

Good reads:

- https://www.nejm.org/doi/10.1056/NEJMp2116224?url_ver=Z39.88-2003&rfr_id=ori:rid::crossref.org&rfr_dat=cr_pub%20%20pubmed
- [How Should Educators and Publishers Eliminate Racial Essentialism? | Journal of Ethics | American Medical Association \(ama-assn.org\)](#)

Preclinical lectures

- Pathologizing race in preclinical lectures
- <https://www.nejm.org/doi/full/10.1056/NEJMms2025768>

Issues in board prep/study questions

- The use of race in these questions can promote biases
- <https://www.tandfonline.com/doi/abs/10.1080/10401334.2016.1268056>
- [How Should Educators and Publishers Eliminate Racial Essentialism? | Journal of Ethics | American Medical Association \(ama-assn.org\)](#)

Use of race in patient presentation

- Race in one liners can pathologize race
- <https://journalofethics.ama-assn.org/article/mention-patients-race-clinical-presentations/2014-06>
- [Mitigating Racism and Implicit Bias in Psychiatric Notes: a Quality Improvement Project Addressing How Race and Ethnicity Are Documented | SpringerLink](#)
- [First Impressions — Should We Include Race or Ethnicity at the Beginning of Clinical Case Presentations? | NEJM](#)
- [Differential Documentation of Race in the First Line of the History of Present Illness - PMC \(nih.gov\)](#)

Clinical signs in Black and Brown Skin

- Images used to depict skin conditions or other physical findings are underrepresented in textbooks and preclinical curriculum materials
- <https://www.blackandbrownskin.co.uk/mindthegap>
- <https://www.sciencedirect.com/science/article/pii/S0277953618300790>
- <https://www.ingentaconnect.com/content/wk/acm/2016/00000091/00000007/art00031>

Race in GFR calculations

- In 2021 a task force from the National Kidney Foundation and American Society of Nephrology recommended immediate implementation of the creatinine equation refit without the race variable in all laboratories
- <https://jamanetwork.com/journals/jama/fullarticle/2735726>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8638402/>
- [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)32716-1/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)32716-1/fulltext)

Race in clinical algorithms

- Race adjusted algorithms have the potential to direct more attention or resources to white patients than others
- <https://www.nejm.org/doi/full/10.1056/NEJMms2004740>

Issues in textbooks

- Textbooks often describe unique disease profiles between races that aren't supported by the literature
- https://journals.lww.com/academicmedicine/Fulltext/2022/10000/Race_in_the_Reading_A_Study_of_Problematic_Uses.30.aspx
- https://journals.lww.com/academicmedicine/fulltext/2011/10000/Unsupported_Labeling_of_Race_as_a_Risk_Factor_for.33.aspx
- [How Should Educators and Publishers Eliminate Racial Essentialism? | Journal of Ethics | American Medical Association \(ama-assn.org\)](https://www.ama-assn.org/journal-of-ethics)

	Racialized Text	Non-Racialized Text
1	“The allele responsible for sickle cell anemia is particularly common among people of African descent; about 9% of African Americans are heterozygous for this allele. About 0.2% are homozygous and therefore have the symptoms of sickle cell anemia. In some groups of people in Africa, up to 45% of all individuals are heterozygous for this allele, and 6% are homozygous. Why is sickle cell anemia so common in Africa? It turns out that carriers of sickle cell anemia are more resistant to malaria, a common and serious disease in central Africa.” (Raven & Johnson, 2002, p. 260)	“About 2 million Americans (0.6%) are carriers of the allele responsible for sickle cell anemia. Around 72,000 people have the symptoms of the disease because they are homozygous. However, in some groups of people in the world, up to 45% of all individuals are heterozygous for this allele, and 6% are homozygous and therefore have the symptoms of sickle cell anemia. Why is sickle cell anemia so common in some groups of people? It turns out that carriers of sickle cell anemia are more resistant to malaria, a common and serious disease in many parts of the world.”
2	http://www.mhhe.com/biosci/genbio/raven6b/information/olc/samplechapter.mhtml . Use this link and then view page 260 of Raven & Johnson (2002) to see the figures used in the experimental text that depicted the distribution of malaria and SCA only in Africa.	http://www.understandingrace.org/humvar/sickle_01.html Use this link to view the figures used in the control condition that depicted the distribution of malaria and SCA in all world populations.
3	“Perhaps the best example is cystic fibrosis (CF), the most common fatal genetic disorder among Caucasians” (Raven & Johnson, 2002, p. 261).	“Perhaps the best example is cystic fibrosis (CF)” (Raven & Johnson, 2002, p. 261).
4	Frequency among human births: cystic fibrosis: 1/2,500 Caucasians sickle cell anemia: 1/625 African-Americans	Frequency among human births: cystic fibrosis: 1/3500 sickle cell anemia: 1/5,000

- - o For example cystic fibrosis should not only be thought of as a disease of ‘white people’ <https://jamanetwork.com/journals/jama/article-abstract/2780564>
 - Further clarification should be provided saying that when doing carrier screening, the residual risk after a negative test is calculated based on ethnic background (due to the different prevalence of specific variants in various populations), genetic counselors are specifically trained to discuss this with patients and ask about self-identified ethnicity

How to report race and ethnicity in medical and science journals

- <https://jamanetwork.com/journals/jama/article-abstract/2783090>

Table 1. Examples of Race Correction in Clinical Medicine.^a

Tool and Clinical Utility	Input Variables	Use of Race	Equity Concern
Cardiology			
The American Heart Association's Get with the Guidelines—Heart Failure ¹⁸ (https://www.mdcalc.com/gwtg-heart-failure-risk-score) <i>Predicts in-hospital mortality in patients with acute heart failure. Clinicians are advised to use this risk stratification to guide decisions regarding initiating medical therapy.</i>	Systolic blood pressure Blood urea nitrogen Sodium Age Heart rate History of COPD Race: black or nonblack	Adds 3 points to the risk score if the patient is identified as nonblack. This addition increases the estimated probability of death (higher scores predict higher mortality).	The original study envisioned using this score to "increase the use of recommended medical therapy in high-risk patients and reduce resource utilization in those at low risk." ¹⁹ The race correction regards black patients as lower risk and may raise the threshold for using clinical resources for black patients.
Cardiac surgery			
The Society of Thoracic Surgeons Short Term Risk Calculator ²⁰ (http://riskcalc.sts.org/stswebriskcalc/calculate) <i>Calculates a patient's risks of complications and death with the most common cardiac surgeries. Considers >60 variables, some of which are listed here.</i>	Operation type Age and sex Race: black/African American, Asian, American Indian/Alaskan Native, Native Hawaiian/Pacific Islander, or "Hispanic, Latino or Spanish ethnicity"; white race is the default setting. BMI	The risk score for operative mortality and major complications increases (in some cases, by 20%) if a patient is identified as black. Identification as another non-white race or ethnicity does not increase the risk score for death, but it does change the risk score for major complications such as renal failure, stroke, and prolonged ventilation.	When used preoperatively to assess a patient's risk, these calculations could steer minority patients, deemed higher risk, away from these procedures.
Nephrology			
Estimated glomerular filtration rate (eGFR) MDRD and CKD-EPI equations ²¹ (https://ukidney.com/nephrology-resources/egfr-calculator) <i>Estimates glomerular filtration rate on the basis of a measurement of serum creatinine.</i>	Serum creatinine Age and sex Race: black vs. white or other	The MDRD equation reports a higher eGFR (by a factor of 1.210) if the patient is identified as black. This adjustment is similar in magnitude to the correction for sex (0.742 if female). The CKD-EPI equation (which included a larger number of black patients in the study population), proposes a more modest race correction (by a factor of 1.159) if the patient is identified as black. This correction is larger than the correction for sex (1.018 if female).	Both equations report higher eGFR values (given the same creatinine measurement) for patients identified as black, suggesting better kidney function. These higher eGFR values may delay referral to specialist care or listing for kidney transplantation.
Organ Procurement and Transplantation Network: Kidney Donor Risk Index (KDRI) ²² (https://optn.transplant.hrsa.gov/resources/allocation-calculators/kdri-calculator/) <i>Estimates predicted risk of donor kidney graft failure, which is used to predict viability of potential kidney donor.[†]</i>	Age Hypertension, diabetes Serum creatinine level Cause of death (e.g., cerebrovascular accident) Donation after cardiac death Hepatitis C Height and weight HLA matching Cold ischemia En bloc transplantation Double kidney transplantation Race: African American	Increases the predicted risk of kidney graft failure if the potential donor is identified as African American (coefficient, 0.179), a risk adjustment intermediate between those for hypertension (0.126) and diabetes (0.130) and that for elevated creatinine (0.209–0.220).	Use of this tool may reduce the pool of African-American kidney donors in the United States. Since African-American patients are more likely to receive kidneys from African-American donors, by reducing the pool of available kidneys, the KDRI could exacerbate this racial inequity in access to kidneys for transplantation.
Obstetrics			
Vaginal Birth after Cesarean (VBAC) Risk Calculator ^{23,24} (https://mfimnetwork.bsc.gwu.edu/PublicBSC/MFMU/VGBirthCalc/vagbirth.html) <i>Estimates the probability of successful vaginal birth after prior cesarean section. Clinicians can use this estimate to counsel people who have to decide whether to attempt a trial of labor rather than undergo a repeat cesarean section.</i>	Age BMI Prior vaginal delivery Prior VBAC Recurring indication for cesarean section African-American race Hispanic ethnicity	The African-American and Hispanic correction factors subtract from the estimated success rate for any person identified as black or Hispanic. The decrement for black (0.671) or Hispanic (0.680) is almost as large as the benefit from prior vaginal delivery (0.888) or prior VBAC (1.003).	The VBAC score predicts a lower chance of success if the person is identified as black or Hispanic. These lower estimates may dissuade clinicians from offering trials of labor to people of color.
Urology			
STONE Score ^{25,26} <i>Predicts the risk of a ureteral stone in patients who present with flank pain</i>	Sex Acute onset of pain Race: black or nonblack Nausea or vomiting Hematuria	Produces a score on a 13-point scale, with a higher score indicating a higher risk of a ureteral stone; 3 points are added for nonblack race. This adjustment is the same magnitude as for hematuria.	By systematically reporting lower risk for black patients than for all nonblack patients, this calculator may steer clinicians away from aggressive evaluations of black patients.
Urinary tract infection (UTI) calculator ²⁷ (https://uticalc.pitt.edu/) <i>Estimates the risk of UTI in children 2–23 mo of age to guide decisions about when to pursue urine testing for definitive diagnosis</i>	Age <12 months Maximum temperature >39°C Race: Describes self as black (fully or partially) Female or uncircumcised male Other fever source	Assigns a lower likelihood of UTI if the child is black (i.e., reports a roughly 2.5-times increased risk in patients who do not describe themselves as black).	By systematically reporting lower risk for black children than for all nonblack children, this calculator may deter clinicians from pursuing definitive diagnostic testing for black children presenting with symptoms of UTI.
Oncology			
Rectal Cancer Survival Calculator ²⁸ (http://www3.mdanderson.org/app/medical/index.cfm?pagename=rectumcancer) <i>Estimates conditional survival 1–5 yr after diagnosis with rectal cancer</i>	Age and sex Race: white, black, other Grade Stage Surgical history	White patients are assigned a regression coefficient of 1, with higher coefficients (depending on stage) assigned to black patients (1.18–1.72).	The calculator predicts that black patients will have shorter cancer-specific survival from rectal cancer than white patients. Clinicians might be more or less likely to offer interventions to patients with lower predicted survival rates.
National Cancer Institute Breast Cancer Risk Assessment Tool (https://bcrisktool.cancer.gov/calculator.html) <i>Estimates 5-yr and lifetime risk of developing breast cancer, for women without prior history of breast cancer, DCIS, or LCIS.</i>	Current age, age at menarche, and age at first live birth First-degree relatives with breast cancer Prior benign biopsies, atypical biopsies Race/ethnicity: white, African American, Hispanic/Latina, Asian American, American Indian/Alaska Native, unknown	The calculator returns lower risk estimates for women who are African American, Hispanic/Latina, or Asian American (e.g., Chinese).	Though the model is intended to help conceptualize risk and guide screening decisions, it may inappropriately discourage more aggressive screening among some groups of nonwhite women.
Breast Cancer Surveillance Consortium Risk Calculator ²⁹ (https://tools.bccsc.org/BCYearRisk/calculator.htm) <i>Estimates 5- and 10-yr risk of developing breast cancer in women with no previous diagnosis of breast cancer, DCIS, prior breast augmentation, or prior mastectomy</i>	Age Race/ethnicity: white, black, Asian, Native American, other/multiple races, unknown BIRADS breast density score First-degree relative with breast cancer Pathology results from prior biopsies	The coefficients rank the race/ethnicity categories in the following descending order of risk: white, American Indian, black, Hispanic, Asian.	Returns lower risk estimates for all nonwhite race/ethnicity categories, potentially reducing the likelihood of close surveillance in these patients.
Endocrinology			
Osteoporosis Risk SCORE (Simple Calculated Osteoporosis Risk Estimation) ³⁰ (https://www.mdapp.co/osteoporosis-risk-score-calculator-316/) <i>Determines whether a woman is at low, moderate, or high risk for low bone density in order to guide decisions about screening with DXA scan</i>	Rheumatoid arthritis History of fracture Age Estrogen use Weight Race: black or not black	Assigns 5 additional points (maximum score of 50, indicating highest risk) if the patient is identified as nonblack	By systematically lowering the estimated risk of osteoporosis in black patients, SCORE may discourage clinicians from pursuing further evaluation (e.g., DXA scan) in black patients, potentially delaying diagnosis and intervention.
Fracture Risk Assessment Tool (FRAX) ³¹ (https://www.sheffield.ac.uk/FRAX/tool.aspx) <i>Estimates 10-yr risk of a hip fracture or other major osteoporotic fracture on the basis of patient demographics and risk-factor profile. Calculators are country-specific.[‡]</i>	Age and sex Weight and height Previous fracture Parent who had a hip fracture Current smoking Glucocorticoid use Rheumatoid arthritis Secondary osteoporosis Alcohol use, ≥3 drinks per day Femoral neck bone mineral density	The U.S. calculator returns a lower fracture risk if a female patient is identified as black (by a factor of 0.43), Asian (0.50), or Hispanic (0.53). Estimates are not provided for Native American patients or for multiracial patients.	The calculator reports 10-yr risk of major osteoporotic fracture for black women as less than half that for white women with identical risk factors. For Asian and Hispanic women, risk is estimated at about half that for white women. This lower risk reported for nonwhite women may delay intervention with osteoporosis therapy.
Pulmonology			
Pulmonary-function tests ³² <i>Uses spirometry to measure lung volume and the rate of flow through airways in order to diagnose and monitor pulmonary disease</i>	Age and sex Height Race/ethnicity	In the U.S., spirometers use correction factors for persons labeled as black (10–15%) or Asian (4–6%).	Inaccurate estimates of lung function may result in the misclassification of disease severity and impairment for racial/ethnic minorities (e.g., in asthma and COPD). ²¹

^a BIRADS denotes Breast Imaging Reporting and Data System, BMI body-mass index (the weight in kilograms divided by the square of the height in meters), CKD-EPI Chronic Kidney Disease Epidemiology Collaboration, COPD chronic obstructive pulmonary disease, DCIS ductal carcinoma in situ, DXA dual-energy x-ray absorptiometry, LCIS lobular carcinoma in situ, and MDRD Modification of Diet in Renal Disease study.

[†] The current calculator uses Ethnicity/Race, with the following options: American Indian or Alaska Native, Asian, Black or African American, Hispanic/Latino, Native Hawaiian or Other Pacific Islander, White, and Multiracial.

[‡] Three countries' calculators are further subcategorized by race, ethnicity, or location: China (Mainland China, Hong Kong), Singapore (Chinese, Malay, Indian), and the United States (Caucasian, black, Hispanic, Asian).