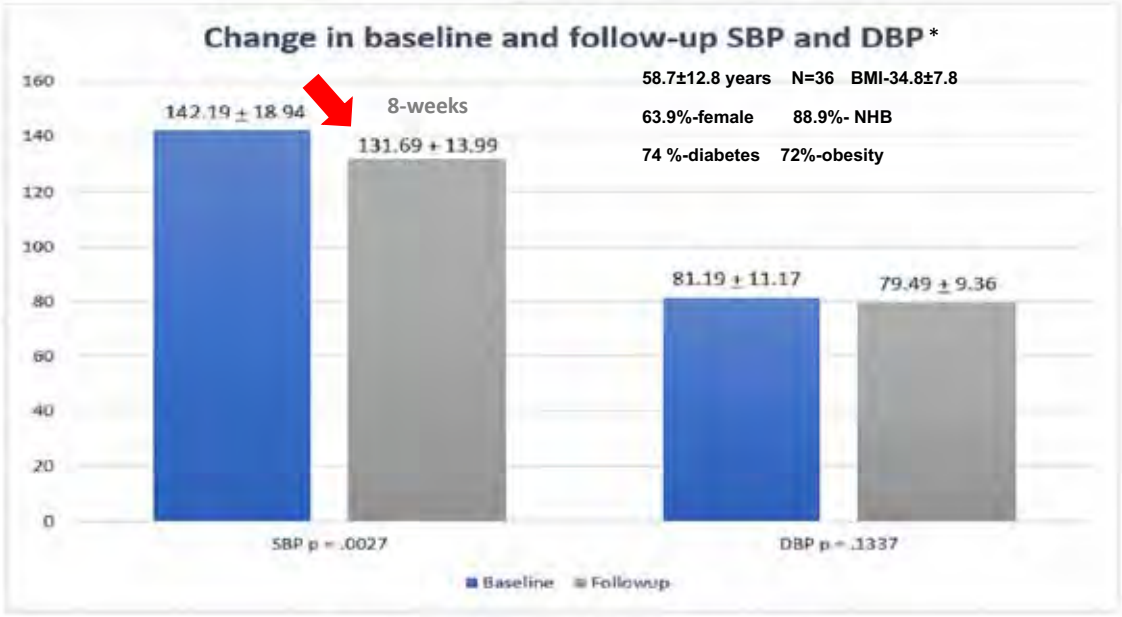


Fig. 2. Change in baseline and follow-up SBP and DBP.

Ferdinand, D. et al. *American Heart Journal Plus: Cardiology Research and Practice*. 2023;26:100253

Hypertension

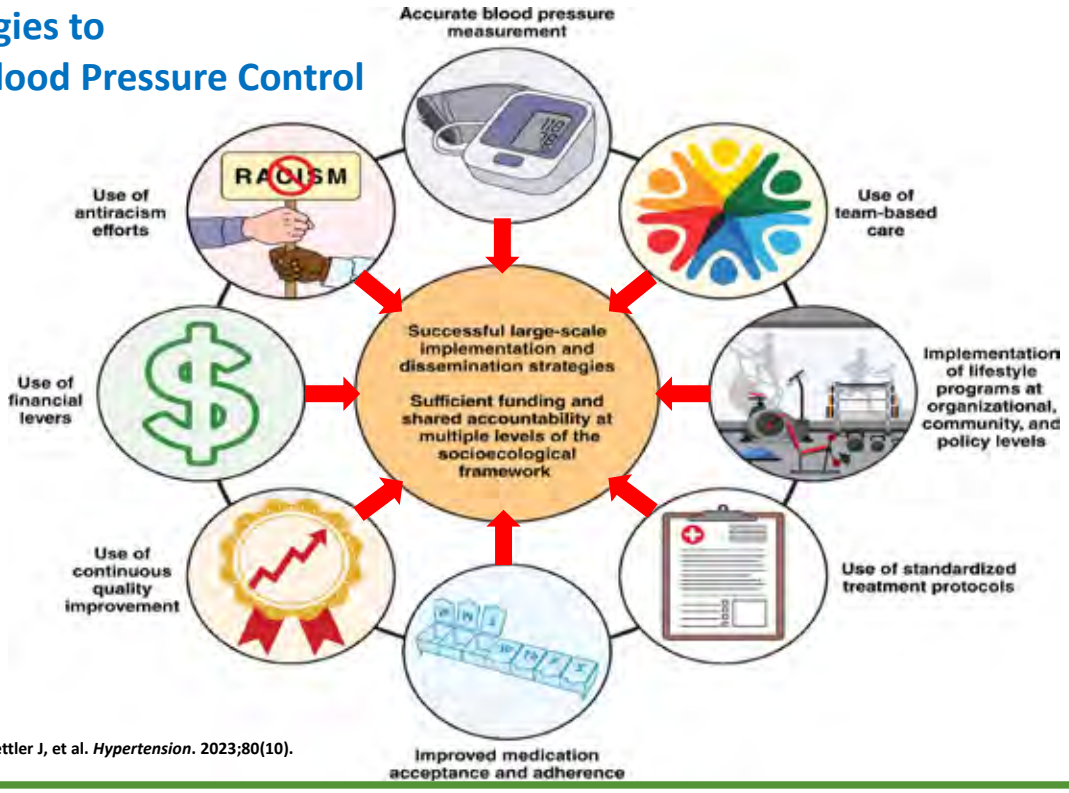
AHA/AMA SCIENTIFIC STATEMENT

Implementation Strategies to Improve Blood Pressure Control in the United States: A Scientific Statement From the American Heart Association and American Medical Association

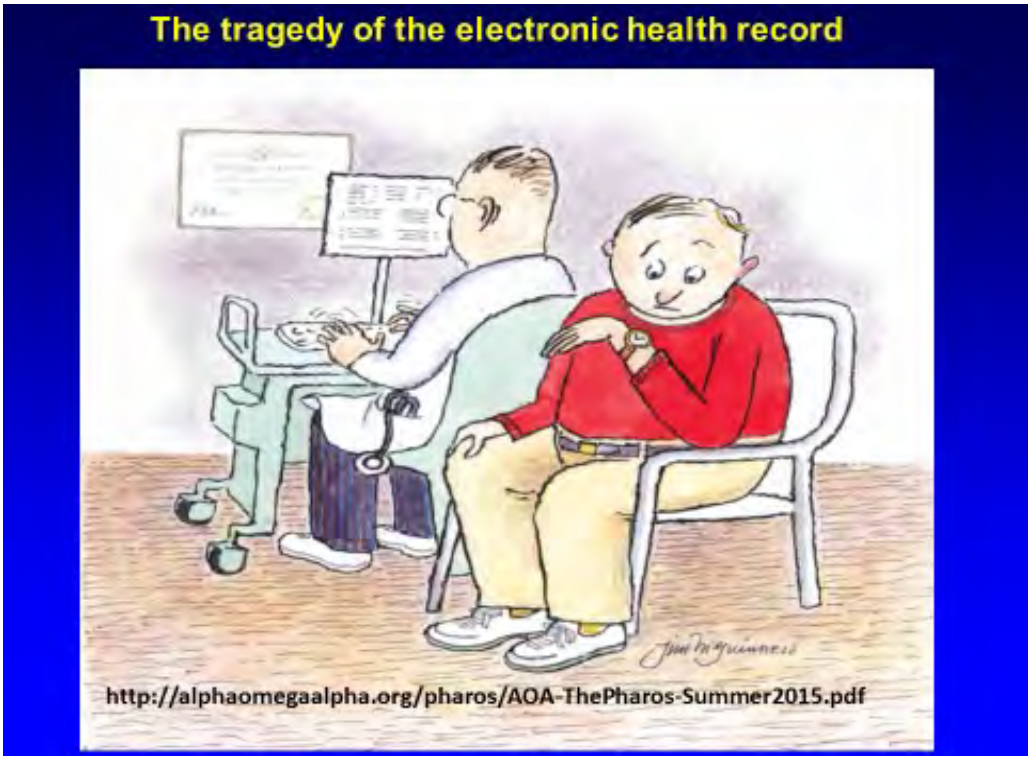
Marwah Abdalla, MD, MPH, Vice Chair; Shari D. Bolen, MD, MPH; Jeffrey Brettler, MD; Brent M. Egan, MD; Keith C. Ferdinand, MD; Cassandra D. Ford, PhD; Daniel T. Lackland, DrPH; Hilary K. Wall, MPH; Daichi Shimbo, MD, Chair; on behalf of the American Heart Association and American Medical Association

Abdalla M et al. Hypertension. 2023 Oct;80(10):e143-e157.

Key Strategies to Improve Blood Pressure Control



Abdalla M, Bolen SD, Brettler J, et al. *Hypertension*. 2023;80(10).



6 Steps to Improving Patient Understanding

1. Limit amount of information provided at each visit
2. Slow down
3. Avoid medical jargon
4. Use pictures or models to explain important concepts
5. Assure understanding with "show-me" technique
6. Encourage patients to ask questions

What Can You Do?

Weiss BD. Health Literacy and Patient Safety: Help Patients Understand. Manual for Clinicians, 2nd edition. Chicago, IL: AMA Foundation, 2007

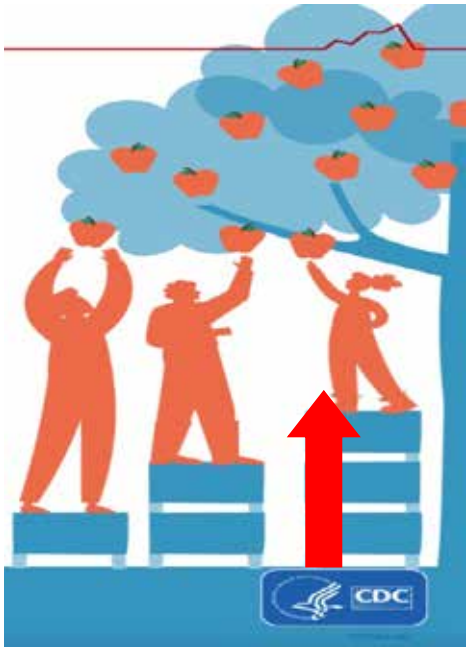
Keys to Effective Blood Pressure Control in Adults With HTN

1. Patient and provider agree on BP target
2. Use fixed-dose combinations
3. Substitute long-acting chlorthalidone for HCTZ (or indapamide)
4. Use long-acting amlodipine as first-line CCB
5. Monthly visits until BP target achieved
6. Replace prescription of 30 d with 90-d refills, if allowed
7. Use telehealth to augment office-based management
8. Enhance connectivity between patient, provider, and electronic health record
9. Screen for SDOH and obstacles to care
10. Use team-based care to enhance lifestyle/medication adherence and solve social issues

Carey RM, Wright JT Jr, Taler SJ, Whelton PK. Circ Res. 2021 Apr 2;128(7):827-846.

Reaching Health Equity

- Targeted interventions are needed to identify and eliminate disparities, based on race/ethnicity, sex/gender, geography, socioeconomic status, ability or disability
- Health equity is a moral and practical imperative



Thank you!

Keith C. Ferdinand MD, FACC,FAHA,FASPC,FNLA
kferdina@tulane.edu
Twitter: @kcferdmd

Weill Cornell Medicine

Global Burden of Disease of Benign Gynecological Conditions

Christina Pardo, MD MPH, F.A.C.O.G.
Assistant Professor, Obstetrics & Gynecology
Donna Redel Clinical Scholar in Obstetrics & Gynecology,
Weill Cornell Medicine

Assistant Professor, Community Health Sciences,
Downstate Health Sciences University

Disclosures

No Disclosures relevant to presentation

Objectives

- To highlight how benign gynecological conditions significantly contribute to the global burden of disease (GBD).
- Define benign gynecological conditions
- Examine inequities of benign gynecologic conditions
- Review the social and medical burden of disease of gynecologic conditions

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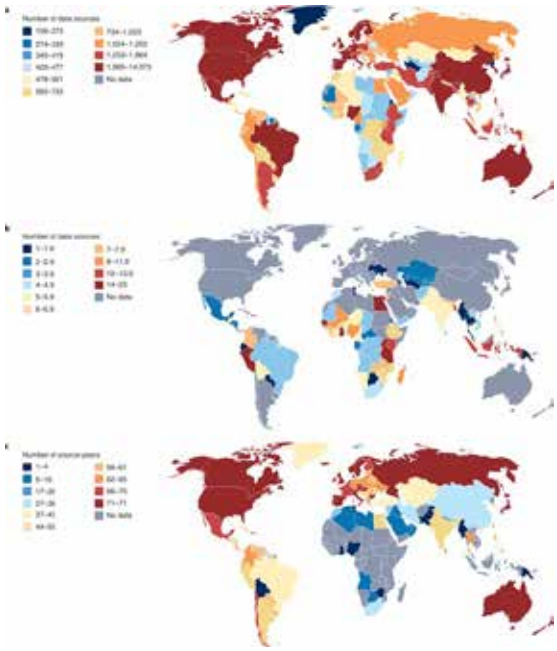
Global Burden of Disease

Comprehensive effort to measure the health of populations across the globe

Studies mortality and morbidity, risk factors and health systems

Key measures:

- Disability-Adjusted Life Years (DALYs): quantifies the total years of healthy life lost due to death and disability
- Years of Life Lost (YLLS): Measure the years of life lost due to premature mortality
- Years Lived with Disability (YLDs): Measure the years of life lived with a disability or health condition



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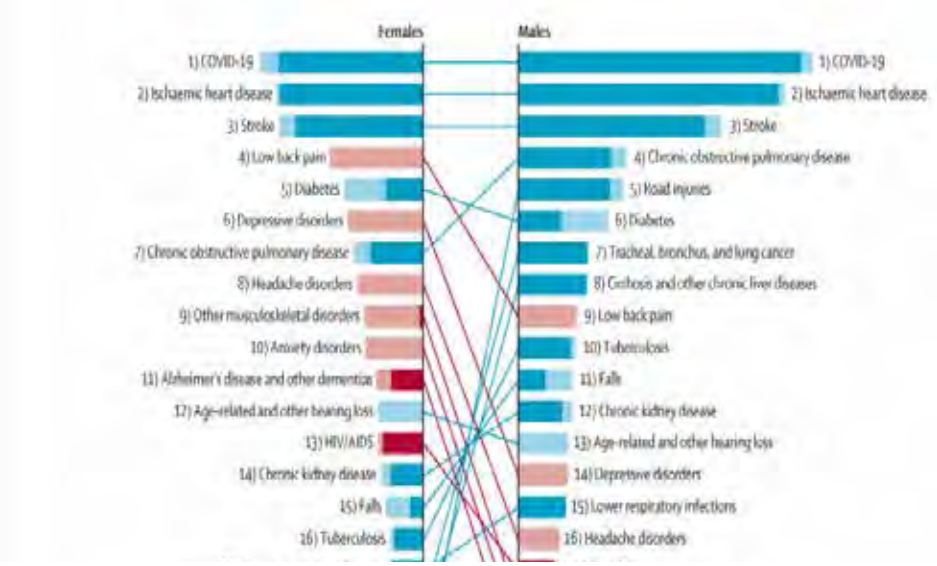
Murray, C.J.L. The Global Burden of Disease Study at 30 years. *Nat Med* 28, 2019–2026 (2022). https://doi.org/10.1038/s41591-022-01990-1

https://www.healthdata.org/research-analysis/gbd

Global rankings of the top 20 causes of DALYs globally for females and males

Women have a higher burden of morbidity-driven conditions

-Largest difference in DALYS for:
- Low back pain
- Depressive disorders
- Headache



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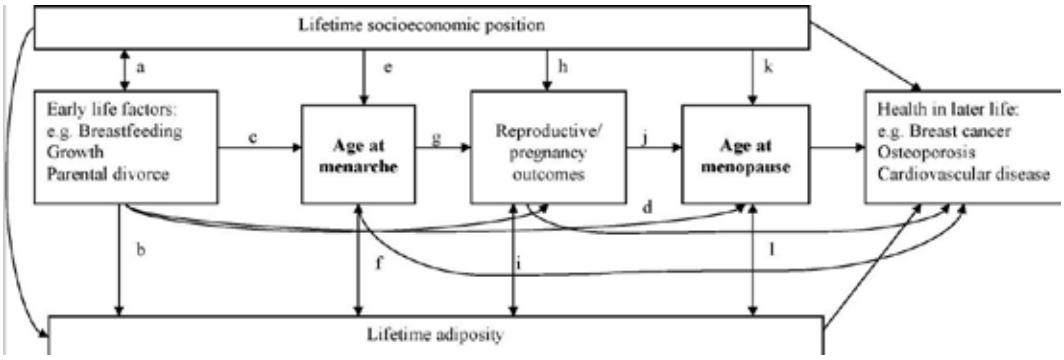
1.Differences across the lifespan between females and males in the top 20 causes of disease burden globally: a systematic analysis of the Global Burden of Disease Study 2021 Patwardhan, Vedavati et al. The Lancet Public Health, Volume 9, Issue 5, e282 - e294

Life course Approach to Women's Health

- **Life course approach involves a view that incorporates factors across life, generations that influence menarche, fertility, pregnancy outcomes, gynecological disorders and menopause**
- **Recognizes how gynecologic health impacts chronic disease risk**



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https://royalsociety.org/-/media/about-us/industry/tof-conference-reports/des8006tofwomens-healthconference-report7final-version.pdf

Mishra GD, Cooper R, Kuh D. A life course approach to reproductive health: theory and methods. Maturitas. 2010 Feb;65(2):92-7. doi: 10.1016/j.maturitas.2009.12.009. Epub 2010 Jan 15. PMID: 20079587; PMCID: PMC3504662.

Global Burden of Disease of GYN Conditions

- Among noncommunicable diseases in women of reproductive age, gynecologic conditions ranked 2nd worldwide in new cases and 1st in disability-adjusted life years
- Progress in reducing the burden of gynecologic diseases has been less than that for many other noncommunicable diseases
- Gynecological disease are characterized by insidious onset, high prevalence, and easy recurrence, spanning the entire life cycle of women.
- According to 2022 WHO report, progress toward achieving global goals for womens health has been slow

Yukun Cao, Yufeng Guo, Zhiping Long, Yi Wu, Bing Pei, Jingyu Ye, Min Zhang, Heli Yuan, Yanjie Jia, Xiao Liu, Fan Wang, Yashuang Zhao, The Global Burden of Gynecological Diseases from 1990 to 2019, American Journal of Preventive Medicine, Volume 67, Issue 5, 2024, Pages 698-704,

Global Burden of Disease of GYN Conditions

Photo: UN Women

Benign Gynecologic conditions account for 5.05%of all years lost to disability (YLDs)

- High Income Countries: 3.95%
- Lower Middle-Income Countries: 5.35% of YLD's

Highest burden in low-income countries

*increased burden due to reduced access to care and services

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Benign Gynecologic Conditions

Non-cancerous conditions of gynecologic system: Vulva, Vagina, Cervix/Uterus, Fallopian Tube, Ovary

Benign Gyn conditions:

- Uterine Fibroids
- Polycystic Ovary Syndrome (PCOS)
- Female Infertility
- Genital Prolapse
- Endometriosis
- Miscarriage and abortion
- Ectopic Pregnancy
- Pelvic Inflammatory Disease(PID)
- Other Gynecologic Diseases

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Other Gynecological Conditions

Menstrual Conditions

- Abnormal Uterine Bleeding
- Menstrual pan
- Vaginismus
- Menopausal and perimenopausal conditions

Non-Menstrual Conditions

- Vulvovaginal candidiasis
- Breast conditions: inflammatory disorders of the breast, non-malignant breast lump, etc
- Inflammatory diseases of the cervix (cervicitis)
- Vulvovaginal conditions
- Non-inflammatory disorders of ovary, fallopian tube, broad ligament: ex ovarian cysts, polups
- Endometrial hyperplasia
- Cervical ectropon
- Non-inflammatory cervical and vaginal disorders

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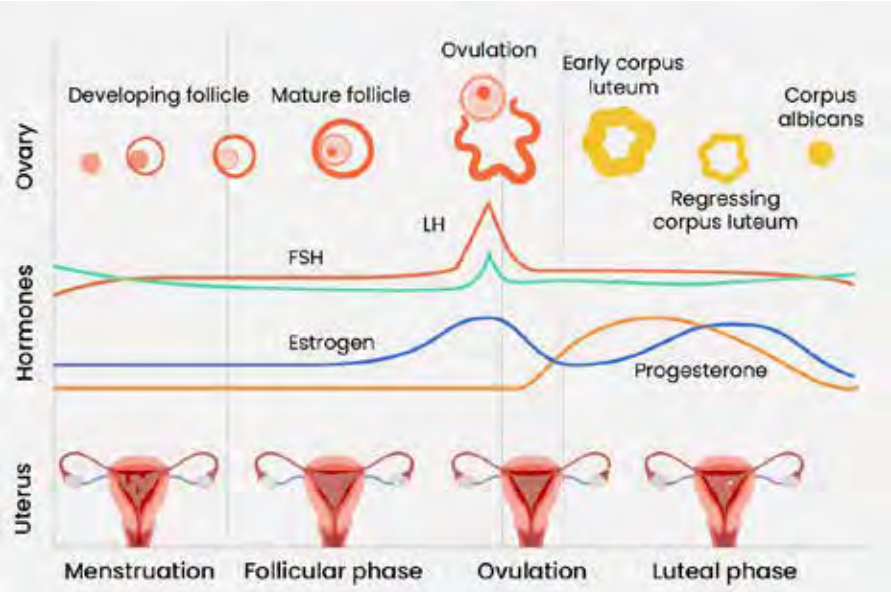
Back to Basics…



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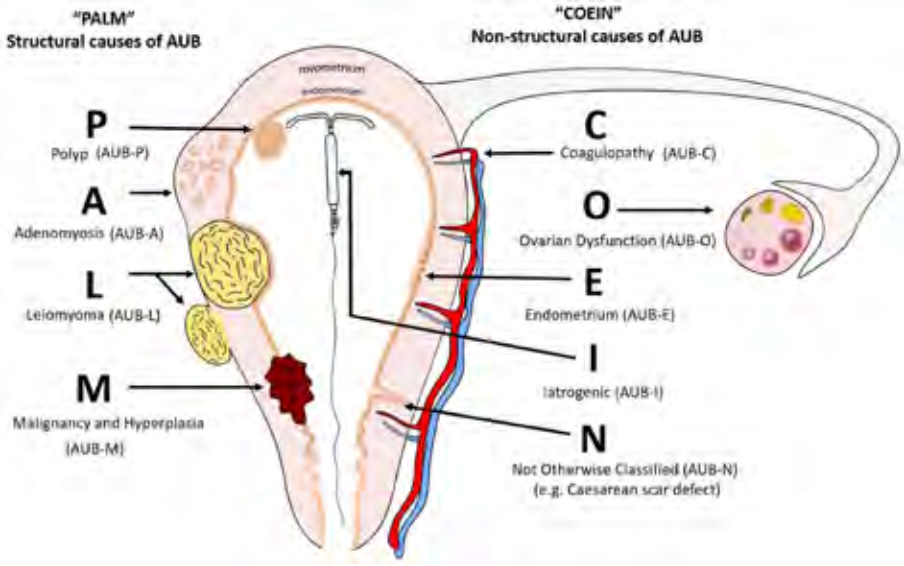

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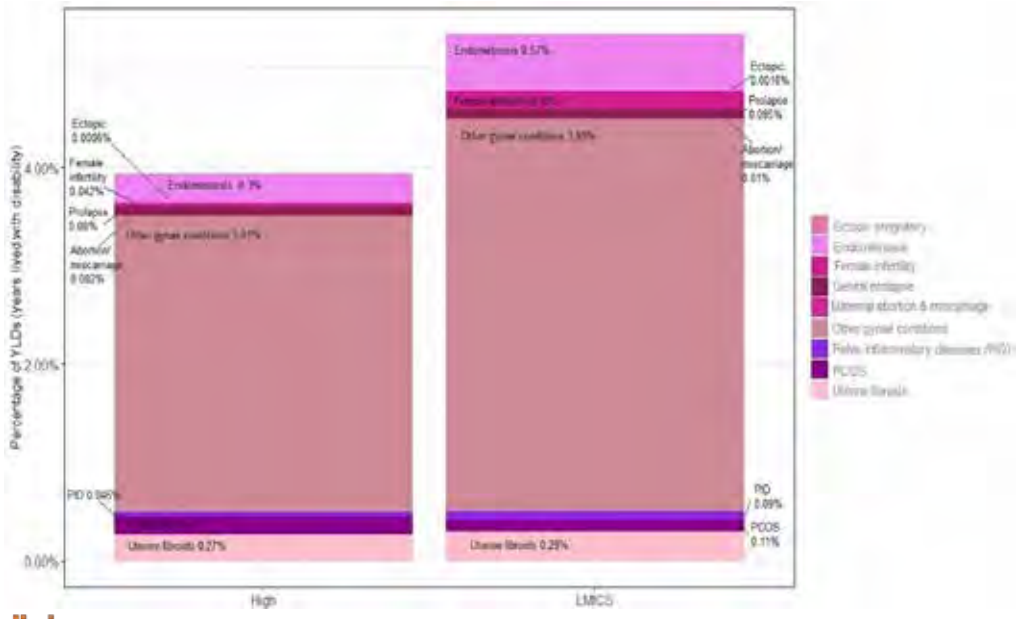
Global Burden of Gynecologic Conditions

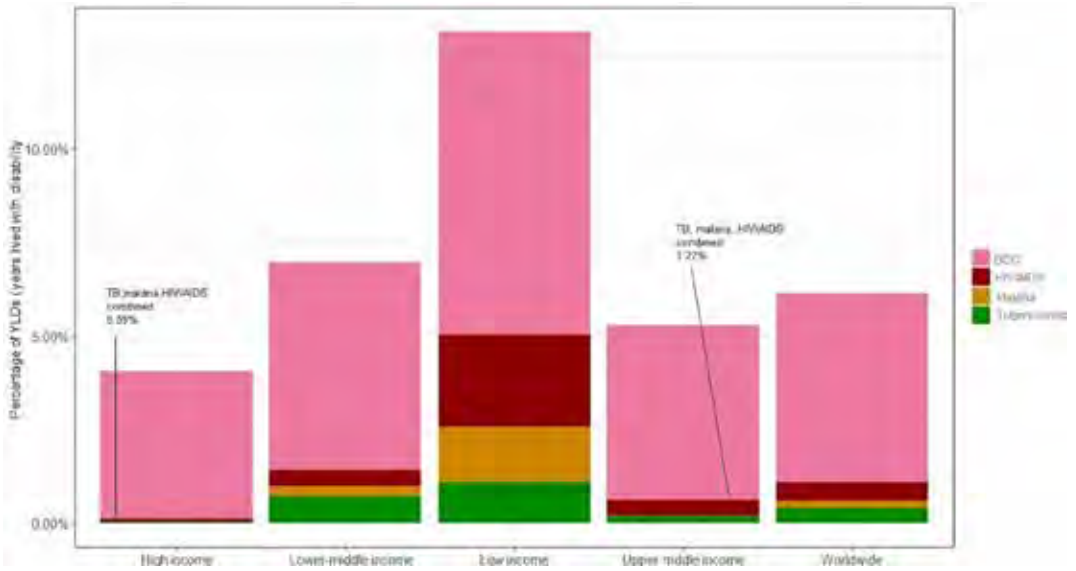
Other GYN conditions represent the highest contributor to burden of GYN conditions



Wijeratne D, Gibson JFE, Fiander A, Rafii-Tabar E, Thakar R. The global burden of disease due to benign gynecological conditions: A call to action. Int J Gynaecol Obstet. 2024 Mar;164(3):1151-1159. doi: 10.1002/ijgo.15211. Epub 2023 Nov 21. PMID: 37987165.

Differences by age group:

	High-income	Low-income
15-49 age group	6.71%	5.3%
50-59	3.14%	3.04%
70+		1.07%



Benign gynecological conditions represented a higher YLD's compared to HIV/AIDS, malaria and TB combined for women aged 15 and above

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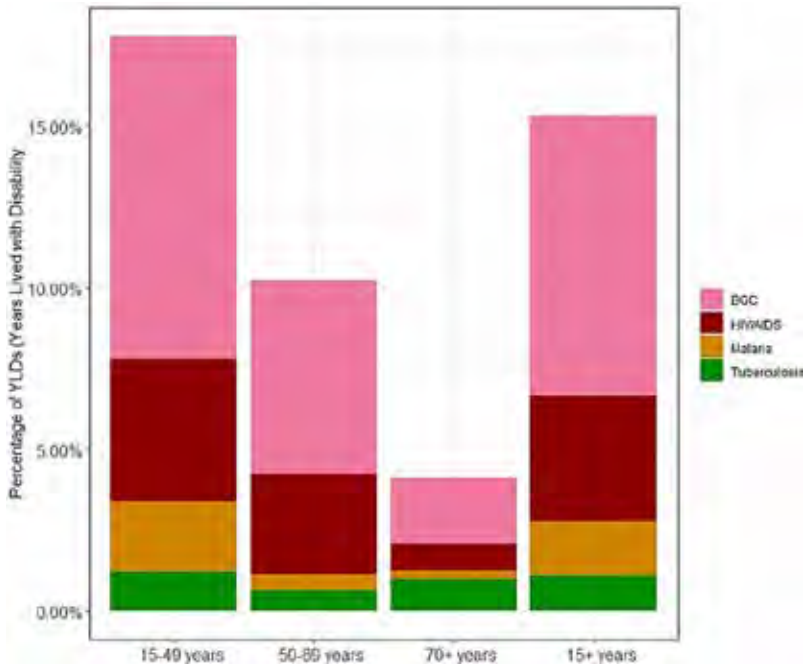
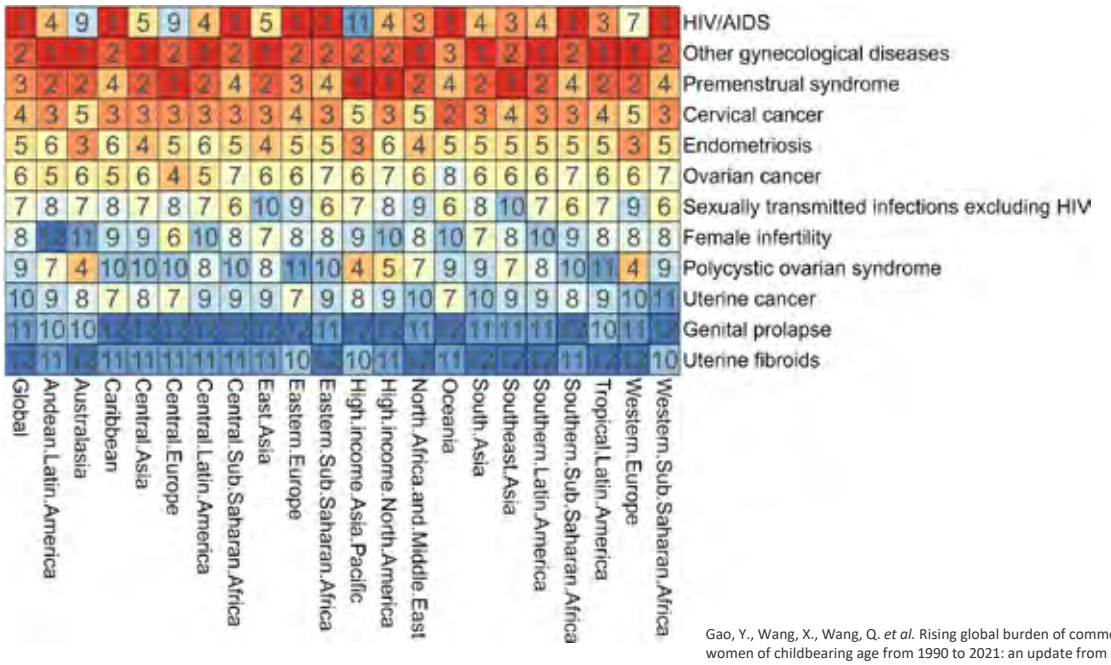
15



16

Ranking of age-standardized DALYs rates for different types of GYN disorders

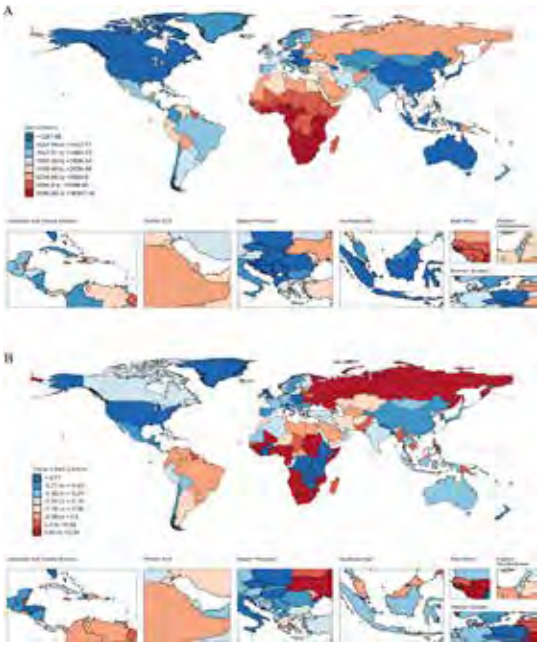


Gao, Y., Wang, X., Wang, Q. *et al.* Rising global burden of common gynecological diseases in women of childbearing age from 1990 to 2021: an update from the Global Burden of Disease Study 2021. *Reprod Health* **22**, 57 (2025). https://doi.org/10.1186/s12978-025-02013-1

Global Burden of GYN conditions

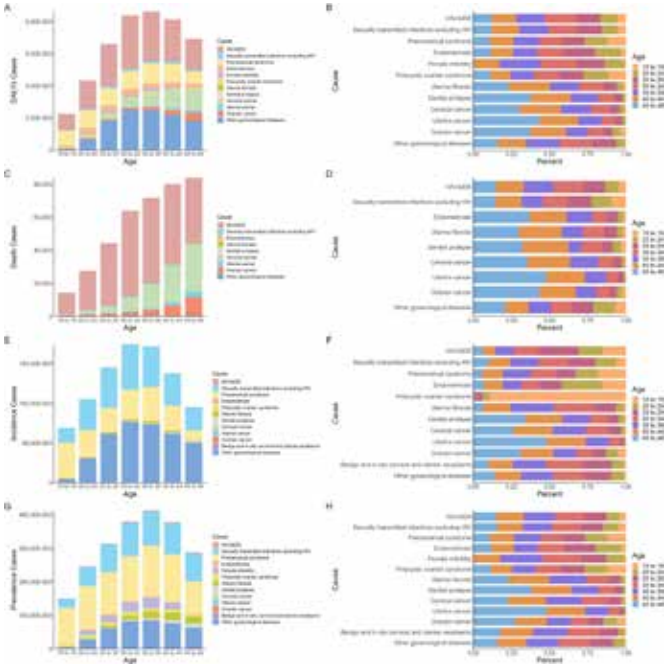
A- Age standardized DALYs

B- Average annual percentage change for standardized DALYs rates



Gao, Y., Wang, X., Wang, Q. *et al.* Rising global burden of common gynecological diseases in women of childbearing age from 1990 to 2021: an update from the Global Burden of Disease Study 2021. *Reprod Health* **22**, 57 (2025). https://doi.org/10.1186/s12978-025-02013-1

Global Burden of GYN conditions



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Prevalence in the United States

ACOG COMMITTEE STATEMENT

Racial and Ethnic Inequities in Obstetrics and Gynecology

SUMMARY OF RECOMMENDATIONS AND CONCLUSIONS

Participating in lifelong learning to understand the roles clinician bias and personally mediated, systemic, and structural racism play in creating and perpetuating adverse health outcomes and health care experiences.

Adopting federal standards, at a minimum, for collection of race and ethnicity information in clinical and administrative data to analyze and identify drivers of inequities and targets for quality improvement.

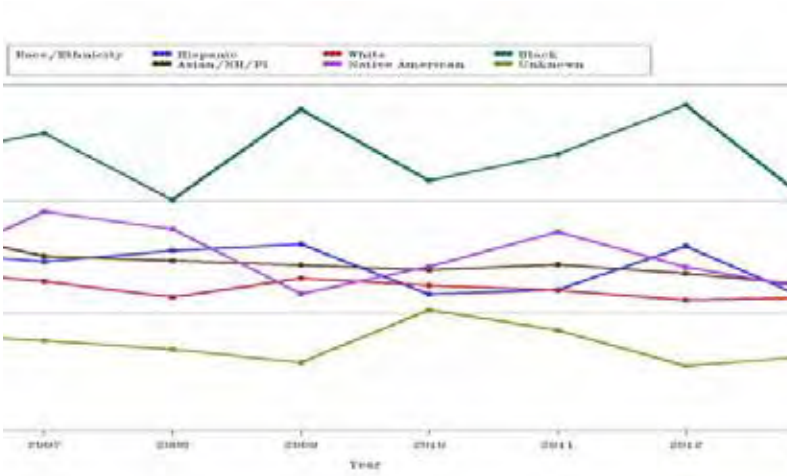
Effectively engaging those with lived experiences of minoritization and marginalization in developing research, institutional and organizational policies, and clinical protocols and practice to advance equity.

Table 1. Racial and Ethnic Disparities and Inequities in Health Outcomes in Obstetrics and Gynecology

Inequities and Disparities in Health Outcomes	AI/AN	Asian	Black	Hispanic	White
Infertility in previous 12 mo (% of women)*	NA	10	12	9	7
Breastfeeding duration (% of infants at 12 mo)†	NA	48.5	26.8	35.7	40.7
Preterm birth (% of live births)‡	11.6	8.8	14.2	9.8	9.2
Fetal death (/1,000 live births+fetal deaths)§	7.5	3.9	9.9	4.9	4.8
Maternal death (/100,000 live births)‖	NA	NA	69.9	28.0	26.6
Gonorrhea (/100,000 population)¶	340	31	662	121	75
Cervical cancer (/100,000 population)#	6.3	6.1	9.2	9.7	7.1
Breast cancer deaths (/100,000 population)**	14.4	11.5	26.1	13.5	19.0
Diabetes-related deaths (/100,000 population)††	47.7	17.2	42.9	28.3	21.3

AI/AN, American Indian or Alaska Native; NA, not available.

Fibroid Uterus



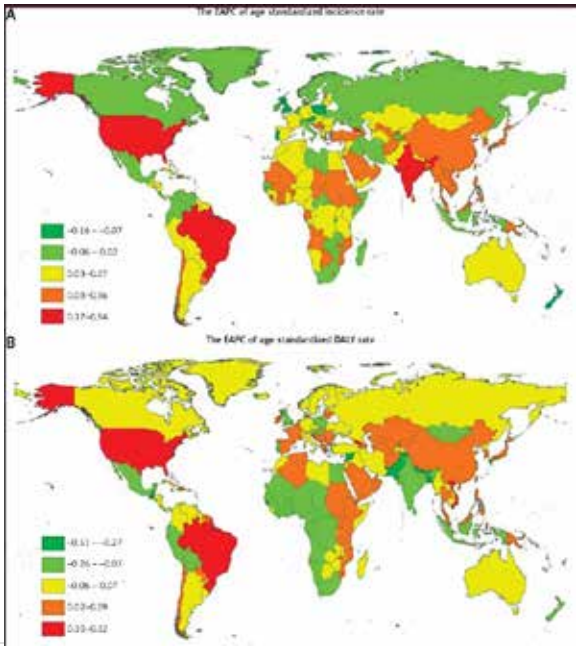
- Prevalence: Affect 70% of white women, 80% of women of African ancestry
- Most common benign tumors of female reproductive system
- Females aged 15-45years: 29% of hospitalizations for gynecological disease
  - Account for 40-60% of hysterectomies
- Annual economic loss caused by uterine fibroids in the United States was higher than the total treatment cost of breast, colon or ovarian cancers

1.A US-based analysis of uterine fibroid diagnosis incidence, trends, and prevalence: 2005 through 2014 Yu, Onchee et al. American Journal of Obstetrics & Gynecology, Volume 219, Issue 6, 591.e1 - 591.e8
2.https://www.archivesofmedicalscience.com/Global-epidemiological-characteristics-of-uterine-fibroids,171786,0,2.html
3.Giuliani E, As-Sanie S, Marsh EE. Epidemiology and management of uterine fibroids. Int J Gynaecol Obstet. 2020 Apr;149(1):3-9. doi: 10.1002/ijgo.13102. Epub 2020 Feb 17. PMID: 31960950.

Global epidemiological characteristics of uterine fibroids

Estimated annual percentage changes (EAPCs)

- The burden of uterine fibroids varies widely around the world:
  - Socioeconomic status
  - Population structure
- In 2019, high income countries had the highest age-standardized incidence rates:
  - adequate medical resources
  - well-established health care systems
  - increased diagnostic rates.
- Low- and middle-income nations had the highest age-standardized DALYs



DOI: 10.5114/aoms/171786
Arch Med Sci 2023;19(6):1802-1810

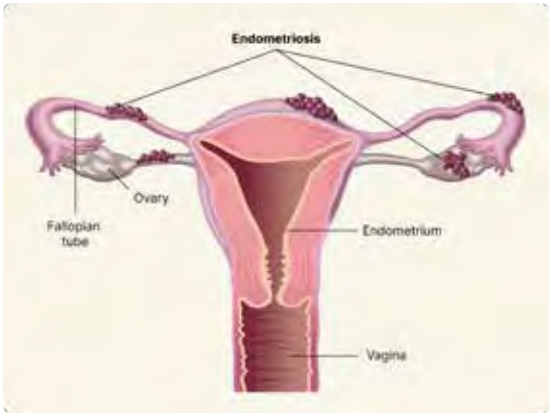
Table 1. Estimates of the excess prevalence and economic burden associated with mental health (MH) morbidities of polycystic ovary syndrome (PCOS) as of 2021 in the United States.

MH morbidities	Excess prevalence of morbidity in PCOS (%)	Annual costs in billions in 2021 USD (% of total costs in category)
Anxiety	3.84	$1.939 (45.5)
Depression	5.79	$1.678 (39.4)
Eating disorders	1.15	$0.644 (15.1)
Total excess cost of MH disorders in PCOS		4.261 (100)

- PCOS is a complex syndrome that includes metabolic and reproductive issues related to hormonal imbalance
- Symptoms: Irregular periods, androgen excess, leading cause of infertility
- Annual economic burden of PCOS in the United States is estimated to exceed $15 billion
    - Direct: costs of diagnosis and treatment
    - Indirect: Long-term health complications, Mental Health disorders, Reduced productivity

Yadav S, Delau O, Bonner AJ, Markovic D, Patterson W, Ottey S, Buyalos RP, Azziz R. Direct economic burden of mental health disorders associated with polycystic ovary syndrome: Systematic review and meta-analysis. Elife. 2023 Aug 3;12:e85338. doi: 10.7554/eLife.85338. PMID: 37534878; PMCID: PMC10471160.

Endometriosis



- Endometriosis affects about 10% of reproductive age women and girls
- Chronic disease associated with:
    - severe life-impacting pain,
    - painful intercourse,
    - Bowel/bladder issues
    - chronic pelvic pain
- No cure- treatment is aimed at controlling symptoms
- Total US endometriosis economic burden estimate: $78-119 billion annually

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Endometriosis Is Undervalued: Call to Action. Front. Glob. Women's Health, 09 May 2022 Sec. Quality of Life Volume 3 - 2022 | https://doi.org/10.3389/fgwh.2022

Disparities in Access to Gynecologic Surgical Care

Racial and socioeconomic inequities influence access to diagnosis, treatment options, and health outcomes.

Women are less likely to participate in shared-decision making

Reduced Access to care, information and services for gynecologic conditions and procedures

National and Global disparities in access to gynecologic care and minimally invasive surgical options

Weill Cornell Medicine

Barnes, Whitney A.; Carter-Brooks, Chanelle M.; Wu, Catherine Z.; Acosta, Danilo A.; Vargas, Maria V.. Racial and ethnic disparities in access to minimally invasive gynecologic surgery for benign pathology. Current Opinion in Obstetrics and Gynecology 33(4):p 279-287, August 2021. | DOI: 10.1097/GCO.0000000000000719

https://www.figo.org/resources/figo-statements/disparities-in-patients-access-to-benign-gynaecological-surgery#:~:text=Within%20our%20documents%2C%20we%20often,and%20sensitive%20services%20and%20care.

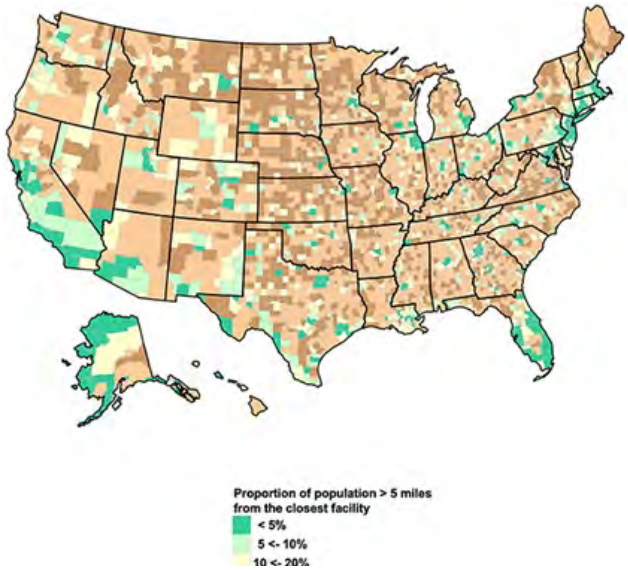
Disparities in Gynecologic Care

•**Delayed Diagnoses and Treatment**
Black women are less likely to receive timely diagnostic evaluations for symptoms such as postmenopausal bleeding, leading to delayed diagnoses of conditions like endometrial cancer.

•**Higher Mortality Rates in Gynecologic Cancers**
Black women face significantly higher mortality rates from gynecologic cancers: they are over twice as likely to die from uterine cancer and 60% more likely to die from cervical cancer compared to non-Hispanic white women.

•**Underrepresentation in Fertility Treatments**
Despite higher reported infertility rates (12% vs. 7% for white women), only 8% of Black women access fertility treatments, compared to 15% of white women. Financial barriers, lack of insurance coverage, and cultural stigma contribute to this disparity.

•**Socioeconomic Barriers to Preventive Care**
Women with low income, limited health literacy, and inadequate insurance are less likely to undergo regular screenings for cervical and other cancers, leading to later-stage diagnoses and poorer outcomes.



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Social and Medical burden of Gynecologic Conditions

•High Prevalence, Limited Recognition
Conditions like fibroids, endometriosis, and PCOS affect millions globally but are often underdiagnosed or misdiagnosed.
•Chronic Pain and Functional Impairment
Persistent symptoms impact quality of life, work productivity, and daily functioning.
•Delays in Diagnosis and Treatment
Many women face years-long delays in receiving appropriate care, particularly women of color.
•Economic Costs
Significant direct medical costs (surgeries, medications) and indirect costs (lost wages, absenteeism).
•Mental Health Impact
Associated with depression, anxiety, and reduced quality of life.
•Social and Cultural Stigma
Taboo around menstruation and reproductive health can lead to silence and inadequate care-seeking.

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https://www.rcog.org.uk/news/new-rcog-research-highlights-the-huge-impact-of-gynaecological-conditions-on-women-globally-predominantly-in-low-and-middle-income-countries/#:~:text=For%20instance%2C%20menstrual%20dysfunction%20is,more%20equitable%20

The Global Impact of Benign Gynecologic Conditions

Disproportionate Burden in LMICs
BGC-related morbidity in low- and middle-income countries (LMICs) exceeds that of several other prioritized global health conditions.

Underreported and Underresourced
Despite high prevalence and impact, BGCs remain overlooked in global women's health agendas.

Drivers of Gender Inequality
Chronic pain, stigma, and lack of access to care perpetuate disparities in education, employment, and quality of life for women.

Urgent Need for Advocacy
Destigmatizing menstruation and gynecologic conditions is critical to advancing women's health equity.

Call for Holistic, Gender-Responsive Care
Comprehensive, integrated healthcare approaches are essential to address physical, mental, and social impacts of BGCs.

Thank you

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Uterine Fibroids: An Overview of Disease and Disparities

Ambereen Sleemi, MD, MPH
Executive Director, International Medical Response
Urogynecologist and Pelvic Reconstructive Surgeon
June 6, 2025

Purpose and Objectives

PURPOSE

Provide updates evidence based recommendations for management of fibroids

OBJECTIVES

- Definition and Epidemiology of Fibroids
- Clinical Considerations
- Treatment options and recommendations
- Disparities in fibroid care

Agenda

- Overview of Fibroids (Myomas, Leiomyomata)
- Prevalence
- Symptoms
- Diagnosis
- Treatment options

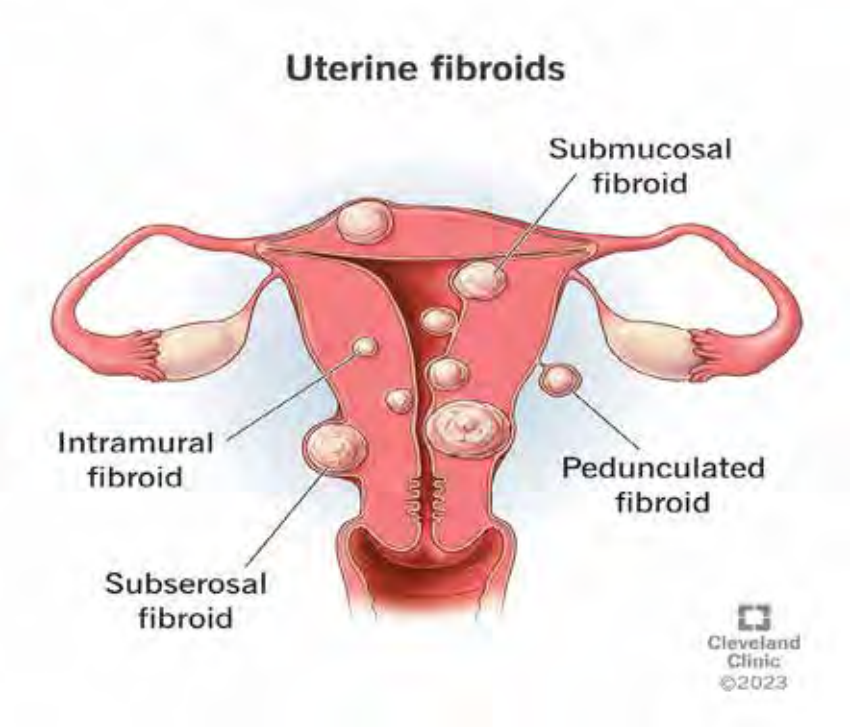
Uterine Leiomyomas

- What are leiomyomas?

- How prevalent are they?

Definition of Myomas

- solid neoplasms composed of smooth muscle cells and fibroblasts
- Vary in sizes and place
- The most common benign pelvic tumor in women



Classification

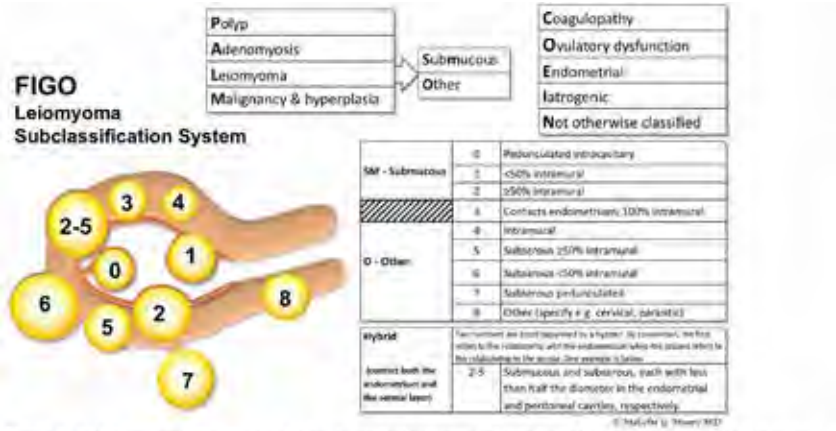


Figure 1. FIGO Abnormal Uterine Bleeding System 2 classification system including the FIGO leiomyoma subclassification system. Abbreviation: FIGO, International Federation of Gynecology and Obstetrics. (Reprinted from Munro MG, Critchley HO, Fraser IS. The two FIGO systems for normal and abnormal uterine bleeding symptoms and classification of causes of abnormal uterine bleeding in the reproductive years: 2018 revisions. FIGO Menstrual Disorders Committee (published erratum appears in Int J Gynaecol Obstet 2019; 144:237). Int J Gynaecol Obstet 2018; 143:393–408.)

Epidemiology

- Common up to 70% of women will have fibroids
- Symptomatic vs asymptomatic-only 25% are symptomatic
- Incidence-largely unknown, increases with age, fam hx, htn, dm

Prevalence

- 2-3X higher in Black women
- occur in almost 70 % of Caucasian women and in greater than 80 % of African American women by age 50
- Black women- earlier onset, more anemia, larger uteri at time of diagnosis – likely to systemic racism and social determinants of health
    - Delay in care, lack of access
    - Higher rates of hyst, and open surgery when controlled for uterine size

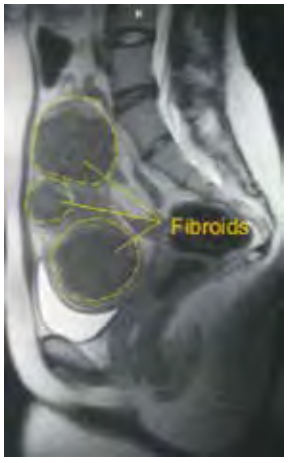
Symptoms

- Bleeding- prolonged and heavy
- Pressure symptoms
- Bowel/urinary symptoms

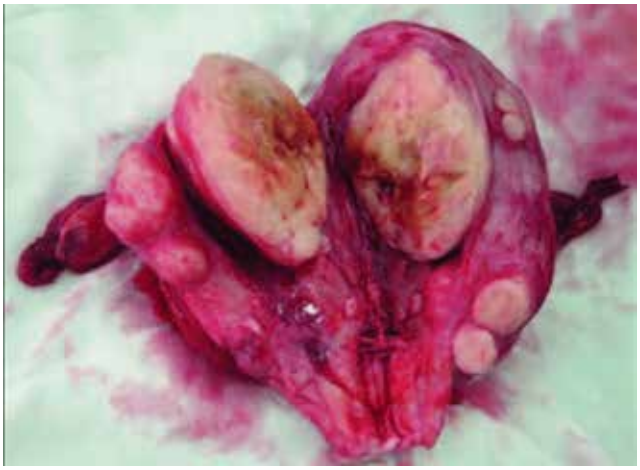
Diagnosis

- History and exam-
  - Symptoms? Growth? Pain? Bleeding?
- Testing- anemia
- Imaging-TV us, sonohysterography, hysteroscopy
  - MRI- surgical planning
- Evaluation for other pathology
  - Malignant sarcoma

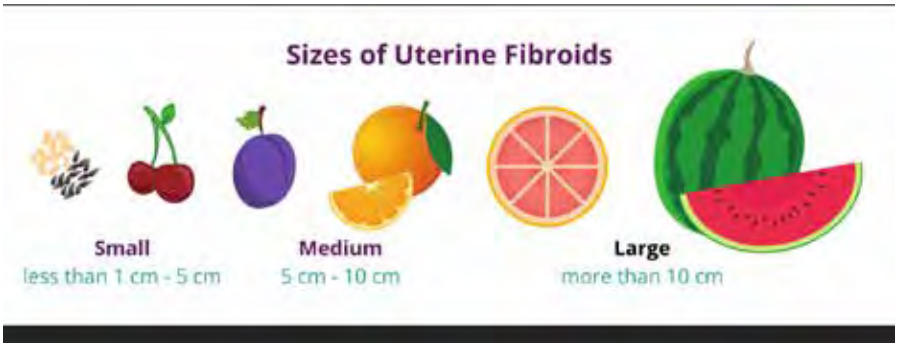
MRI of large myomas



Cut section of submucosal and subserosal



Gyns are obsessed with fruit



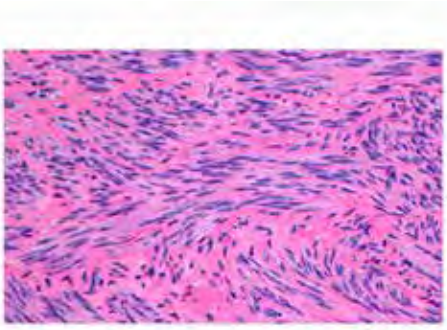
Rare but deadly if confused

This is a leiomyosarcoma protruding from myometrium into the endometrial cavity of this uterus that has been opened laterally so that the halves of the cervix appear at the far right and left. Fallopian tubes and ovaries project from top and bottom. The irregular nature of this mass suggests that is not just an ordinary leiomyoma.

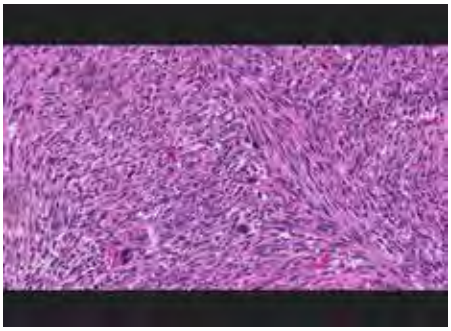
Leiomyosarcoma

- Can mimic benign fibroids
- Are uncommon- 8% of uterine cancers
- Intraoperatively can spread
- Rapidly growing
- Can be hard to distinguish on imaging

Leiomyosarcoma- increased mitosis, cellular disarray



Leiomyoma, light micrograph



Treatment options

- Expectant-asymptomatic, those who don't desire intervention
- Medical-lack of evidence to support NSAID used for heavy bleeding w fibroids
- CAM- acupuncture/herbal remedies- lack of evidence for fibroids
- Intervention: patient-centered,shared-decision making
  - Symptom focused, fertility
- Surgical

Expectant management

- Who is a candidate?
  - Most women are without symptoms
- Patients approaching menopause-
  - myomas decline after in size and symptoms w/ lack of estrogen and progesterone
- How to follow

Medical options

- Symptom treatment-excess bleeding, pain

- Bleeding treatment: GnRH antagonists- ELAGOLIX-oral 300mg BID w/ add back tx(hormones to counter the hypoestrogen efx)
  - Effective for blood loss, 88% pts w/ improvement
  - Up to 24 mo trt
- IUD w hormones: levonogestrel decrease bleeding inducing endometrial atrophy
- OCPS-combined and progestin-only
- Tranexamic acid-can limit menstrual blood loss
- Bleeding and size: GnRH agonists Long term vs short term: some tx are bridging until surgery

Medical treatement for Size and Bleeding

- GnRH agonists- short term treatment for size and bleeding (Leuprolide)
- Bridging treatment until other strategy
- Decreases blood flow
- Decreased myoma size
- Myomas grow back 3-9 mo after trt

Interventions

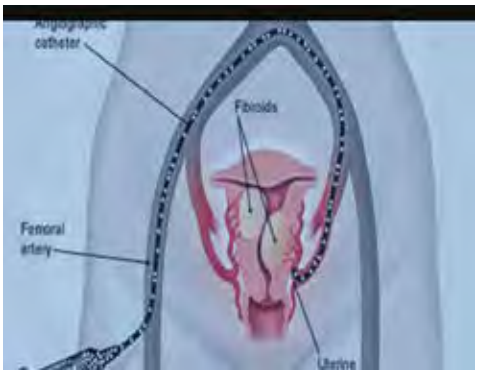
- Uterine artery embolization
- Radiofrequency Ablation
- Focused ultrasound
- Endometrial ablation

Uterine artery embolization

- Recommended as intervention for uterine preservation
- Embolic agent delivered thru catheterization of uterine arteries
- Cause devascularization and involution
- Sig reduction in size for up to 5 years
- Improvement in bleeding symptoms
- Reintervention rates noted at 14.4% at 60 mo

UAE

- Complications:
  - Major 1-12% incl unplanned hysterectomy, Rehospitalization, ovarian failure, pulm embolism
  - Minor 21-64% pain, fever, nausea, vaginal d/c, pelvic infection
- Limited data on fertility
- Inc risk of preg loss, c/s, pp hemorrhage



Radiofrequency ablation

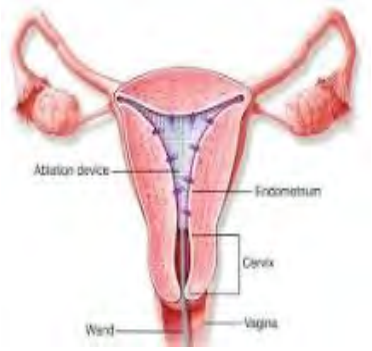
- 1st reported in 2002
- hyperthermic ablation is using elevated temperature to produce tissue destruction- ultrasound guided
- Safe to use
- Uterine preserving

Focus Ultrasound

- Non invasive
- Used hi-intensity ultrasound to cause necrosis
- MRI- guided
- Limited low-quality data
- Small RCT trial- less improvement in symptoms and QOL
- 53.9% re-intervention
- Not recommended

Endometrial ablation

- Intervention that destroys the endometrial lining
- Some evidence it help bleeding symptoms
- Insufficient evidence to recommend for myomas



Surgery

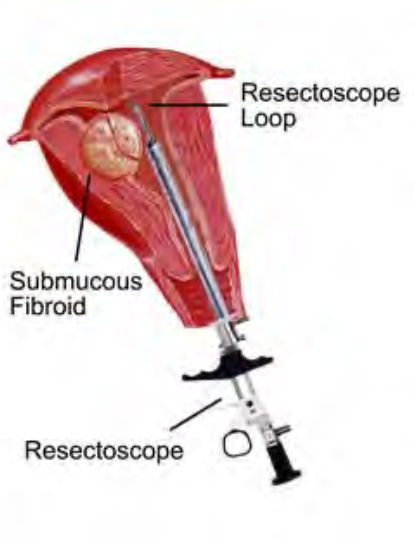
- Considerations
  - Fertility considerations- cavity distortion
  - Anemia- preoperative management if considering a myomectomy or hysterctomy
  - Myomectomy vs Hysterectomy

Myomectomy

- Uterine preservation consideration
- Can be hysteroscopic/laparoscopic/robotic or abdominal via laparotomy
- All improve QOL
  - Not clear if it improves bleeding issues
  - Preg rates differ if it's subserosal (outside surface) vs. submucosal

Hysteroscopic Myomecotomy

- Isolated myomas- submucosal into cavity
- Rapid recovery
- Low risk of complications
- Low re-intervention rates
- "hot knife through butter"



Laparoscopic/robotic myomectomy

- Symptomatic treatment/uterine preservation
- Faster recovery, less post op pain,
  - Short term QOL same as abdominal myomectomy
  - Increase recurrence rate if > 5 fibroids
- Robotic use offers no benefit for OR time, blood loss or hospital stay

Hysterectomy

- Recommended as definitive solution
- Myomas are the leading reason for hysterectomy
- No fertility desired
- Improvement in anemia
- Improvement in QOL
- Vaginal route preferred if possible

Quality of Life

- Effects of treatment: both myomectomy and hyst offer improvement in QOL and symptoms
- Long term vs short term

Health Disparities in Fibroid/Myoma Care

- Healthy People 2030 defines health disparities as “a particular type of health difference that is closely linked with economic, social or environmental disadvantage,” which are the result of the social, structural, and political context
- Systematic review by Katon et al 2023 found
  - US: Prevalence of fibroids higher in Black women
    - Possible increase to exposures that cause fibroids
    - Lack of access to high-quality care
    - Negative experiences

Biologic differences in fibroids?

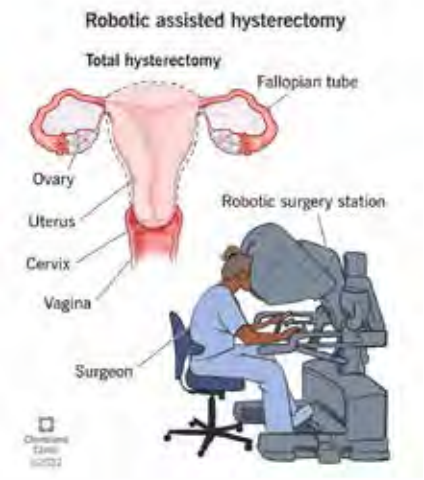
- Bateman et al (2024) in an analysis of fibroids in Black and White women found in Black women:
  - higher incidence of mutations
  - Increased extracelluar matrix proteins
  - Stiffer phenotypes
- Bariani et al (2024) found higher extracellular matrix proteins in the myometrium of Black women before fibroid development ie the conversion of myometrial tissue to fibroid tissue
- Gene expression: impacted by allostatic load
  - chronic daily stressors: racism, sexism, other marginalizing harmful factors
- Hair products (relaxers, straightens) with chemicals associated with inc risk of fibroids
  - Wise et al found that ever versus never use of hair relaxers among Black women was associated with 17% higher incidence of uterine fibroids (IIR 1.17, 95% CI 1.06, 1.30)

Disparities in treatment

- Black women more likely to undergo surgical intervention
  - Higher rates of hospitalization, myomectomies, hysterectomy compared to White women
  - Post op complications were significantly higher in Black patients compared to white (odds ratio [OR], 2.5; 95% CI, 1.5–4.8)
  - Periop blood transfusions also higher (OR, 2.3; 95% CI, 1.1–5.0)
  - Religious restrictions on transfusions may play a role as Blacks are overrepresented among Jehovah's witnesses (22% Black where gen US pop is 12% Black) Can impact delay or avoidance of medical care
- Taren et al in 2010 reported most studies on fibroids didn't report race/ethnicity

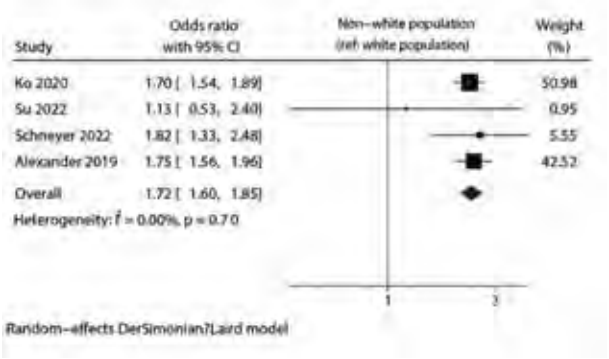
Socioeconomic Impact and Fibroid Care

- White women/ women of other racial groups with private insurance are more likely to undergo laparoscopic procedures
- African Americans, Hispanics& women with Medicare coverage more likely to undergo abdominal procedures, even for the same indication



Socioeconomic Impact and Fibroid Care

- 2025 meta-analysis from Hessami et al report nonwhite patients often demonstrating lower access to MIS utilization and higher rates of surgical morbidity than white patients.
- Black and Hispanic patients were less likely to undergo MIS compared to white patients (Black: OR 0.44 [95% CI 0.39–0.49] and Hispanic: OR 0.65 [95% CI 0.59–0.71]).
- Nonwhite patients higher risk: develop surgical complications after hysterectomy in either MIS (OR 1.32 [95% CI: 1.15–1.52]) or open hysterectomy (OR 1.56 [95% CI: 1.40–1.73]).



Racial Disparities in Minimally Invasive Benign Hysterectomy Hessami et al JSLS 2025 Jan2;28(3):e2024.00018.

Disparity in Uterine Cancer Care

- Well documented that Black women have a 2-4 fold higher inc of high risk cancer types and worse outcomes due to many factors incl hihg-risk subtypes
- Factors incl access to care, symptoms and bias in diagnosis
- The incidence of non-endometrioid subtypes was higher in Black compared to White women, with the most pronounced differences seen in serous carcinoma (9.1 vs. 3.0), carcinosarcoma (6.1 vs. 1.8), and leiomyosarcoma (1.3 vs. 0.6)

- **Racial disparities in high-risk uterine cancer histologic subtypes: A United States Cancer Statistics study Abel et al.** Gynecol Oncol 2021 May;161(2):470-476

Recommendations to consider

- Treatment options
- Surgical vs. Medical
- Best outcomes occur with patient-centered care and shared-decision making and culturally-competent care
- Disparity in care and impact on fibroid pathology, diagnosis and care
  - Everything from gene expression to structural causes impact on fibroid care