

01. Title: Readability of Patient-Facing Educational Websites on Superficial Radiation TherapyJessi Henige¹, Britta Carroll²¹ University of Miami, ² First-Year Medical Student at the University of Miami Miller School of Medicine.

Background: Superficial radiotherapy (SRT) is a form of radiation treatment used for superficial skin conditions, including non-melanoma skin cancers. Despite the importance of health literacy, online patient education materials for patients undergoing SRT often exceed recommended readability levels. Readability is defined as the level of reading ability required to understand a text, typically expressed as a U.S. grade-level equivalent. This study aimed to assess the readability of patient resources for SRT.

Methods: A systematic Google search was conducted using the term “superficial radiology treatment,” and the first 50 publicly accessible results were screened. Educational resources are defined as patient-directed content providing information on superficial radiotherapy, including descriptions of the procedure, indications, risks, and benefits. Non-educational sources (i.e. advertisements, duplicate pages, or content lacking substantive medical information) and peer-reviewed journal articles were excluded. Readability was assessed using the Flesch–Kincaid Grade Level (FKGL) formula and was calculated manually for each source by obtaining total word count, sentence count, and syllable count, and applying the standard equation. A mean readability grade level was calculated across all included materials.

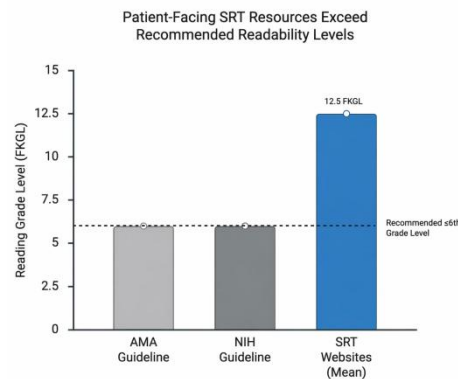
Results: The mean Flesch–Kincaid Grade Level (FKGL) for the 50 websites analyzed was 12.37 ± 2.17 (U.S. grade-level equivalent), with scores ranging from 5.86 to 16.81 FKGL. Overall, 98% ($n = 49$) of websites exceeded the recommended 6th-grade reading level for patient education materials. Additionally, 90% ($n = 45$) were written at or above a high school level (≥ 9 th grade), and 62% ($n = 31$) demonstrated college-level readability (FKGL > 12).

Conclusion: Online educational resources on superficial radiotherapy, a treatment commonly used for patients with non-melanoma skin cancers, are generally written above recommended readability levels for patient education. The National Institutes of Health and American Medical Association recommend that patient education materials be written at or below a 6th-grade reading level to ensure patient accessibility. However, most analyzed websites surpassed this threshold, indicating that online resources on superficial radiotherapy may be too complex for the general population to easily comprehend (Figure 1). Improving the clarity and accessibility of these materials may enhance patient understanding and support informed decision-making. Studies show that using Artificial Intelligence tools, like ChatGPT, can help to make health information easier to understand, improving health literacy.

Key Words: Radiotherapy, Skin Neoplasms, Health Literacy, Patient Education as Topic, Internet

Figure or Table:

Figure 1. Patient-Facing SRT Resources Exceed Recommended Readability Levels



Mean Flesch–Kincaid Grade Level (FKGL) of analyzed websites compared to the recommended ≤ 6 th-grade level by AMA and NIH.

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