Lack of Diversity in Textbook Images Depicting Diseases of the Breast

Black Americans have a higher cancer related mortality rate than any other racial group, yet they are underrepresented in medical education materials. We sought to determine the extent of skin tone representation depicted in images of breast cancer textbooks.

Textbooks were screened to include non-illustrated, color images of conditions with sufficient skin or breast tissue present to assign the Fitzpatrick skin phototype (FP) score. Included figures were independently reviewed and assigned a FP score (range: 1-6). Figures were grouped into “light skin color” (FP scores 1-3) and “dark skin color” (FP scores 4-6). Number of figures in each category were calculated, along with the percentage of patients with light skin color versus dark skin color. The Fisher Exact test was used to determine differences in representation across categories, with P< 0.05 as statistically significant.

12 textbooks with 557 eligible figures were included. Of the 363 operative images, 114 figures were pre-, 33 figures were intra-, and 216 were post-operative. Benign pathology encompassed 63 figures, of which 18 were categorized as infectious/benign and 45 as non-infectious/benign. Malignant pathologies were depicted in 115 figures. On a logistic regression model to evaluate the odds of a figure having dark skin color predicted by category, postoperative figures were 82% less likely (OR: 0.187, 95% CI: 0.049-0.718) to have dark skin color than the reference group, preoperative. Overall, 533 (95.7%) figures depicted patients with light skin color while 24 (4.3%) figures presented patients with dark skin color (p<0.05). There was no association between FP score and year of textbook publication (p=0.69).

Patient images in breast textbooks are mainly of light skin tones. The dearth of images depicting dark skinned individuals did not improve over time. Adding images with patients of color in future textbooks can contribute to the improvement of disparities within breast cancer care.