

# A scoping review of clinical communication in cancer care in Africa

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# **Abstract**

**Background:** Cancer care involves disclosing difficult information, making treatment decisions, and advance care planning. Communication practices and preferences are strongly influenced by sociocultural context. This scoping review aims to identify, map, and appraise the available evidence on clinical communication in cancer care in Africa and recommend priorities for future work.

**Methods:** A search strategy was developed to identify studies conducted in Africa with a primary focus on patient-clinician communication in cancer care and performed in PubMed, Embase, Web of Science, CINAHL, African Index Medicus, and PsycINFO. Two reviewers independently screened titles and abstracts, full texts, and cited references. Study characteristics were analyzed using descriptive statistics and content analysis. Critical appraisal was performed using the Mixed Methods Appraisal Tool.

**Results:** Our search yielded 58 articles from 19 countries. Study designs were quantitative survey (53%), qualitative (38%), non-randomized experimental (5%), and mixed methods (3%), with no randomized trials. Populations included patients with cancer (n = 25), doctors (n = 24), nurses (n = 16), family/caregivers (n = 16), and/or others. Seven studies (12%) focused on pediatrics. Most studies (60%) focused on clinicians' disclosure of information, often framed as "breaking bad news" or "truth-telling." The remainder focused on information preferences (14%), advance care planning (10%), illness understanding (5%), shared decision making (5%), and communication training (3%). Critical appraisal demonstrated higher quality among qualitative than quantitative studies.

**Conclusions:** Future work should explore underexamined research areas such as patient-centered communication, translate observational findings into intervention development and testing, implement communication skills training, and evaluate outcomes related to communication in cancer care in Africa.

Key words: Cancer; communication; decision-making; breaking bad news; doctor-patient relations; Africa.

# Implications for practice

A rich body of evidence lays the groundwork for future research, training, and quality improvement initiatives in patient-clinician communication in cancer care in Africa. This work has the potential to meaningfully improve the overall quality of care and outcomes among patients, families, and clinicians.

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## Introduction

The burden of cancer is rising in Africa, with over 1.1 million new cases annually and a projected 90% increase by 2040. Currently, the majority (70%-80%) of patients present at advanced stages, and mortality rates are high. In the last decade, oncology and palliative care capacity have grown substantially in many African settings, presenting a pivotal opportunity to define and implement quality cancer care in local contexts. Effective communication between clinicians, patients, and families is integral to high-quality cancer care.

Clinical communication in cancer care involves complex tasks such as disclosing a new cancer diagnosis, discussing prognosis, making treatment decisions, and planning for end-of-life care. High-quality communication has been shown to improve patient well-being, alleviate caregiver burden, optimize healthcare resource utilization, and mitigate clinician burnout. Ar Recognizing that numerous barriers lead to suboptimal communication, international guidelines recommend specific practices and skills-based training for clinicians caring for patients with cancer.

However, interpretations of "high quality" clinical communication vary worldwide. Cultural and structural factors influence communication preferences and practices. For instance, the degree of knowledge and directness of communication that a patient desires, the level of patient and/or family involvement in care decisions, and the perceived power dynamics between patients and clinicians vary across diverse contexts.<sup>10</sup> Yet despite significant contextual differences, most communication guidelines and interventions are based on research from Western countries. Initiatives to improve clinical communication in African cancer care settings should be informed by research from these contexts. While a variety of studies on different aspects of cancer communication have been conducted in Africa, this body of literature has not yet been comprehensively reviewed. Given the complex and heterogenous nature of communication research, a scoping review is needed to provide an overview of the existing evidence base and conceptual boundaries of cancer communication in Africa.<sup>11</sup>

This scoping review aims to systematically identify, map, and appraise the breadth of evidence on clinical communication in cancer care in Africa. Specifically, we aim to describe the extent, range, and nature of available evidence; to clarify key concepts; to evaluate methodological quality; and to identify gaps in this literature. This review serves as a precursor to future systematic reviews that will synthesize research findings among subsets of similar studies. Our overall goals are to recommend research priorities and inform initiatives that will improve communication in cancer care in Africa.

#### Methods

#### Study protocol

This scoping review follows Joanna Briggs Institute guidance<sup>11,14</sup> and is reported here using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist.<sup>15</sup> An a priori protocol was previously published in the Open Science Framework.<sup>16</sup>

#### Inclusion criteria

Articles reporting original studies that met the following criteria<sup>11</sup> were included:

- Context: The study was conducted in Africa. International multisite studies were eligible if results were reported by the site.
- Population: Study participants were patients with cancer, family or caregivers, and/or healthcare workers who care for patients with cancer (herein "clinicians").
   Studies of serious illness more broadly were eligible if cancer was clearly among the illnesses included.
- Concept: The primary focus of the study was communication. Studies of other aspects of cancer care or palliative care were included only if communication was the focus of at least one aim and major finding. Since our original intent was to examine the construct "serious illness communication," or potentially difficult conversations involving delivery of serious news, prognostic communication, and/or shared decision-making based on patient's values and goals, <sup>17</sup> we excluded studies that focused on general patient education.

No limitations were placed on language or publication year. We included published research only.

#### Information sources and search

In collaboration with a research librarian (E.W.), we developed an electronic literature search strategy that combined 3 domains: geography, clinical context, and communication (Supplementary Table S1). For geography, each African country was named in the search string in addition to Mesh terms for Africa. For clinical context, search terms included: "cancer," "oncology," "palliative," "hospice," "serious illness," "terminal illness," "end of life," and "Terminal Care [Mesh]." The communication domain included multiple terms for the conceptual categories of patient-clinician communication, information disclosure, decision-making, and advance care planning. For each category, potential terms were iteratively tested and those that yielded additional eligible articles were retained. The final search strategy was applied to PubMed, Embase, Web of Science, CINAHL, African Index Medicus, and PsycINFO in August 2023. Citations were uploaded to Rayyan, a web app for systematic reviews (http://rayyan.gcri.org/).

# Study selection

Two to 3 reviewers (R.D., C.W., E.W.) independently screened all titles and abstracts. Records that potentially met inclusion criteria were sought for retrieval. All retrievable articles underwent independent full-text review by at least 2 reviewers to determine eligibility. The works cited of all eligible articles were screened to identify additional titles. Discrepancies were resolved through consensus.

#### Data extraction

For each included article, 2 authors independently extracted the following variables: publication year, study location, language, country of authors' primary institutional affiliation, clinical context, study population, study design, data collection methods, communication category, study aims, relevant key findings, type of self-reported data (ie, experiences versus preferences), communication training recommendation, and quality appraisal items. Discrepancies were adjudicated by a third author.

## Critical appraisal

Methodological quality of the included studies was assessed using the Mixed Method Appraisal Tool (MMAT).<sup>18</sup> MMAT

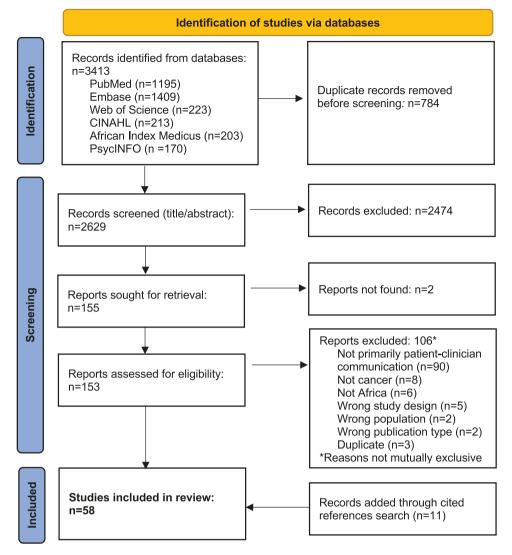


Figure 1. PRISMA Flow Diagram<sup>20</sup>.

was chosen because it is intended for heterogeneous study designs. Based on study design (ie, qualitative, survey, mixed methods), five criteria were scored on a nominal scale: "Yes," "No," or "Can't tell."

#### Data analysis

Descriptive statistics were used to analyze study characteristics and MMAT ratings, facilitated by Stata/SE 15.1 (StataCorp LLC). Basic qualitative content analysis was used to analyze study aims and major results, facilitated by MAXQDA (VERBI Software, 2022). We did not synthesize research findings in this review.<sup>11-13</sup>

#### Reflexivity

Our team includes members from the US, Rwanda, and Tanzania. Thus, our analysis is influenced by both a local and foreign pose (ie, position from which we write), and we aspire to write for both a local and foreign gaze (ie, audience). In an effort to embed both perspectives, data extraction and critical appraisal were performed independently by one American and one African author for each study, and all authors contributed to data interpretation. Our collective multidisciplinary expertise as health communication researchers, oncologists,

palliative care physicians, and bioethicists enhances this review.

# Results

# Study Selection

Our final search yielded 2,629 unique records (Figure 1). After screening titles and abstracts, 155 articles were sought for retrieval. Two articles were not found, and the remaining 153 underwent full text and cited references review, yielding 58 eligible articles (indexed in Supplementary Tables S2 and S3). The most common reason for exclusion was that communication was not the primary focus (see Supplementary Table S4).

#### Study characteristics

Publication dates ranged from 1996 to 2023, with half of the articles published since 2017. Study characteristics are summarized in Table 1. Studies were conducted in 19 countries across all regions of Africa (Figure 2), with the highest numbers in South Africa (n = 15), Nigeria (n = 10), Egypt (n = 7), and Kenya (n = 7). Most articles (93%) were published in English. The first author's primary institution was in Africa in 65% of articles; in the rest, first authors were based in the

**Table 1.** Study characteristics (n = 58).

|   | n      | %       |
|---|--------|---------|
| Geographic location   |        |         |
| Single country in Africa                                    | 51     | 88      |
| Multiple countries in Africa                                | 5      | 9       |
| Multiple countries within and outside of Africa             | 2      | 3       |
| Language of published article                               |        |         |
| English   | 54     | 93      |
| French  | 4      | 7       |
| Country of first author's primary institutional affiliation |        |         |
| African country being studied                               | 36     | 62      |
| Other country in Africa                                     | 2      | 3       |
| United States   | 7      | 12      |
| United Kingdom  | 7      | 12      |
| Other country in Europe                                     | 3      | 5       |
| Canada  | 2      | 3       |
| Japan   | 1      | 2       |
| Proportion of authors with primary affiliation in Africa    |        |         |
| All (100%)  | 28     | 48      |
| A majority (50%-99%)  | 10     | 17      |
| A minority (1%-49%)   | 9      | 15      |
| None (zero)   | 8      | 14      |
| Data not available  | 3      | 5       |
| Age group of focus  |        |         |
| Adult   | 36     | 62      |
| Both adult and pediatrics                                   | 10     | 17      |
| Pediatrics  | 7      | 12      |
| Not specified   | 5      | 9       |
| Clinical context  |        |         |
| Cancer/oncology   | 36     | 62      |
| Hospital  | 13     | 22      |
| Palliative care or hospice                                  | 6      | 10      |
| Community   | 2      | 3       |
| Medical school  | 1      | 2       |
| Study populations (not mutually exclusive; $n = 103$ )      |        |         |
| Patients with cancer  | 25     | 24      |
| Doctors   | 24     | 23      |
| Family or caregivers  | 16     | 15      |
| Nurses  | 16     | 15      |
| Other   | 15     | 15      |
| Patients with serious illness                               | 7      | 7       |
| Study type per MMAT designations                            | ,      | ,       |
| Quantitative descriptive                                    | 31     | 53      |
| Qualitative descriptive  Qualitative only                   | 22     | 38      |
| Non-randomized experimental                                 | 3      | 5       |
| Mixed methods   | 2      | 3       |
| Data collection methods (not mutually exclusive; $n = 75$ ) | _      | 9       |
| Survey using novel or adapted instrument                    | 32     | 42      |
| Qualitative interviews                                      | 20     | 26      |
| Survey using established instrument                         | 7      | 20<br>9 |
| Qualitative focus groups                                    | 6      | 8       |
| Ethnographic observation                                    | 5      | 7       |
| Emmographic observation                                     | 3<br>4 | 5       |
| Medical record review                                       |        |         |
| Medical record review Survey instrument validation          | 1      | 1       |

United States (12%), United Kingdom (12%), Europe (5%), Canada (3%), and Japan (2%). In most articles, either all authors (48%) or the majority (17%) were based in Africa. Eight articles (14%) had no authors based in Africa.

#### Clinical context

The majority of studies (62%) pertained to adult patients, with 2 focused on elderly adults. <sup>21,22</sup> Seven studies (12%) focused on a pediatric context, and 10 (17%) encompassed pediatric and adult contexts. The clinical context was most commonly cancer-focused (62%), followed by hospital settings (22%), palliative care or hospice (10%), and others (see Table 1). Study populations included patients with cancer (n = 25) or serious illness (n = 7), doctors (n = 24), nurses (n = 16), family/caregivers (n = 16), and/or others, with several (38%) including multiple categories. Among studies that included patients with cancer, most (n = 18; 72%) included a mix of cancer types, and 5 (20%) focused on breast cancer. <sup>23-27</sup>

# Study designs and methods

A total of 36 studies (62%) used quantitative methods. These were all descriptive observational studies except for 3 non-randomized experimental studies; there were no randomized experimental studies. Of the 3 experimental studies, 2 evaluated a communication training intervention<sup>28,29</sup> and 1 evaluated a clinical intervention for structured end-of-life decision-making.<sup>30</sup> All quantitative studies utilized a self-report measure, that is, a survey or questionnaire, except for one retrospective medical record review.<sup>31</sup> Three studies used both a survey and medical record review.<sup>30,32,33</sup>

Most survey/questionnaire studies used a novel instrument that was developed or adapted for that study (*n* = 32). Seven studies used previously established instruments, including the Control Preferences Scale,<sup>32,34</sup> Patient Illness Understanding survey,<sup>32</sup> Satisfaction with Decisions and Care Scale,<sup>34</sup> Doctor-Patient Relationship Questionnaire and Functional Assessment of Cancer Therapy-Breast Cancer,<sup>26</sup> Comfort with Communication in Palliative and End of Life Care instrument,<sup>29</sup> Integrated African Palliative Outcome Scale,<sup>33</sup> and 2 questionnaires about cancer disclosure to children that were formally validated in prior unpublished studies.<sup>35</sup> One study included a psychometric evaluation of an established instrument, that is, a survey of clinicians' self-reported communication practices, in an African setting.<sup>36</sup>

Of 4 mixed methods studies, 2 used a survey that contained both quantitative and qualitative questions,  $^{37,38}$  and 2 used both a quantitative survey and qualitative interviews.  $^{23,39}$  The remaining 22 qualitative studies (38%) used interviews (n = 20), focus groups (n = 6), ethnographic observation (n = 5), and/or key document review (n = 1). Three implementation-oriented studies collected qualitative data to inform the development or adaptation of communication guidelines  $^{37,40}$  or of a communication tool.  $^{41}$ 

## Conceptual categories

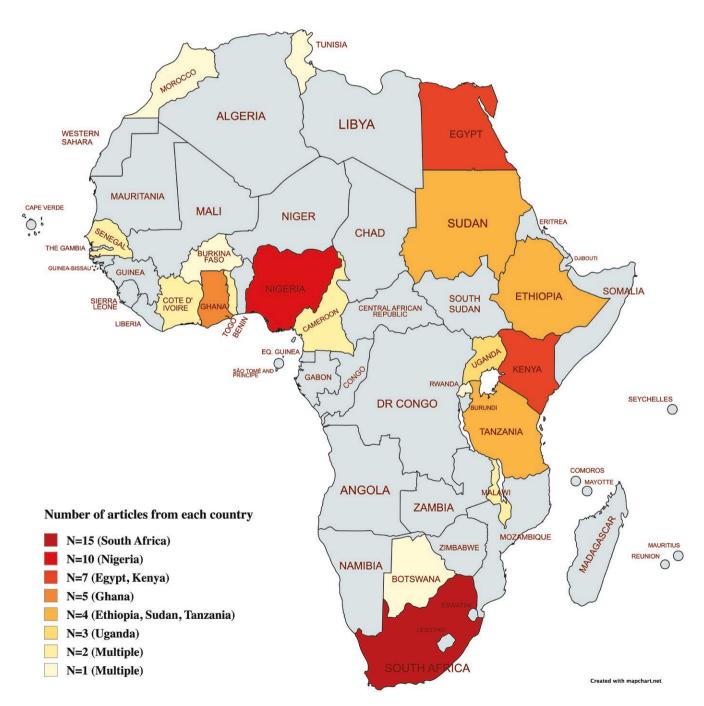
Studies focused on the conceptual categories of general patient-clinician communication, information disclosure by clinicians, information needs and preferences of patients or families, illness understanding, shared decision-making, advance care planning, and communication skills training. Figure 3 maps the overlapping distributions of conceptual categories across all studies.

At the time of our review, the terms "serious illness communication" or "patient-centered communication" combined with geography terms (eg, "Africa") yielded zero results.

## Information disclosure

The majority of studies (n = 35; 60%) had a primary focus on the disclosure of information from clinicians to patients and/or families, framed as "breaking bad news" in over half of these (n = 19; 54%) and/or truth-telling (or withholding) in 13 (37%) (Figure 4). In most of these studies, "information" referred to a diagnosis (n = 25; 71%) and/or prognosis (n = 17; 49%). Herein we refer to this conceptual category as "information disclosure."

The 35 studies that focused on information disclosure were divided between quantitative and qualitative methods and collected perspectives from patients, family caregivers, clinicians, and others. As displayed in Figure 4, some studies examined participants' actual experiences of information disclosure, some examined their preferences, and many examined both. Some quantitative studies measured discrepancies between actual vs preferred experiences among patients or caregivers<sup>42-45</sup> or between actual versus ideal practices according to clinicians.<sup>39,46</sup> Most studies probed the distinction between delivering information to a patient directly versus to their family. Studies of pediatric contexts investigated whether children are/should be informed of their diagnosis and/or prognosis.<sup>35,37,38,40,47-50</sup>



**Figure 2.** Countries in which data collection took place (n = 74)

Nearly all quantitative studies and a third of qualitative studies evaluated determinants of information disclosure. For example, most survey studies included multivariable analysis of the association between sociodemographic variables and participants' communication experiences or preferences. Similarly, nearly all qualitative studies and a quarter of quantitative studies explored barriers and facilitators of high-quality information disclosure at individual, health system, and/or societal levels. Multiple studies referenced existing protocols for delivering bad news as benchmarks for evaluating communication quality. For example, 3 studies asked clinicians to report their adherence to the "SPIKES" protocol for breaking bad news<sup>36,44,51</sup> and one asked patients to report their physician's performance of SPIKES.<sup>44</sup>

Among these studies on clinicians' information disclosure to patients, none investigated clinicians' elicitation of information from patients, such as patients' values, priorities, or goals.

#### Information needs and preferences

In our screening process, we observed that many studies in Africa have examined "information needs" related to cancer, yet this term is used for different concepts. "Information needs" may refer to patients' preferences for individualized prognostic information, which met our eligibility criteria. Seven studies had a primary focus on "information needs" that included preferences for whether, and how, prognostic information should be communicated<sup>21,38,48,52-55</sup> and one focused on prognosis preferences not framed as "information needs." Seven others evaluated participants' preferences for prognostic information as a secondary focus. <sup>37,42,44,45,57-59</sup>

The term "information needs" is also used to refer to patients' needs for education about their disease and treatment, or to cancer awareness more generally, which fell outside our scope. Supplementary Table S4 lists excluded studies that focused on these conceptualizations.

#### Illness understanding

Fourteen studies investigated illness understanding among patients, including 3 in which this was the primary aim. <sup>32,33,60</sup> One of these assessed patients' perception of curability using the Patient Illness Understanding survey<sup>32</sup> and another asked patients "what disease do you have, and what is expected from it?"<sup>33</sup> In both, accuracy was determined by medical record review. The third evaluated patients' awareness of having a "tumor," "cancer," or named cancer.<sup>60</sup> Other studies investigated illness understanding as a secondary focus, including 6 with questionnaire items evaluating patient- (or parent-) reported knowledge of the diagnosis, <sup>21,45,61</sup> prognosis, <sup>45,57,61</sup> and/or understanding of the disease.<sup>37,42,45</sup> Four qualitative studies presented patients' and families' self-reported illness understanding.<sup>37,62-64</sup> One study asked caregivers about patients' diagnostic awareness.<sup>43</sup>

#### Shared decision-making

Eight studies investigated shared decision-making about cancer care, including 3 in which this was the primary focus. <sup>26,34,59</sup> Two of these examined concordance between preferred and actual involvement in decision-making. <sup>34,59</sup> Another measured the correlations between shared decision-making, the doctor-patient relationship, and overall quality of life in patients with breast cancer. <sup>26</sup> Other studies ascertained patients' decision-making experiences and preferences, <sup>25,42</sup> physicians' self-reported practices of involving patients in

decision-making,<sup>65</sup> or the attitudes of patients, caregivers, and the general public toward oncologists involving patients in end-of-life decisions.<sup>58</sup> One study investigated the sociocultural and structural factors that influence patient engagement with treatment decision-making.<sup>27</sup>

#### Advance care planning

Seven heterogeneous studies investigated advance planning for end-of-life care, referred to as "advance care planning" in one instance.<sup>41</sup> There was much less overlap between this concept and the others, as demonstrated in Figure 3. Two studies examined advance directives.<sup>31,66</sup> One evaluated an intervention for structured end-of-life decision-making.<sup>30</sup> Another collected input to tailor a conversation tool called "One Slide" for a local population.<sup>41</sup> Others investigated experiences or preferences related to end-of-life care from the perspectives of bereaved caregivers,<sup>67</sup> patients,<sup>57</sup> and clinicians.<sup>29</sup>

## Communication skills training

Eleven studies examined communication skills training. Two focused primarily on this, including one that evaluated a role-play training intervention for medical students<sup>28</sup> and one that evaluated a communication training webinar series for clinicians.<sup>29</sup> Several other studies asked clinicians about prior training in communication, usually in breaking bad news.<sup>36,44,46,51,65,68,69</sup> Surveys assessed doctors' attitudes toward communication training<sup>23,51,65</sup> and evaluated the effect of prior training on self-reported competence.<sup>51,68</sup> An ethnographic study investigated the impact of clinicians' palliative care education on their information disclosure practices and on patients' illness understanding.<sup>64</sup>

While 11 studies investigated communication training, 30 (52%) recommended communication training in their discussion or conclusion.

#### Outcomes evaluation

A few studies evaluated outcomes of communication, including patients' satisfaction, <sup>34,44</sup> quality of life, <sup>26</sup> and psychological responses, <sup>61</sup> and physicians' emotional responses to breaking bad news. <sup>44,46</sup> None aimed to measure impacts on health outcomes, treatment adherence, or healthcare resource utilization, though these outcomes were discussed in some qualitative findings.

#### Critical appraisal

Results of the critical appraisal are shown in Figure 5. All studies met the MMAT screening criteria except one that did not state its research questions. The qualitative studies had the highest quality ratings. Quantitative descriptive studies had low (<50%) quality ratings in 2 out of 5 criteria, that is, representativeness and risk of nonresponse bias, generally due to inadequate information (ie, "Can't tell"). Two of the 3 experimental studies were missing information required to rate representativeness, accounting for confounders, and intervention fidelity, and 2 did not present complete outcome data.

#### **Discussion**

This scoping review maps the heterogeneous body of published research on clinical communication in cancer care in Africa. Through analyzing the types of available evidence, clarifying key concepts, and examining methodological quality, we have identified gaps in the literature and recommend future work.

|   |                           | Information Disclosure Categories |           |              |          |       | GI.               |                    |                  |                 |
|---|---------------------------|-----------------------------------|-----------|--------------|----------|-------|-------------------|--------------------|------------------|-----------------|
| First Author                                      | Primary Focus of          | Diagnosis                         | Prognosis | "Breaking    | "Truth   | Info. | Illness<br>Under- | Shared<br>Decision | Advanced<br>Care | Comm.<br>Skills |
|   | Study                     | Delivery                          | Delivery  | Bad<br>News" | Telling" | Needs | standing          | Making             | Planning         | Training        |
| Bendary <sup>44</sup>                             |                           | •                                 | •         | News         | •        | •     | •                 |                    |                  |                 |
| A. Woldemariam <sup>57</sup>                      |                           | •                                 | •         | •            | •        | •     |                   | •                  |                  |                 |
| Nwankwo <sup>64</sup>                             |                           | •                                 | •         | •            | •        |       |                   | •                  |                  | •               |
| Fisseha <sup>43</sup>                             |                           | •                                 | •         | •            |          | •     |                   |                    |                  | •               |
| Agom <sup>63</sup>                                |                           | •                                 | •         | •            |          |       | •                 |                    |                  | •               |
| Elsiddek <sup>60</sup>                            |                           | •                                 | •         | •            |          |       | •                 |                    |                  |                 |
| Muneer <sup>45</sup>                              |                           | •                                 | •         | •            |          |       |                   |                    |                  | •               |
| Nwankwo <sup>41</sup>                             |                           | •                                 | •         |              | •        | •     | •                 | •                  |                  |                 |
| Athanas <sup>75</sup>                             |                           | •                                 | •         |              | •        |       |                   |                    |                  |                 |
| Harris <sup>73</sup>                              |                           | •                                 | •         |              | •        |       |                   |                    |                  |                 |
| Lolonga <sup>36</sup>                             |                           | •                                 | •         |              |          | •     | •                 |                    |                  |                 |
| Ida <sup>62</sup>                                 |                           | •                                 | •         |              |          |       | •                 |                    |                  |                 |
| Ogundiran <sup>74</sup>                           |                           | •                                 | •         |              |          |       |                   |                    |                  |                 |
| Brown <sup>77</sup>                               |                           | •                                 |           | •            | •        |       |                   |                    |                  |                 |
| Adebayo <sup>67</sup><br>Lounsbury <sup>35</sup>  |                           | •                                 |           | •            |          |       |                   |                    |                  | •               |
| Couitchéré <sup>48</sup>                          | I. C                      | •                                 |           | •            |          |       |                   |                    |                  |                 |
| Henry <sup>49</sup>                               | Information<br>Disclosure | •                                 |           | •            |          |       |                   |                    |                  |                 |
| Caren <sup>61</sup>                               | (n=35; 60%)               | •                                 |           |              | •        |       | •                 |                    |                  |                 |
| El-Ghazali <sup>22</sup>                          |                           | •                                 |           |              | •        |       |                   |                    | <u> </u>         | •               |
| Rapa <sup>39</sup>                                |                           | •                                 |           |              | •        |       |                   |                    |                  |                 |
| Alsirafy <sup>67</sup>                            |                           | •                                 |           |              |          |       | •                 |                    |                  |                 |
| Abdel-hafeez <sup>88</sup>                        |                           | •                                 |           |              |          |       |                   |                    |                  |                 |
| Bâ <sup>23</sup>                                  |                           | •                                 |           |              |          |       |                   |                    |                  |                 |
| El Malla <sup>34</sup>                            |                           | •                                 |           |              |          |       |                   |                    |                  |                 |
| Campbell <sup>46</sup>                            |                           |                                   | •         | •            |          |       |                   |                    |                  |                 |
| Ganca <sup>89</sup>                               |                           |                                   | •         | •            |          |       |                   |                    |                  |                 |
| Caulfield <sup>76</sup>                           |                           |                                   | •         |              |          |       |                   |                    |                  |                 |
| Ayers <sup>90</sup>                               |                           |                                   |           | •            | •        |       |                   |                    |                  |                 |
| Kpanake <sup>21</sup>                             |                           |                                   |           | •            | •        |       |                   |                    |                  |                 |
| Dafallah <sup>50</sup><br>Sharma <sup>68</sup>    |                           |                                   |           | •            |          |       |                   |                    |                  | •               |
| Walker <sup>91</sup>                              |                           |                                   |           | •            |          |       |                   |                    |                  | •               |
| Agyemang <sup>26</sup>                            |                           |                                   |           | •            | •        |       |                   | •                  |                  |                 |
| Adamolekun <sup>38</sup>                          |                           |                                   | •         |              | ·        |       |                   |                    |                  |                 |
| Selman <sup>53</sup>                              |                           | •                                 | •         | •            |          | •     | •                 |                    |                  |                 |
| Lkhoyaali <sup>20</sup>                           |                           | •                                 | •         |              |          | •     | •                 |                    |                  |                 |
| Jithoo <sup>37</sup>                              | Information               | •                                 | •         |              |          | •     |                   |                    |                  |                 |
| Mekuria <sup>54</sup>                             | Needs and                 | •                                 | •         |              |          | •     |                   |                    |                  |                 |
| Maree <sup>47</sup>                               | Preferences               | •                                 |           |              |          | •     |                   |                    |                  |                 |
| Nwodoh <sup>55</sup>                              | (n=8; 14%)                |                                   | •         |              |          | •     |                   |                    |                  |                 |
| Fourie <sup>52</sup>                              |                           |                                   | •         |              |          | •     |                   |                    |                  |                 |
| McLoughlin <sup>51</sup>                          |                           |                                   | •         |              |          | •     |                   |                    |                  |                 |
| Gafer <sup>32</sup>                               | Illness                   | •                                 | •         |              |          |       | •                 |                    |                  |                 |
| Hammad <sup>59</sup>                              | Understanding (n=3; 5%)   | •                                 |           |              |          |       | •                 |                    |                  |                 |
| Yennurajalingam <sup>31</sup> Tilly <sup>58</sup> | · / /                     |                                   | •         |              |          |       | •                 | _                  |                  |                 |
| Tilly <sup>38</sup> Kugbey <sup>25</sup>          | Shared Decision<br>Making |                                   | •         |              |          | •     |                   | •                  |                  |                 |
| Yennurajalingam <sup>33</sup>                     | Making<br>(n=3; 5%)       |                                   |           |              |          |       |                   | •                  | -                |                 |
| Shen <sup>56</sup>                                | (, -, -,                  |                                   | •         |              |          | •     | •                 | •                  | •                |                 |
| Edwin <sup>29</sup>                               |                           |                                   | -         |              |          |       |                   |                    | •                |                 |
| Githaiga <sup>66</sup>                            | Advance Care              |                                   |           |              |          |       |                   |                    | •                |                 |
| Ojedoyin <sup>65</sup>                            | Planning                  |                                   |           |              |          |       |                   |                    | •                |                 |
| Omondi <sup>30</sup>                              | (n=6; 10%)                |                                   |           |              |          |       |                   |                    | •                |                 |
| Stanford <sup>40</sup>                            |                           |                                   |           |              |          |       |                   |                    | •                |                 |
| Westmoreland <sup>27</sup>                        | Comm. Training            |                                   |           | •            |          |       |                   |                    |                  | •               |
| Wittenberg <sup>28</sup>                          | (n=2; 3%)                 |                                   |           |              |          |       |                   |                    | •                | •               |
| Adejoh <sup>24</sup>                              | General Comm.             |                                   |           |              |          |       |                   | •                  |                  |                 |
|   | (n=1; 2%)                 |                                   |           |              |          |       |                   |                    | <u> </u>         |                 |

**Figure 3.** Overview of communication content by article (n = 58)

# Types of available evidence

Wide-ranging research on communication in cancer care has been conducted in diverse African contexts. Over half of the included studies took place in South Africa, Nigeria, Egypt, and Kenya, and an additional fifteen countries were represented. Despite no language restrictions in our search, Francophone countries are underrepresented. The number of studies on this subject has increased recently, which we

| Educat Acada and and                               | Primary Focus<br>of Study  | Study Design               | PATIENTS        |                   | FAMILY/CAREGIVERS |             | CLINICIANS/HCPs |                |
|--|----------------------------|----------------------------|-----------------|-------------------|-------------------|-------------|-----------------|----------------|
| First Author and<br>Citation                       |                            |                            | Actual          | Preferences       | Actual            | Preferences | Actual          | Opinions on    |
| D 1 44   | ·                          | Cumrore                    | Experiences     | •                 | Experiences       | Treferences | Practices       | Ideal Practice |
| Bendary <sup>44</sup> A. Woldemariam <sup>57</sup> |                            | Survey<br>Survey           | •               | •                 |                   | •           |                 | •              |
| Nwankwo <sup>64</sup>                              |                            | Survey                     | <del> </del>    |                   |                   | •           | •               | •              |
| Fisseha <sup>43</sup>                              |                            | Survey                     | •               | •                 |                   |             | •               | •              |
| Agom <sup>63</sup>                                 |                            | Qualitative                | •               | -                 | •                 |             |                 |                |
| Elsiddek <sup>60</sup>                             |                            | Survey                     |                 |                   |                   |             |                 |                |
| Muneer <sup>45</sup>                               |                            | Survey                     |                 |                   |                   |             | •               | •              |
| Nwankwo <sup>41</sup>                              |                            | Survey                     | •               | •                 |                   |             | -               | -              |
| Athanas <sup>75</sup>                              |                            | Qualitative                | -               | •                 |                   |             | •               | •              |
| Harris <sup>73</sup>                               |                            | Qualitative                |                 |                   |                   |             | •               | •              |
| Lolonga <sup>36</sup>                              |                            | Mixed                      |                 |                   | •                 | •           | •               | •              |
| Ida <sup>62</sup>                                  |                            | Qualitative                |                 |                   | •                 |             | •               |                |
| Ogundiran <sup>74</sup>                            |                            | Survey                     |                 |                   |                   |             | •               | •              |
| Brown <sup>77</sup>                                |                            | Qualitative                |                 |                   |                   |             | •               | •              |
| Adebayo <sup>67</sup>                              |                            | Survey                     |                 |                   |                   |             | •               |                |
| Lounsbury <sup>35</sup>                            |                            | Survey                     |                 |                   |                   |             | •               |                |
| Couitchéré <sup>48</sup>                           | Information                | Survey                     |                 |                   | •                 | •           |                 |                |
| Henry <sup>49</sup>                                | Disclosure                 | Qualitative                |                 |                   |                   |             | •               |                |
| Caren <sup>61</sup>                                | (n=35; 60%)                | Qualitative                | •               |                   | •                 |             |                 |                |
| El-Ghazali <sup>22</sup>                           |                            | Mixed                      | •               |                   |                   |             | •               |                |
| Rapa <sup>39</sup>                                 |                            | Qualitative                |                 |                   |                   |             | •               | •              |
| Alsirafy <sup>67</sup>                             |                            | Survey                     |                 |                   | •                 | •           |                 |                |
| Abdel-hafeez <sup>88</sup>                         |                            | Survey                     | •               | •                 |                   |             |                 |                |
| Bâ <sup>23</sup>                                   |                            | Qualitative                | •               | •                 |                   |             |                 |                |
| El Malla <sup>34</sup>                             |                            | Survey                     |                 |                   | •                 |             |                 |                |
| Campbell <sup>46</sup>                             |                            | Qualitative                |                 |                   |                   |             | •               |                |
| Ganca <sup>89</sup>                                |                            | Qualitative                |                 |                   |                   |             | •               | •              |
| Caulfield <sup>76</sup>                            |                            | Qualitative                |                 |                   |                   |             | •               | •              |
| Ayers <sup>90</sup>                                |                            | Qualitative                | •               |                   | •                 |             | •               |                |
| Kpanake <sup>21</sup>                              |                            | Survey                     |                 | •                 |                   |             |                 |                |
| Dafallah <sup>50</sup>                             |                            | Survey                     |                 |                   |                   |             | •               | •              |
| Sharma <sup>68</sup>                               |                            | Survey                     |                 |                   |                   |             | •               |                |
| Walker <sup>91</sup>                               |                            | Qualitative                | •               | •                 |                   |             |                 |                |
| Agyemang <sup>26</sup>                             |                            | Qualitative                | •               |                   | •                 |             | •               |                |
| Adamolekun <sup>38</sup>                           |                            | Mixed                      |                 |                   |                   |             | •               | •              |
| Selman <sup>53</sup>                               |                            | Qualitative                | •               | •                 | •                 | •           |                 |                |
| Lkhoyaali <sup>20</sup>                            |                            | Survey                     | ٠               | •                 |                   |             |                 |                |
| Jithoo <sup>37</sup>                               | Information                | Mixed                      | -               |                   | •                 |             |                 |                |
| Mekuria <sup>54</sup>                              | Needs and                  | Survey                     |                 | •                 |                   |             |                 |                |
| Maree <sup>47</sup>                                | Preferences<br>(n=8; 14%)  | Qualitative                |                 |                   | •                 | •           |                 |                |
| Nwodoh <sup>55</sup><br>Fourie <sup>52</sup>       | (11 0, 14/0)               | Qualitative                |                 | •                 |                   |             |                 |                |
| McLoughlin <sup>51</sup>                           |                            | Qualitative                |                 | •                 |                   | •           | •               |                |
| Gafer <sup>32</sup>                                | ***                        | Survey<br>Survey           | •               | •                 |                   |             |                 |                |
| Hammad <sup>59</sup>                               | Illness<br>Understanding   | Survey                     | •               |                   |                   |             |                 |                |
| Yennurajalingam <sup>31</sup>                      | (n=3; 5%)                  | •                          | •               |                   |                   |             |                 |                |
| Tilly <sup>58</sup>                                |                            | Survey<br>Survey           | •               | •                 |                   |             |                 |                |
| Kugbey <sup>25</sup>                               | Shared Decision<br>Making  | Survey                     | •               |                   |                   |             |                 |                |
| Yennurajalingam <sup>33</sup>                      | (n=3; 5%)                  | Survey                     | •               | •                 |                   |             |                 |                |
| Shen <sup>56</sup>                                 | ( ,, -, -,                 | Survey                     | •               | •                 |                   |             |                 |                |
| Edwin <sup>29</sup>                                |                            | Intervention               | •               |                   |                   |             |                 |                |
| Githaiga <sup>66</sup>                             | Advance Care               | Qualitative                |                 |                   | •                 |             |                 |                |
| Ojedoyin <sup>65</sup>                             | Planning                   | Survey                     |                 |                   |                   |             |                 | •              |
| Omondi <sup>30</sup>                               | (n=6; 10%)                 | Record review <sup>a</sup> | 1               |                   |                   |             |                 |                |
| Stanford <sup>40</sup>                             |                            | Qualitative                |                 |                   |                   |             |                 | •              |
| Westmoreland <sup>27</sup>                         | Comm.                      | Intervention               |                 |                   |                   |             | •               |                |
| Wittenberg <sup>28</sup>                           | Training (n=2; 3%)         | Intervention               |                 |                   |                   |             | •               |                |
| Adejoh <sup>24</sup>                               | General Comm.<br>(n=1; 2%) | Qualitative                | •               | •                 |                   |             |                 |                |
| aOmondietal was a n                                |                            | of advismas dimentis       | o completion on | d thus did not so | Hoot calf nament  | data        |                 |                |

<sup>a</sup>Omondi et al. was a medical record review of advance directive completion and thus did not collect self-report data

**Figure 4.** Study design and type of self-reported data by article (n = 58).

associate with growing oncology and palliative care capacity in Africa, response to patient concerns, heightened academic interest in communication and bioethics, and expansion of clinical research and funding. Most studies (65%) were led by first authors based in Africa. By contrast, in the global oncology literature generally, there have been more North

|   | Yes  | No   | Can't tell |
|---|------|------|------------|
| MMAT Screening questions for all study designs (n=58)   |      |      |            |
| S1. Are there clear research questions?   | 98%  | 0%   | 2%         |
| S2. Do the collected data allow to address the research questions?  | 98%  | 0%   | 2%         |
| Qualitative (n=22)  |      |      |            |
| 1.1. Is the qualitative approach appropriate to answer the research question?   | 100% | 0%   | 0%         |
| 1.2. Are the qualitative data collection methods adequate to address the research question?                             | 100% | 0%   | 0%         |
| 1.3. Are the findings adequately derived from the data?   | 100% | 0%   | 0%         |
| 1.4. Is the interpretation of results sufficiently substantiated by data?   | 100% | 0%   | 0%         |
| 1.5. Is there coherence between qualitative data sources, collection, analysis, and interpretation?                     | 91%  | 5%   | 5%         |
| Quantitative descriptive (n=31)   |      |      |            |
| 4.1. Is the sampling strategy relevant to address the research question?  | 74%  | 6%   | 19%        |
| 4.2. Is the sample representative of the target population?   | 34%  | 6%   | 58%        |
| 4.3. Are the measurements appropriate?  | 84%  | 0%   | 16%        |
| 4.4. Is the risk of nonresponse bias low?   | 42%  | 13%  | 45%        |
| 4.5. Is the statistical analysis appropriate to answer the research question?   | 90%  | 3%   | 6%         |
| Quantitative non-randomized experimental (n=3)  |      |      |            |
| 3.1. Are the participants representative of the target population?  | 33%  | 0%   | 67%        |
| 3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)?                            | 67%  | 0%   | 33%        |
| 3.3. Are there complete outcome data?   | 33%  | 67%  | 0%         |
| 3.4. Are the confounders accounted for in the design and analysis?  | 33%  | 0%   | 67%        |
| 3.5. During the study period, is the intervention administered (or exposure occurred) as intended?                      | 33%  | 0%   | 67%        |
| Mixed methods (n=2) a   |      |      |            |
| 5.1. Is there an adequate rationale for using a mixed methods design to address the research question?                  | 50%  | 50%  | 0%         |
| 5.2. Are the different components of the study effectively integrated to answer the research question?                  | 100% | 0%   | 0%         |
| 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted?              | 50%  | 0%   | 50%        |
| 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?             | 0%   | 0%   | 100%       |
| 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved? | 0%   | 100% | 0%         |

<sup>&</sup>lt;sup>a</sup> Includes two studies that used questionnaires with both qualitative and quantitative items. (Two additional studies were predominantly survey studies that each included two qualitative interviews, however without description of the qualitative methods; these were appraised under the quantitative descriptive category.)

| Color Key |         |  |  |  |
|-----------|---------|--|--|--|
|           | 80-100% |  |  |  |
|           | 60-79%  |  |  |  |
|           | 40-59%  |  |  |  |
|           | 20-39%  |  |  |  |
|           | 0-19%   |  |  |  |

Figure 5. Methodological quality of included studies using the Mixed Methods Appraisal Tool (MMAT).

American than African first authors of studies in Africa (51% vs 45%). 70

The included studies feature a variety of clinical contexts, study populations, and research questions. The majority are either descriptive survey studies or exploratory qualitative studies. Greater standardization of measures could facilitate meta-analyses and cross-site comparisons. Furthermore, many survey studies used novel instruments or established instruments that had only been validated in high-income countries. Validation of measures in African contexts would enhance rigor and illuminate the extent of cross-cultural variation.<sup>71</sup> Locally developed and/or validated measures also ensure that improvements to care are based on what matters most to stakeholders.<sup>72</sup>

There was a relative paucity of implementation-oriented studies and no randomized experimental studies, highlighting a pressing need to translate observational findings into intervention development and testing in Africa. Observational data from the included studies could inform the development of interventions spanning communication training, innovative models of service delivery, and patient education and empowerment initiatives. Evaluation of communication interventions is often optimally accomplished by pragmatic cluster randomized trials that account for real-life conditions.<sup>73</sup> Investment in implementation science and health services research will be key to establishing feasible, acceptable, and effective interventions to improve communication quality.<sup>72</sup>

Few studies systematically evaluated the impact of communication quality on outcomes. In North America, communication researchers have measured patient health outcomes, patient- and family-reported outcomes, goal-concordant care, and healthcare utilization, though consensus on core outcomes is not well established. Altrigation to be seen whether results are generalizable to African contexts. For instance, North American studies have shown that prognosis communication does not take away hope, cause depression, increase anxiety, or harm the patient-doctor relationship. Whether this holds true in African contexts where people may believe that prognostication itself can hasten death requires further research. Yes, 41-67, 74-77 Thus, a major opportunity exists to evaluate communication outcomes deemed most relevant and meaningful in Africa.

# Key conceptual categories

Most studies on cancer communication in Africa have focused on unidirectional information flow from clinicians to patients and/or families. The concepts of "breaking bad news" and "truth telling" were commonly invoked across diverse contexts. While most examined the clinician's role, several examined patients' preferences or illness understanding. An overall emphasis on information disclosure reflects the difficulty of discussing cancer, which is exacerbated in many African contexts by advanced disease at diagnosis, limited access to treatment, and high mortality rates. These realities result in

widespread perceptions of cancer as a death sentence, <sup>23,50,63,78</sup> greatly burdening clinical conversations.

Cultural factors have also inspired research on information disclosure. For instance, many studies examined the disclosure of information to a patient directly versus to their relatives first. The popularity of this question reflects cultural orientations toward communalism over individualism, which is rooted in the Ubuntu philosophy of interconnectedness that is common across diverse African contexts. <sup>79,80</sup> Similarly, several studies on prognosis and end-of-life communication noted that open discussion about death is taboo in many places. <sup>40,41,77</sup> The contrast itself between local norms and the Western paradigm of direct communication within patient-clinician dyads, which dominates international guidelines, likely encourages research on this subject as well.

Relatively fewer studies in Africa have focused on bilateral information exchange, such as clinicians eliciting information from patients or engaging patients in collaborative decision-making (i.e., shared decision-making or advanced care planning). No studies examined clinicians' exploration of patients' goals, values, and priorities, which is central to the constructs "serious illness communication" and "patientcentered communication." These constructs, which have become prominent in US literature, 8,81 were seldom used. Similarly, there was much less emphasis on personalizing cancer care than is seen in ASCO82 or US National Cancer Institute<sup>3</sup> guidelines. A scoping review of pediatric cancer communication in low- and middle-income countries similarly found that while all included studies addressed information disclosure, only 28% addressed decision-making.83 Similar patterns are seen outside serious illness contexts in Africa; for example, in a Rwandan primary care context, all items of the Communication Assessment Tool were rated as highly important by a majority of respondents except for patient involvement in decision-making.84

To some degree, a reduced emphasis on decision-making may result from treatment options being more limited in Africa. In high-income countries, shared decision-making and advanced care planning grew in response to the expansion of clinical options, including intensive interventions. 85,86 Moreover, broader cultural norms and values likely drive a greater emphasis on clinician rather than patient information sharing in Africa. In many African contexts, paternalism is the predominant model of decision-making, rooted in the principle of beneficence coupled with hierarchical medical cultures. 22,27,64,74 By contrast, individual autonomy and patient agency in decision-making take precedence in Western cultures.85 That said, the included studies demonstrate significant within-group variation in communication experiences and preferences at the individual level. Culturally informed research and patient care are needed to integrate the powerful role of cultural context while avoiding overgeneralizations.10

The finding of variation in communication concepts across African contexts is a reminder of the need for openness and humility in approaching this subject.<sup>87</sup> The degree to which interventions, measures, and guidelines should be extrapolated versus adapted versus developed de novo remains to be determined.

#### Research quality appraisal

Critical appraisal using MMAT demonstrated high quality among qualitative studies and lower quality among

quantitative studies. This difference likely reflects more specific objective criteria for quantitative studies compared to more general subjective criteria for qualitative studies in MMAT, rather than a true difference in quality across these broad categories. Low-quality ratings were more commonly related to missing information than to poor performance. Limited resources, training, and infrastructure for research in many African settings can hinder effective methodology. By addressing these needs and fostering collaborations, the research community can optimize research quality.

# Opportunities for future systematic reviews

This scoping review serves as a precursor to future systematic reviews on precise research questions within this broad field of evidence. For instance, a systematic review could synthesize findings on clinicians' practices of diagnosis disclosure or on patients' preferences for prognostic information. Subsets of articles, such as those focused on pediatrics, could be analyzed. In contrast, other areas currently lack sufficient evidence to warrant a systemic review.

#### Limitations

Our review has potential limitations. First, several studies fell into a "gray area" around our intended scope, resulting in iterative refinement of the eligibility criteria. While we strove to be as objective as possible in this process, there is a risk of selection bias. To address this, Supplementary Table S4 presents the excluded studies. Second, the exclusion of unpublished studies and gray literature reduces comprehensiveness, particularly in light of publication barriers that African researchers may face.

## **Conclusions**

We identified strengths and gaps in the available evidence on clinical communication in African cancer care, guiding an agenda for future research, training, and quality improvement initiatives. Opportunities exists to move from descriptive studies to experimental studies, translating observational findings into communication intervention development and evaluation. A key intervention recommended by most studies is communication skills training. Culturally informed approaches have the greatest potential to result in meaningful improvements in the experience of cancer for patients and families in Africa.

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#### Author contributions

Rebecca J. DeBoer—conceptualization; methodology; data curation; formal analysis; writing—original draft. Chiara A. Wabl—data curation; formal analysis; writing—review

and editing. Beatrice Mushi-data curation; formal analysis; writing—review and editing. Pacifique Uwamahoro data curation; formal analysis; writing—review and editing. Raymond Athanas—data curation; formal analysis; writing-review and editing. Diane Andrea Ndoli-data curation; formal analysis; writing-review and editing. Eulade Rugengamanzi-data curation; formal analysis. Mamsau Ngoma—data curation; formal analysis; writing—review and editing. Hubert Tuyishime—data curation; formal analysis; writing—review and editing. Deogratias Mtei—data curation; formal analysis. Nicaise Nsabimana—data curation; formal analysis. Katherine Van Loon—supervision; writing—review and editing. Justin J. Sanders—supervision; methodology; writing-review and editing. Rebecca L. Sudore-supervision; methodology; writing—review and editing. Vincent K. Cubaka—supervision; methodology data curation; formal analysis; writing—review and editing

# **Conflicts of Interest**

None.

# **Data Availability**

Data may be shared upon request.

# Supplementary material

Supplementary material is available at *The Oncologist* online.

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