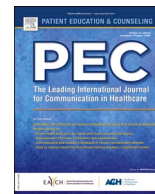




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The role of time in involving patients with cancer in treatment decision making: A scoping review

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ABSTRACT

Background: Time is often perceived as a barrier to shared decision making in cancer care. It remains unclear how time functions as a barrier and how it could be most effectively utilized.

Objective: This scoping review aimed to describe the role of time in patient involvement, and identify strategies to overcome time-related barriers.

Methods: Seven databases were searched for any publications on patient involvement in cancer treatment decisions, focusing on how time is used to involve patients, the association between time and patient involvement, and/or strategies to overcome time-related barriers. Reviewers worked independently and in duplicate to select publications and extract data. One coder thematically analyzed data, a second coder checked these analyses.

Results: The analysis of 26 eligible publications revealed four themes. Time was a resource 1) to process the diagnosis, 2) to obtain/process/consider information, 3) for patients and clinicians to spend together, and 4) for patient involvement in making decisions.

Discussion: Time is a resource throughout the treatment decision-making process, and generic strategies have been proposed to overcome time constraints.

Practice value: Clinicians could co-create decision-making timelines with patients, spread decisions across several consultations, share written information with patients, and support healthcare redesigns that allocate the necessary time.

1. Introduction

Cancer treatment decisions involve complex tradeoffs between benefits and harms, and patients may have markedly different treatment

preferences [1]. Shared decision making (SDM) is a preferred decision-making approach to involve patients in selecting management strategies that align with their preferences and best fit their lives [2]. However, patients with cancer often do not feel sufficiently involved [3,

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4], and the observed SDM is low on average [5–7]. Patients with cancer and their clinicians commonly cite time pressure as a barrier to SDM [8–11]. However, a review showed that overall, higher levels of SDM were not associated with longer consultation times [12]. When a discrete decision exists (e.g., to start radiation therapy; to move to second-line chemotherapy; to proceed with surgery), the time for decision making begins when at least one of those involved (patient and/or clinician) becomes aware that a treatment decision needs to be made and lasts until a final decision is reached. For the involvement of patients with cancer in treatment decision making, both time within and outside consultations are seen as necessary for patients to learn about and consider their options, and discuss them with others [13]. Patients report having too little time to gather, process, and reflect on information during consultations [9]. When patients experience time pressure, they express fewer concerns because they believe that clinicians do not have time to listen to them [10,14]. While the duration of time in minutes may be objective, the passage of time and its sufficiency are subject to perception and judgment. *Actual* time may be limited while *perceived* time may be sufficient and vice versa [15]. It is unclear how time is used in routine decision-making processes. Also, we do not know how patients, their decision partners, and clinicians feel the time could

be used most effectively to involve patients in treatment decision making. Furthermore, it is still unclear how perceived time constraints could best be addressed. This scoping review aims to explore **what evidence is available in the literature to:** 1) describe the role of time in patient involvement in cancer treatment decision making, and 2) identify strategies to overcome time-related barriers.

2. Methods

The protocol of this scoping review was registered at Open Science Framework (OSF; DOI 10.17605/OSF.IO/98XKN). In line with the Joanna Briggs Institute's recommendations [16], this review is reported according to the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist guidelines, which can be found in [Appendix A \[17\]](#).

2.1. Search strategy

Systematic literature searches were performed, with the help of a librarian (RHJO), in the following seven bibliographic databases: PubMed, EMBASE, Emcare (via Ovid), The Cochrane Library (via

Box 1

Eligibility criteria

Source of evidence

We searched for any peer-reviewed publication of original qualitative or quantitative research and of (systematic) reviews, meta-analyses, case studies, and opinion papers.

Types of participants

To be eligible, participants should be adult patients (≥ 18 years) who had been diagnosed with cancer, decision partners of adults who had been diagnosed with cancer, and/or any **clinician** having responsibility for the cancer treatment in adult patients. We defined decision partners as individuals from the personal environment of a patient with cancer who has been or is currently involved in making a treatment decision with the patient. Publications were included if results were presented for a (sub)group that consisted exclusively of participants fulfilling the above-mentioned criteria.

Context

The context of interest was the shared decision-making process about the initiation of, or change to a cancer treatment; end-of-life decisions were not eligible as these decisions do not pertain to the treatment of the cancer. To be eligible for inclusion in the process of treatment decision making, we used the following criteria:

- **Clinicians** should be actively involved (e.g., decision-making processes between patients and informal caregivers were excluded);
- The decision should be about a current patient's situation (e.g., advanced care planning decisions were excluded as they apply to future situations; this may result in a different experience of (objective and/or subjective) time);
- The decision should not be about complementary or alternative medicine;
- Publications reporting clinical trials were only eligible if the clinical trial was presented as one of the treatment options;
- Treatment decision making should be explicitly mentioned (e.g., publications about information provision in which treatment decision making was implicit were excluded).

Concept

Publications should focus on at least one of the following criteria:

- Experiences or views of patients, decision partners, or clinicians (empirical studies/reviews) or authors (opinion papers) about the use of time for involving patients in their cancer treatment decision making;
- Association between use of time for any decision-related activity and extent of patient involvement in cancer treatment decision making;
- Concrete strategies to overcome time-related barriers to patient involvement in cancer treatment decision making (e.g., decision aids, communication training, or adjustments to protocol or guidelines) and their (expected) effects.

Exclusion criteria

Publications reporting intervention studies were excluded as we were interested in the role of time in routine care. We further excluded publications written in languages other than English or Dutch. These are listed in Appendix C, along with the publications for which we could not access the full-text publication.

Wiley), CINAHL (via EBSCO), APA Psycinfo (via EBSCO) and Web of Science (all from inception to 2021, October 5th). Search terms included controlled terms (e.g., MeSH in PubMed and Emtree in Embase) as well as free-text terms. In The Cochrane Library we only used free-text terms. Search terms expressing ‘decision making’ were used in combination with search terms comprising ‘cancer’ and search terms comprising ‘time perception’. The full search strategies for all databases can be found in [Appendix B](#).

2.2. Publication eligibility

The eligibility criteria for publications are presented in [Box 1](#).

2.3. Publication selection process

Varying pairs of six independent assessors screened titles/abstracts. In case of disagreement, full-text publication was screened. Next, varying pairs of six independent assessors screened eligibility based on full-text publications. Agreement on inclusion/exclusion and reason for exclusion was sought in consensus meetings if necessary. In case no consensus was reached, a third assessor arbitrated.

The title/abstract screening was pilot-tested with 20 selected publications to calibrate the review team. The review team discussed discrepancies and clarified eligibility criteria where needed. As all assessors agreed on at least 15 articles (75 %) after one round, we then proceeded screening in independent pairs. The full-text screening was pilot-tested with ten selected publications (per round) within the full team. Again, the review team discussed discrepancies and clarified eligibility criteria where needed. We began full-text screening in independent pairs after three rounds, once the assessors agreed that the criteria were clear enough and calibration was sufficient. We used Microsoft Excel [18] to document screening in both phases. In case we were unable to retrieve full-text publications, we requested them from the authors.

2.4. Data charting

The team members pilot-tested the data charting form, refining and adjusting it where needed. Subsequently, relevant data from the remaining publications were charted independently by pairs. Disagreements were resolved through discussion, and if consensus was not reached, a third person arbitrated. We extracted data on publication details (e.g., authors, publication year, country), study design, data collection, sample, decision topics, and (quantitative and qualitative) results that were relevant to our research questions.

2.5. Collating and summarizing

Thematic analysis was used to analyze the data. One coder applied open coding (THW) and a second coder checked the codes (MLG). Consensus was sought through discussion if needed, and if not achieved, a third coder (AHP) arbitrated.

3. Results

[Fig. 1](#) presents the flowchart of publication selection. The chance-adjusted inter-rater agreement for full-text eligibility ranged across pairs of reviewers from fair ($k = 0.32$) to moderate ($k = 0.56$) [19].

[Appendix D](#) describes the characteristics of the publications included. There were 26 publications, of which fourteen reported on quantitative studies [20–33], eight on qualitative studies [34–41], and the other four included an opinion paper [42], a summary of a workshop [43], an analysis of a website [44], and a realist synthesis [45]. The quantitative and qualitative studies were conducted in the following countries: eight in North America [21, 23–26, 28, 29, 37], seven in Europe [20, 22, 34–36, 40, 41], four in Australia [27, 30, 38, 39], two in Asia [31,32], and one study was conducted in multiple countries across continents [33]. Fourteen studies included only patients [20, 23, 24, 26, 27, 29, 32, 34–39, 41], four studies included only clinicians [21, 30, 31, 33], and four studies included both patients (of which one also included

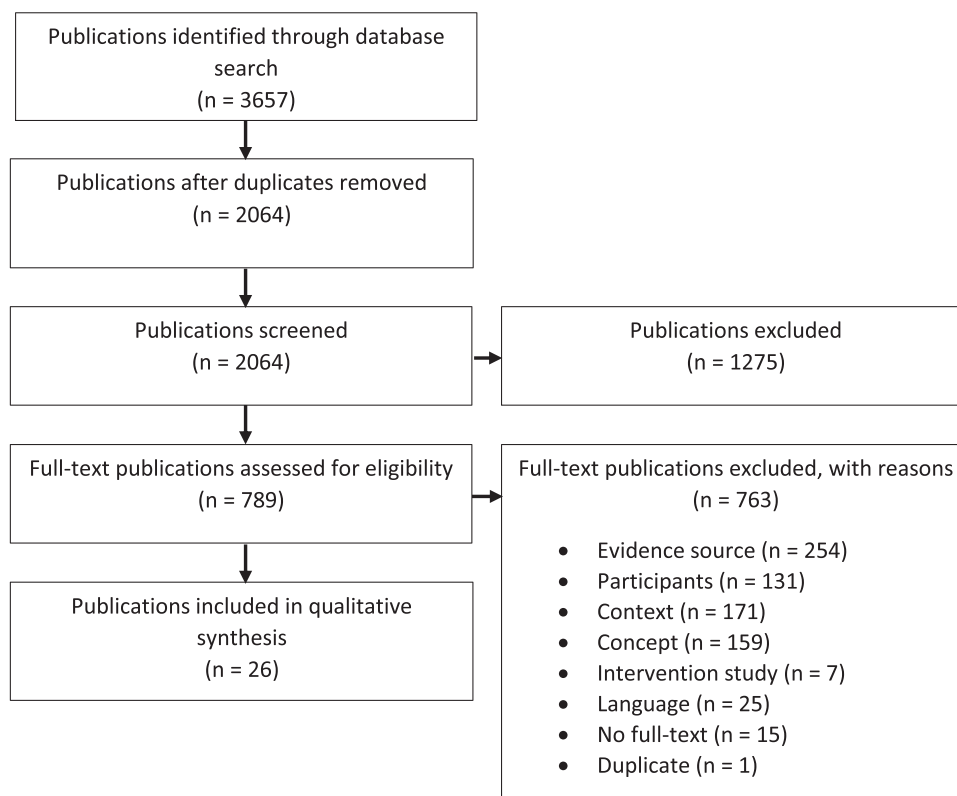


Fig. 1. Flowchart of publication selection.

their caregivers) and clinicians [22, 25, 28, 40]. The most frequently included patient populations were patients with breast cancer (nine studies) [20, 23, 24, 27, 28, 32, 34, 38, 39], patients with prostate cancer (five studies) [22, 25, 29, 36, 41] and patients with hematological cancer (four studies) [26, 35, 37, 39]. Medical specialties varied across studies.

The four themes that emerged from the analysis were: 1) time to process the diagnosis, 2) time to obtain, process, and consider information, 3) time that patients and clinicians spend together, and 4) time for (patient involvement in) the overall decision-making process.

3.1. Time to process the diagnosis

Two publications reported that patients need time to process the bad news of their cancer diagnosis [37,41]. The shock and suddenness of the diagnosis may make patients unable to process additional information and make treatment decisions, and may even lead to patients wanting to defer making a decision [37]. Processing the diagnosis may assist patients in better understanding their condition and the uncertainties surrounding its treatment [41].

3.2. Time to obtain, process, and consider information

Patients report not always having adequate time to seek and obtain information [32] or to consider information [40]. Clinicians indicate that patients should have enough time to assess different treatment options [33]. The time to gather all information is not necessarily associated with a patient's actual role in treatment decision making [32].

Patients who use information in-between consultations may appreciate having sufficient time to process the information, as it may make them feel more involved in the decision [38]. Some patients experience the time between consultations as being short [38].

To make optimal use of the time in-between consultations, clinicians can provide additional written information [38], such as decision aids [22]. Patients can review this information at home, reflect on their preferences, and prepare questions for the next consultation [22,38]. This approach has the following potential benefits: a) decreasing patients' feeling of being overwhelmed [38], b) increasing patients' knowledge [22], c) creating more realistic treatment expectations [22], d) improving the quality of the discussion between patients and decision partners [22], and e) allowing clinicians to focus more on patients' preferences during the next consultation [22]. Furthermore, providing additional written information may alleviate the pressure of communicating all information during the consultation [38].

3.3. Time that patient and clinician spend together

Whether patients and clinicians perceived there was sufficient time available to spend together varies widely across the two groups [20, 22, 23, 26, 28, 31, 34, 35, 38]. Some publications describe patients and clinicians experiencing having had too little time to spend together [20, 22, 31, 34, 35, 38]. Other publications found that most [23,28] or all [26] participants were satisfied with the amount of time available. Two quantitative studies suggest that the actual amount of time that patients and clinicians spend together may be unrelated to patient involvement in treatment decision making [24,25]. Eight other publications, both quantitative and qualitative, suggest a positive relationship between longer time and patient involvement [21, 22, 30, 34, 35, 39, 43, 45].

From patients' perspective, a lack of clinicians' time may be reflected in short appointment times and clinicians appearing to be pressed for time [22]. Patients may perceive a rush in clinicians' information provision and explanation [22]. Clinicians may speak quickly or explain complex information in just a few long sentences, and provide large amounts of information in a relatively short time frame [36]. Some patients reported appreciating the shorter consultations [36]. Short

consultations may lead patients to not understand all the information [22,36] and to have no time for reflection [36]. When patients experience time pressure from clinicians, they may tend to not want to bother clinicians with questions [35].

From clinicians' perspective, having sufficient time could help them learn more about their patients' needs and preferences, which in turn can enhance patient involvement in treatment decision making [34]. Clinicians can play an important role in facilitating patient involvement in treatment decision making by showing patience to patients during consultations [20]. To show patience, clinicians should listen more than they talk, accept the patients' desire to take time for treatment decisions, and acknowledge and respect patients' worries and fears. Clinicians can show patience even when consultation times are short [20]. Furthermore, clinicians may save consultation time by addressing patients' concerns in initial consultations and having thorough initial discussions which may in turn shorten subsequent consultations [30].

When clinicians operate on a fee-for-service schedule and perceive patient involvement to increase consultation time, they may reduce the time spent with patients, which in turn may decrease levels of patient involvement [45]. Policymakers should identify where changes in the organization of healthcare (i.e., system changes) may be needed in this regard [45]. For example, policymakers may choose to increase reimbursement for the time that patients and clinicians spend together [20].

3.4. Time for (patient involvement in) the overall decision-making process

One quantitative study reported a positive association between scores indicating how much time patients had experienced to make a treatment decision, and how much they felt involved in the decision process (i.e., the experience of more time is associated with stronger feelings of being involved) [29]. Another publication concluded that insufficient time for decision making makes patients unable to comprehend and weigh information, and thus unable to make considerate treatment decisions [38].

Time pressure may be caused by the perceived urgency to start treatment [45]. When clinicians perceive that an immediate decision is needed (e.g., when a patient comes in with a life-threatening emergency), then they may not be inclined to involve patients in treatment decision making [45]. Similarly, patients may perceive their situation to require immediate action [38]. Clinicians' administrative burden (e.g., organizing appointments and completing documentation in medical records) and interruptions of their workflows (e.g., by meetings and phone calls) may add to time pressure [40]. Lack of system support [45] and financial incentives [43] may further result in fewer opportunities to devote adequate time to involve patients in treatment decisions. Another barrier reported for clinicians to involve patients is a possible delay in the treatment decision [33]. Some patients need time to revisit the decision during the next consultation, which is as of yet uncommon in clinical practice [41].

To resolve time pressure, clinicians may consider negotiating and agreeing with patients about their preferred time frame for making the decision [42]. Furthermore, clinicians can spread the decision-making process over multiple consultations [22,38], encourage patients to take time to consider their options [38,44], and encourage patients to discuss the decision with significant others or involve decision partners in the process [27,44]. System support may facilitate clinicians in giving patients as much time as they need to make treatment decisions [45].

4. Discussion and conclusion

4.1. Discussion

Time is needed to involve patients with cancer in treatment decision making. We found that time is needed for the decision-making process in general [29,38], and specifically for patients to process the bad news of the diagnosis [37,41], for patients to obtain, process, and consider

information [33], and for patients and clinicians to spend time together [21, 22, 30, 34, 35, 39, 43, 45]. The evidence suggests that the time for this process is often reported to be insufficient [20, 22, 31, 32, 34, 35, 38, 40]. However, specific evidence on how time is used to become involved (patients) or to involve patients (clinicians), and how to recognize when necessary time has been fulfilled, is currently lacking. A thorough understanding of *how* time can facilitate or hinder patient involvement in cancer treatment decision making is therefore lacking as of yet. The available evidence points to general conclusions and possible strategies to address time-related barriers.

First, we were unable to clarify how much time patients and clinicians regard to be sufficient for involving patients in treatment decision making. The *time needed* for patient involvement may depend on patient preferences and characteristics [46]. Older patients, patients with lower (health) literacy skills, and patients facing more decisions, in particular, may need more time for decision making [46]. Overall, experiencing enough time for decision making was identified as important for patients to be able to engage in shared decision making [47]. For more vulnerable patients especially, it is important to adapt information provision to the patient's situation, such as medical condition, educational level, and cognitive capacity [48]. For example, it may be helpful to patients if they receive information in small chunks and are allowed time-outs during the decision-making process to reflect on the information [48]. The *time available* for decision making strongly depends on the medical context (e.g., specialty and type of decision [46]). The time that is medically available, or perceived to be available, is an important contextual factor and highly dependent on 1) the urgency of starting treatment [45] and 2) the organization of healthcare [49]. In situations that demand urgent medical action, like emergency contexts (e.g., symptomatic hyperleukocytosis in patients with leukemia), involving patients may be more difficult yet not impossible [45], especially if clinicians are trained to use the time for decision making optimally [50]. At the level of the healthcare system, clinicians need support to devote the time that is needed – in experienced duration and depth – to involve individual patients in treatment decisions [51,52]. A lack of system support to spend time with patients [45] and financial incentives that discourage spending time with patients [43] can result in increased objective and perceived time pressure, and lower patient involvement in treatment decision making. To illustrate, if clinicians are allowed to see patients undisturbed by phone calls and are enabled to block time for administrative work, their workflows would be less interrupted and they and their patients may experience fewer time pressures [40]. System support is also needed to change unhelpful financial incentives. Namely, the view that patient involvement impairs organizational or individual profit margins and reduces clinician's income may be a barrier to patient involvement. Therefore, especially in fee-for-service healthcare systems, alternative payment models that incentivize time for patient involvement are needed [53]. A lack of evidence for the added value of patient involvement prevents policymakers from investing in time for patient involvement [46].

Greater patient involvement does not necessarily require more consultation time, especially not when clinicians are trained in, and have adapted their work processes to sharing decisions with patients [12]. To overcome time-related barriers to patient involvement, *clinicians* could pay attention to patient concerns early in the decision-making process [30] and show patience to patients during consultations [20]. They can further encourage patients to take time for decision making [38,44], discuss the decision with significant others, and/or involve decision partners in the process [27,44]. Furthermore, it may be of significant help to spread the decision-making process over multiple consultations [22,38], and to make written information available in-between consultations [22,38]. *Clinicians and patients* can together facilitate patient involvement by explicitly agreeing on an appropriate time frame for decision making [42]. *Policymakers* can identify where system changes are needed [45], such as increasing reimbursement for the time that patients and clinicians spend together

[20], introducing the possibility of offering time-outs in the clinical pathway [12], and distributing time over different disciplines and people involved in the decision-making process [12,46].

Our review identified some important *directions for future research*. In general, future research should investigate the added value of time for patient involvement in treatment decision making [46]. Specifically, it may be helpful to consider at what time point or time points additional time may be of particular value, such as at the time of processing the bad news of a cancer diagnosis or progression, or at the time of considering the information about treatment options. These studies should preferably focus on patient groups that may most often need more time to become involved in decision making, such as older patients, patients with lower (health) literacy skills, and patients facing more complex decisions. Gaining a better insight into when time is most needed can, in turn, help make effective changes to the healthcare system.

4.2. Strengths and limitations

This scoping review is the first to report on the role of time regarding the involvement of patients in routine cancer treatment decision making. It provides an overview of when, and for what, time may be desired or needed, and what strategies may be considered to help work around time-related barriers.

Our review has some limitations. The concept of “time” is broad, which makes it hard to define a search that identifies the most relevant literature on the subject and to extract and analyze the most pertinent data. For example, the difference between time and the use of time is often not clearly described. Therefore, we decided to only look for explicit utterances and results regarding the role of time in patient involvement. This means that we left out results that linked time and patient involvement only implicitly. We further included publications regardless of how the authors had defined or measured patient involvement in cancer treatment decision making. The publications included in this review did not necessarily have a shared view of what the patient's role is in treatment decision making, which then is reflected in the scope of how time is a factor in shaping this involvement.

4.3. Conclusion

Sufficient time is needed for 1) processing bad news about one's condition, 2) obtaining, processing, and considering information about treatment options, 3) patient and clinician spending time together to make decisions, and 4) the overall decision-making process, to properly involve patients in treatment decision making. Reportedly, patients and clinicians do not always have adequate time to do so. Action from clinicians, patients, and policymakers all seem relevant to overcoming time-related barriers to patient involvement. Empirical studies on the added value of time for patient involvement, particularly the timing, recipients, and conditions under which time is available, are needed to determine how time can be mobilized most effectively.

4.4. Practice implications

The findings from this review point to several actions that stakeholders can take, the effectiveness of which needs to be determined in future studies. Patients and clinicians should first clarify how much time is available, and preferred, to make the treatment decision. During consultations, attention should be paid to patients' worries and concerns early in the decision-making process. Clinicians should try to minimize any possible sense of urgency in patients as much as possible, and all relevant decision partners should be involved. Time in-between consultations can be created by spreading the decision-making process over several consultations, and patients can be invited to use that time to become better informed and discuss the decision with significant others. Finally, policymakers can support a more effective allocation of time by making system changes to allow uninterrupted consultations and alleviate

pressure to limit time spent with patients.

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CRediT authorship contribution statement

Nathaly Espinoza Suárez: Writing – review & editing, Visualization, Investigation. **Maria José Hernández-Leal:** Writing – review & editing, Visualization, Investigation. **Cristian Soto Jacome:** Writing – review & editing, Visualization, Investigation. **Thomas Wieringa:** Writing – review & editing, Writing – original draft, Visualization, Validation, Project administration, Methodology, Investigation, Formal analysis, Data curation. **Montserrat León-García:** Writing – review &

editing, Visualization, Methodology, Investigation, Formal analysis. **Yaara Zisman-Ilani:** Writing – review & editing, Visualization, Investigation. **Rene Otten:** Writing – review & editing, Investigation, Data curation, Conceptualization. **Victor Montori:** Writing – review & editing, Visualization, Methodology, Conceptualization. **Arwen Pieterse:** Writing – review & editing, Visualization, Validation, Supervision, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization.

Declaration of Competing Interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Dr. Zisman-Ilani is a member of the PCORI Advisory Panel on Clinical Effectiveness and Decision Science (CEDS).

Appendix A. – Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	1
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	1
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	1, 2
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	2
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	2
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	2
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	2
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	2, Appendix B
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	2
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	2, 3
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	3
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	NA
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	3
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	3, Fig. 1
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	3
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	NA
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	3
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	3, 4
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	4
Limitations	20	Discuss the limitations of the scoping review process.	5
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	5
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	5

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.
 † A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).
 ‡ The frameworks by Arksey and O'Malley [Arksey & O'Malley (2005) Int J Soc Res Methodol 8:19-32] and Levac and colleagues [Levac et al (2010) Implement Sci 5:69] and the JBI guidance [Peters et al (2015) Int J Evid Based Healthc 13:141; Peters et al (2017) in: Aromataris E, Munn Z, eds. Joanna Briggs Institute Reviewer's Manual] refer to the process of data extraction in a scoping review as data charting.
 § The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

Appendix B. – Search strategy

Search strategy in PubMed (2021 October 5th).

#	Query	Results
#8	#5 OR #7	531
#7	#3 AND #6	358
#6	"adequate time"[tw] OR "appointment time"[tw] OR "appropriate time"[tw] OR "consider time"[tw] OR "consider the time"[tw] OR "considering time"[tw] OR "considering the time"[tw] OR "considered time"[tw] OR "considered the time"[tw] OR "conversation time"[tw] OR "dedicated time"[tw] OR "dedicated the time"[tw] OR "delay in time"[tw] OR "delay in the time"[tw] OR "discussing time"[tw] OR "discussing the time"[tw] OR "discuss time"[tw] OR "discuss the time"[tw] OR "discussed the time"[tw] OR "discussed time"[tw] OR "duration of time"[tw] OR "encounter time"[tw] OR "enough time"[tw] OR "experience of time"[tw] OR "experience the time"[tw] OR "experiencing time"[tw] OR "experiencing the time"[tw] OR "follow-up time"[tw] OR "have time"[tw] OR "have the time"[tw] OR "having time"[tw] OR "having the time"[tw] OR "impact of time"[tw] OR "impact of the time"[tw] OR "influence of time"[tw] OR "influence the time"[tw] OR "influencing time"[tw] OR "influencing the time"[tw] OR "insufficient time"[tw] OR "investing time"[tw] OR "investing in time"[tw] OR "investing in the time"[tw] OR "investment of time"[tw] OR "investment in time"[tw] OR "investment in the time"[tw] OR "lack time"[tw] OR "lack the time"[tw] OR "lacking time"[tw] OR "lacking the time"[tw] OR "lacked time"[tw] OR "lacked the time"[tw] OR "lack of time"[tw] OR "lag in time"[tw] OR "lagging the time"[tw] OR "lagging in time"[tw] OR "lagged the time"[tw] OR "lagged in time"[tw] OR "less time"[tw] OR "little time"[tw] OR "long time"[tw] OR "meaningful time"[tw] OR "encounter time"[tw] OR "need time"[tw] OR "needing time"[tw] OR "needed time"[tw] OR "no time"[tw] OR "perceiving time"[tw] OR "perceiving the time"[tw] OR "perceived time"[tw] OR "perceived the time"[tw] OR "perception of time"[tw] OR "prefer the time"[tw] OR "prefer time"[tw] OR "preferring the time"[tw] OR "preferring time"[tw] OR "prepare time"[tw] OR "prepare the time"[tw] OR "preparation time"[tw] OR "preparing time"[tw] OR "preparing the time"[tw] OR "pressure time"[tw] OR "proper time"[tw] OR "reconsider the time"[tw] OR "reconsider time"[tw] OR "reconsidering the time"[tw] OR "reconsidering time"[tw] OR "rethink the time"[tw] OR "rethink time"[tw] OR "rethinking the time"[tw] OR "rethinking time"[tw] OR "right time"[tw] OR "role of time"[tw] OR "scarce time"[tw] OR "scarcity of time"[tw] OR "short time"[tw] OR "spend time"[tw] OR "spend the time"[tw] OR "spending time"[tw] OR "spent time"[tw] OR "spent the time"[tw] OR "subjective time"[tw] OR "sufficient time"[tw] OR "insufficient time"[tw] OR "take time"[tw] OR "take the time"[tw] OR "taking time"[tw] OR "taking the time"[tw] OR "took the time"[tw] OR "took time"[tw] OR "unsatisfied with the time"[tw] OR "satisfied with the time"[tw] OR "use time"[tw] OR "use of time"[tw] OR "used time"[tw] OR "using time"[tw] OR "utilizing time"[tw] OR "utilising time"[tw] OR "utilisation of time"[tw] OR "utilisation of the time"[tw] OR "utilization of time"[tw] OR "utilization of the time"[tw]	139,079
#5	#3 AND #4	186
#4	"time-related barrier* "[tw] OR "time barrier* "[tw] OR "time break* "[tw] OR "time constraint* "[tw] OR "time for conversation"[tw] OR "time cost* "[tw] OR "time for a decision"[tw] OR "time for the decision"[tw] OR "time for a delay* "[tw] OR "time for delay* "[tw] OR "time for discuss* "[tw] OR "time for a discuss* "[tw] OR "time duration"[tw] OR "time for an encounter"[tw] OR "time for the encounter"[tw] OR "time enough"[tw] OR "time experienc* "[tw] OR "time factor"[tw] OR "time follow-up "[tw] OR "time impact* "[tw] OR "time influence"[tw] OR "time is insufficient"[tw] OR "time invest* "[tw] OR "time lag* "[tw] OR "time left "[tw] OR "time for a medical encounter"[tw] OR "time for the medical encounter"[tw] OR "time needed"[tw] OR "time percept* "[tw] OR "time perspective"[tw] OR "time prefer* "[tw] OR "time to prepare "[tw] OR "time for preparation"[tw] OR "time pressure"[tw] OR "time for a reconsider* "[tw] OR "time for reconsider* "[tw] OR "time to reconsider* "[tw] OR "time for a rethink* "[tw] OR "time to rethink* "[tw] OR "time for rethink* "[tw] OR "time is right "[tw] OR "time role"[tw] OR "time satisfaction"[tw] OR "time is satisfying"[tw] OR "time is satisfied"[tw] OR "time scarcity"[tw] OR "time is scarce"[tw] OR "time spent"[tw] OR "time is spent"[tw] OR "time is sufficient"[tw] OR "time is insufficient"[tw] OR "time to talk"[tw] OR "time for talking"[tw] OR "time use"[tw] OR "time used"[tw] OR "time is used"[tw] OR "time utilization "[tw] OR "time utilisation "[tw] OR "time workload"[tw]	73,326
#3	#1 AND #2	39,657
#2	"Clinical Decision-Making"[Mesh] OR "Decision Making"[Mesh] OR "Decision Making, Shared"[Mesh] OR "decision making"[tiab] OR "decision proces* "[tiab]	342,226
#1	"Neoplasms"[Mesh] OR "neoplas* "[tw] OR "tumor* "[tw] OR "tumour* "[tw] OR "cancer* "[tw] OR "lymphoma* "[tw] OR "malignan* "[tw] OR "oncolog* "[tw] OR "carcinom* "[tw] OR "melanom* "[tw] OR "leukemi* "[tw] OR "leukaemi* "[tw] OR "Kahler* "[tw] OR "myeloma"[tw] OR "sarcoma* "[tw] OR "myxoma* "[tw]	4,921,703

Search strategy in Embase.com (2021 October 5th).

#	Query	Results
#8	#5 OR #7	1503
#7	#3 AND #6	1021
#6	'adequate time':ti,ab,de,kw OR 'appointment time':ti,ab,de,kw OR 'appropriate time':ti,ab,de,kw OR 'consider time':ti,ab,de,kw OR 'consider the time':ti,ab,de,kw OR 'conversation time':ti,ab,de,kw OR 'dedicated time':ti,ab,de,kw OR 'dedicated the time':ti,ab,de,kw OR 'delay in time':ti,ab,de,kw OR 'delay in the time':ti,ab,de,kw OR 'discussing time':ti,ab,de,kw OR 'discussing the time':ti,ab,de,kw OR 'discuss time':ti,ab,de,kw OR 'discuss the time':ti,ab,de,kw OR 'discussed the time':ti,ab,de,kw OR 'duration of time':ti,ab,de,kw OR 'enough time':ti,ab,de,kw OR 'experience of time':ti,ab,de,kw OR 'experience the time':ti,ab,de,kw OR 'experiencing time':ti,ab,de,kw OR 'experiencing the time':ti,ab,de,kw OR 'follow-up time':ti,ab,de,kw OR 'have time':ti,ab,de,kw OR 'have the time':ti,ab,de,kw OR 'having time':ti,ab,de,kw OR 'having the time':ti,ab,de,kw OR 'impact of time':ti,ab,de,kw OR 'impact of the time':ti,ab,de,kw OR 'influence of time':ti,ab,de,kw OR 'influence the time':ti,ab,de,kw OR 'influencing time':ti,ab,de,kw OR 'influencing the time':ti,ab,de,kw OR 'investing time':ti,ab,de,kw OR 'investing in time':ti,ab,de,kw OR 'investing in the time':ti,ab,de,kw OR 'investment of time':ti,ab,de,kw OR 'investment in time':ti,ab,de,kw OR 'investment in the time':ti,ab,de,kw OR 'lack time':ti,ab,de,kw OR 'lack the time':ti,ab,de,kw OR 'lacking time':ti,ab,de,kw OR 'lacking the time':ti,ab,de,kw OR 'lagged time':ti,ab,de,kw OR 'lagged the time':ti,ab,de,kw OR 'lagged in time':ti,ab,de,kw OR 'lag in time':ti,ab,de,kw OR 'lagging the time':ti,ab,de,kw OR 'lagging in time':ti,ab,de,kw OR 'lagged the time':ti,ab,de,kw OR 'lagged in time':ti,ab,de,kw OR 'less time':ti,ab,de,kw OR 'little time':ti,ab,de,kw OR 'long time':ti,ab,de,kw OR 'meaningful time':ti,ab,de,kw OR 'encounter time':ti,ab,de,kw OR 'need time':ti,ab,de,kw OR 'needing time':ti,ab,de,kw OR 'needed time':ti,ab,de,kw OR 'no time':ti,ab,de,kw OR 'no time':ti,ab,de,kw OR 'perceiving time':ti,ab,de,kw OR 'perceiving the time':ti,ab,de,kw OR 'perceived time':ti,ab,de,kw OR 'perception of time':ti,ab,de,kw OR 'prefer time':ti,ab,de,kw OR 'prefer the time':ti,ab,de,kw OR 'preference time':ti,ab,de,kw OR 'preference of the time':ti,ab,de,kw OR 'preparing time':ti,ab,de,kw OR 'preparing the time':ti,ab,de,kw OR 'pressure time':ti,ab,de,kw OR 'proper time':ti,ab,de,kw OR 'proper the time':ti,ab,de,kw OR 'reconsider the time':ti,ab,de,kw OR 'reconsider time':ti,ab,de,kw OR 'reconsidering the time':ti,ab,de,kw OR 'reconsidering the time':ti,ab,de,kw OR 'rethink time':ti,ab,de,kw OR 'rethink the time':ti,ab,de,kw OR 'rethinking the time':ti,ab,de,kw OR 'rethinking time':ti,ab,de,kw OR 'right time':ti,ab,de,kw OR 'role of time':ti,ab,de,kw OR 'scarce time':ti,ab,de,kw OR 'scarcity of time':ti,ab,de,kw OR 'short time':ti,ab,de,kw OR 'spend time':ti,ab,de,kw OR 'spend the time':ti,ab,de,kw OR 'spending time':ti,ab,de,kw OR 'spending time':ti,ab,de,kw OR 'spent time':ti,ab,de,kw OR 'spent the time':ti,ab,de,kw OR 'subjective time':ti,ab,de,kw OR 'sufficient time':ti,ab,de,kw OR 'insufficient time':ti,ab,de,kw OR 'take time':ti,ab,de,kw OR 'take the time':ti,ab,de,kw OR 'taking time':ti,ab,de,kw OR 'taking the time':ti,ab,de,kw OR 'took time':ti,ab,de,kw OR 'took the time':ti,ab,de,kw OR 'took time':ti,ab,de,kw OR 'unsatisfied with the time':ti,ab,de,kw OR 'satisfied with the time':ti,ab,de,kw OR 'use time':ti,ab,de,kw OR 'use of time':ti,ab,de,kw OR 'used time':ti,ab,de,kw OR 'using time':ti,ab,de,kw OR 'utilizing time':ti,ab,de,kw OR 'utilizing time':ti,ab,de,kw OR 'utilization of time':ti,ab,de,kw OR 'utilization of the time':ti,ab,de,kw OR 'utilization of the time':ti,ab,de,kw	234,290
#5	#3 AND #4	531
#4	'time-related barrier*':ti,ab,de,kw OR 'time barrier*':ti,ab,de,kw OR 'time break*':ti,ab,de,kw OR 'time constraint*':ti,ab,de,kw OR 'time for conversation':ti,ab,de,kw OR 'time cost*':ti,ab,de,kw OR 'time for a decision':ti,ab,de,kw OR 'time for the decision':ti,ab,de,kw OR 'time for a delay*':ti,ab,de,kw OR 'time for delay*':ti,ab,de,kw OR 'time for discuss*':ti,ab,de,kw OR 'time for a discuss*':ti,ab,de,kw OR 'time duration':ti,ab,de,kw OR 'time for an encounter':ti,ab,de,kw OR 'time for the encounter':ti,ab,de,kw OR 'time enough':ti,ab,de,kw OR 'time experienc*':ti,ab,de,kw OR 'time factor':ti,ab,de,kw OR 'time follow-up':ti,ab,de,kw OR 'time impact*':ti,ab,de,kw OR 'time influence':ti,ab,de,kw OR 'time invest*':ti,ab,de,kw OR 'time lag*':ti,ab,de,kw OR 'time left':ti,ab,de,kw OR 'time for a medical encounter':ti,ab,de,kw OR 'time for the medical encounter':ti,ab,de,kw OR 'time needed':ti,ab,de,kw OR 'time percept*':ti,ab,de,kw OR 'time perspective':ti,ab,de,kw OR 'time prefer*':ti,ab,de,kw OR 'time to prepare':ti,ab,de,kw OR 'time for preparation':ti,ab,de,kw OR 'time pressure':ti,ab,de,kw OR 'time for a reconsider*':ti,ab,de,kw OR 'time for reconsider*':ti,ab,de,kw OR 'time to reconsider*':ti,ab,de,kw OR 'time for a rethink*':ti,ab,de,kw OR 'time to rethink*':ti,ab,de,kw OR 'time for rethink*':ti,ab,de,kw OR 'time is right':ti,ab,de,kw OR 'time role':ti,ab,de,kw OR 'time satisfaction':ti,ab,de,kw OR 'time is satisfying':ti,ab,de,kw OR 'time is satisfied':ti,ab,de,kw OR 'time scarcity':ti,ab,de,kw OR 'time is scarce':ti,ab,de,kw OR 'time spent':ti,ab,de,kw OR 'time is spent':ti,ab,de,kw OR 'time is sufficient':ti,ab,de,kw OR 'time is insufficient':ti,ab,de,kw OR 'time to talk':ti,ab,de,kw OR 'time for talking':ti,ab,de,kw OR 'time use':ti,ab,de,kw OR 'time used':ti,ab,de,kw OR 'time is used':ti,ab,de,kw OR 'time utilization':ti,ab,de,kw OR 'time utilisation':ti,ab,de,kw OR 'time workload':ti,ab,de,kw	144,512
#3	#1 AND #2	80,532
#2	'decision making'/exp OR 'decision making':ti,ab,de,kw OR 'decision proces*':ti,ab,de,kw	484,909
#1	'neoplasm'/exp OR 'neoplasm' OR 'neoplas*':ti,ab,de,kw OR 'tumor*':ti,ab,de,kw OR 'tumour*':ti,ab,de,kw OR 'cancer*':ti,ab,de,kw OR 'lymphoma*':ti,ab,de,kw OR 'malignan*':ti,ab,de,kw OR 'oncolog*':ti,ab,de,kw OR 'carcinom*':ti,ab,de,kw OR 'melanom*':ti,ab,de,kw OR 'leukemi*':ti,ab,de,kw OR 'leukaemi*':ti,ab,de,kw OR 'kahler*':ti,ab,de,kw OR 'myeloma':ti,ab,de,kw OR 'sarcoma*':ti,ab,de,kw OR 'myxoma*':ti,ab,de,kw	6,829,083

Search strategy in Emtree (via Ovid; 2021 October 5th).

#	Query	Results
#8	5 or 7	468
#7	3 and 6	284
#6	("adequate time" or "appointment time" or "appropriate time" or "consider time" or "consider the time" or "considering time" or "considering the time" or "considered time" or "considered the time" or "conversation time" or "dedicated time" or "dedicated the time" or "delay in time" or "delay in the time" or "discussing time" or "discussing the time" or "discuss time" or "discuss the time" or "discussed the time" or "discussed time" or "duration of time" or "encounter time" or "enough time" or "experience of time" or "experience the time" or "experiencing time" or "experiencing the time" or "follow-up time" or "have time" or "have the time" or "having time" or "having the time" or "impact of time" or "impact of the time" or "influence of time" or "influence the time" or "influencing time" or "influencing the time" or "insufficient time" or "investing time" or "investing in time" or "investing in the time" or "investment of time" or "investment in time" or "investment in the time" or "lack time" or "lack the time" or "lacking time" or "lacking the time" or "lacked time" or "lacked the time" or "lack of time" or "lag in time" or "lagging the time" or "lagging in time" or "lagged the time" or "lagged in time" or "less time" or "little time" or "long time" or "meaningful time" or "encounter time" or "need time" or "needing time" or "needed time" or "no time" or "perceiving time" or "perceiving the time" or "perceived time" or "perceived the time" or "perception of time" or "prefer the time" or "prefer time" or "preferring the time" or "preferring time" or "prepare time" or "prepare the time" or "preparation time" or "preparing time" or "preparing the time" or "pressure time" or "proper time" or "reconsider the time" or "reconsider time" or "reconsidering the time" or "reconsidering time" or "rethink the time" or "rethink time" or "rethinking the time" or "rethinking time" or "right time" or "role of time" or "scarce time" or "scarcity of time" or "short time" or "spend time" or "spend the time" or "spending time" or "spent time" or "spent the time" or "subjective time" or "sufficient time" or "insufficient time" or "take time" or "take the time" or "taking time" or "taking the time" or "took the time" or "took time" or "unsatisfied with the time" or "satisfied with the time" or "use time" or "use of time" or "used time" or "using time" or "utilizing time" or "utilising time" or "utilisation of time" or "utilisation of the time" or "utilization of time" or "utilization of the time").mp.	60,867
#5	3 and 4	216
#4	("time-related barrier*" or "time barrier*" or "time break*" or "time constraint*" or "time for conversation" or "time cost*" or "time for a decision" or "time for the decision" or "time for a delay*" or "time for delay*" or "time for discuss*" or "time for a discuss*" or "time duration" or "time for an encounter" or "time for the encounter" or "time enough" or "time experienc*" or "time factor" or "time follow-up" or "time impact*" or "time influence" or "time is insufficient" or "time invest*" or "time lag*" or "time left" or "time for a medical encounter" or "time for the medical encounter" or "time needed" or "time percept*" or "time perspective" or "time prefer*" or "time to prepare" or "time for preparation" or "time pressure" or "time for a reconsider*" or "time for reconsider*" or "time to reconsider*" or "time for a rethink*" or "time to rethink*" or "time for rethink*" or "time is right" or "time role" or "time satisfaction" or "time is satisfying" or "time is satisfied" or "time scarcity" or "time is scarce" or "time spent" or "time is spent" or "time is sufficient" or "time is insufficient" or "time to talk" or "time for talking" or "time use" or "time used" or "time is used" or "time utilization" or "time utilisation" or "time workload").mp.	40,218
#3	1 and 2	24,282
#2	exp decision making/ or 'decision making'.mp. or 'decision process'.mp.	193,357
#1	exp neoplasm/ or ("neoplas*" or "tumor*" or "tumour*" or "cancer*" or "lymphoma*" or "malignan*" or "oncolog*" or "carcinom*" or "melanom*" or "leukemi*" or "leukaemi*" or "kahler*" or "myeloma" or "sarcoma*" or "myxoma*").mp.	986,063

Search strategy in the Cochrane Library (via Wiley; 2021 October 5th).

#	Query	Results
#8	#5 or #7	77
#7	#3 and #6	52
#6	("adequate time" OR "appointment time" OR "appropriate time" OR "consider time" OR "consider the time" OR "considering time" OR "considering the time" OR "considered time" OR "considered the time" OR "conversation time" OR "dedicated time" OR "dedicated the time" OR "delay in time" OR "delay in the time" OR "discussing time" OR "discussing the time" OR "discuss time" OR "discuss the time" OR "discussed the time" OR "discussed time" OR "duration of time" OR "encounter time" OR "enough time" OR "experience of time" OR "experience the time" OR "experiencing time" OR "experiencing the time" OR "follow-up time" OR "have time" OR "have the time" OR "having time" OR "having the time" OR "impact of time" OR "impact of the time" OR "influence of time" OR "influence the time" OR "influencing time" OR "influencing the time" OR "insufficient time" OR "investing time" OR "investing in time" OR "investing in the time" OR "investment of time" OR "investment in time" OR "investment in the time" OR "lack time" OR "lack the time" OR "lacking time" OR "lacking the time" OR "lacked time" OR "lacked the time" OR "lack of time" OR "lag in time" OR "lagging the time" OR "lagging in time" OR "lagged the time" OR "lagged in time" OR "less time" OR "little time" OR "long time" OR "meaningful time" OR "encounter time" OR "need time" OR "needing time" OR "needed time" OR "no time" OR "perceiving time" OR "perceiving the time" OR "perceived time" OR "perceived the time" OR "perception of time" OR "prefer the time" OR "prefer time" OR "preferring the time" OR "preferring time" OR "prepare time" OR "prepare the time" OR "preparation time" OR "preparing time" OR "preparing the time" OR "pressure time" OR "proper time" OR "reconsider the time" OR "reconsider time" OR "reconsidering the time" OR "reconsidering time" OR "rethink the time" OR "rethink time" OR "rethinking the time" OR "rethinking time" or "right time" OR "role of time" OR "scarce time" OR "scarcity of time" OR "short time" OR "spend time" OR "spend the time" OR "spending time" OR "spent time" OR "spent the time" OR "subjective time" OR "sufficient time" OR "insufficient time" OR "take time" OR "take the time" OR "taking time" OR "taking the time" OR "took the time" OR "took time" OR "unsatisfied with the time" OR "satisfied with the time" OR "use time" OR "use of time" OR "used time" OR "using time" OR "utilizing time" OR "utilising time" OR "utilisation of time" OR "utilisation of the time" OR "utilization of time" OR "utilization of the time");ti,ab,kw	10,756
#5	#3 and #4	28
#4	("time-related barrier*" OR "time barrier*" OR "time break*" OR "time constraint*" OR "time for conversation" OR "time cost*" OR "time for a decision" OR "time for the decision" OR "time for a delay*" OR "time for delay*" OR "time for discuss*" OR "time for a discuss*" OR "time duration" OR "time for an encounter" OR "time for the encounter" OR "time enough" OR "time experienc*" OR "time factor" OR "time follow-up" OR "time impact*" OR "time influence" OR "time is insufficient" OR "time invest*" OR "time lag*" OR "time left" OR "time for a medical encounter" OR "time for the medical encounter" OR "time needed" OR "time percept*" OR "time perspective" OR "time prefer*" OR "time to prepare" OR "time for preparation" OR "time pressure" OR "time for a reconsider*" OR "time for reconsider*" OR "time to reconsider*" OR "time for a rethink*" OR "time to rethink*" OR "time for rethink*" OR "time is right" OR "time role" OR "time satisfaction" OR "time is satisfying" OR "time is satisfied" OR "time scarcity" OR "time is scarce" OR "time spent" OR "time is spent" OR "time is sufficient" OR "time is insufficient" OR "time to talk" OR "time for talking" OR "time use" OR "time used" OR "time is used" OR "time utilization" OR "time utilisation" OR "time workload");ti,ab,kw	9482
#3	#1 and #2	2787
#2	"decision making":ti,ab,kw OR "decision proces*":ti,ab,kw	14,920
#1	"neoplas*":ti,ab,kw or "tumor*":ti,ab,kw or "tumour*":ti,ab,kw or "cancer*":ti,ab,kw or "lymphoma*":ti,ab,kw or "malignan*":ti,ab,kw or "oncolog*":ti,ab,kw or "carcinom*":ti,ab,kw or "melanom*":ti,ab,kw or "leukemi*":ti,ab,kw or "leukaemi*":ti,ab,kw or "kahler*":ti,ab,kw or "myeloma":ti,ab,kw or "sarcoma*":ti,ab,kw or "myxoma*":ti,ab,kw	207,991

(continued)

#	Query	Results
S3	is insufficient" OR "time to talk" OR "time for talking" OR "time use" OR "time used" OR "time is used" OR "time utilization " OR "time utilisation " OR "time workload")	20,250
S2	(MH "Decision Making+") OR TI ("decision making" OR "decision proces*") OR AB ("decision making" OR "decision proces*") OR SU ("decision making" OR "decision proces*")	172,118
S1	(MH "Neoplasms+") OR TI (("neoplas*" OR "tumor*" OR "tumour*" OR "cancer*" OR "lymphoma*" OR "malignan*" OR "oncolog*" OR "carcinom*" OR "melanom*" OR "leukemi*" OR "leukaemi*" OR "Kahler*" OR "myeloma" OR "sarcoma*" OR "myxoma*")) OR AB (("neoplas*" OR "tumor*" OR "tumour*" OR "cancer*" OR "lymphoma*" OR "malignan*" OR "oncolog*" OR "carcinom*" OR "melanom*" OR "leukemi*" OR "leukaemi*" OR "Kahler*" OR "myeloma" OR "sarcoma*" OR "myxoma*")) OR SU (("neoplas*" OR "tumor*" OR "tumour*" OR "cancer*" OR "lymphoma*" OR "malignan*" OR "oncolog*" OR "carcinom*" OR "melanom*" OR "leukemi*" OR "leukaemi*" OR "Kahler*" OR "myeloma" OR "sarcoma*" OR "myxoma*"))	849,659

Search strategy in APA Psycinfo (via EBSCO; 2021 October 5th).

#	Query	Results
S8	S5 OR S7	141
S7	S3 AND S6	79
S6	TI ("adequate time" OR "appointment time" OR "appropriate time" OR "consider time" OR "consider the time" OR "considering time" OR "considering the time" OR "considered time" OR "considered the time" OR "conversation time" OR "dedicated time" OR "dedicated the time" OR "delay in time" OR "delay in the time" OR "discussing time" OR "discussing the time" OR "discuss time" OR "discuss the time" OR "discussed the time" OR "discussed time" OR "duration of time" OR "encounter time" OR "enough time" OR "experience of time" OR "experience the time" OR "experiencing time" OR "experiencing the time" OR "follow-up time" OR "impact of time" OR "impact of the time" OR "influence of time" OR "influence the time" OR "influencing time" OR "influencing the time" OR "insufficient time" OR "investing time" OR "investing in time" OR "investing in the time" OR "investment of time" OR "investment in time" OR "investment in the time" OR "lack time" OR "lack the time" OR "lacking time" OR "lacking the time" OR "lacked time" OR "lacked the time" OR "lack of time" OR "lag in time" OR "lagging the time" OR "lagging in time" OR "lagged the time" OR "lagged in time" OR "less time" OR "little time" OR "long time" OR "meaningful time" OR "encounter time" OR "need time" OR "needing time" OR "needed time" OR "no time" OR "perceiving time" OR "perceiving the time" OR "perceived time" OR "perceived the time" OR "perception of time" OR "prefer the time" OR "prefer time" OR "preferring the time" OR "preferring time" OR "prepare time" OR "prepare the time" OR "preparation time" OR "preparing time" OR "preparing the time" OR "pressure time" OR "proper time" OR "reconsider the time" OR "reconsider time" OR "reconsidering the time" OR "reconsidering time" OR "rethink the time" OR "rethink time" OR "rethinking the time" OR "rethinking time" OR "right time" OR "role of time" OR "scarce time" OR "scarcity of time" OR "short time" OR "spend time" OR "spend the time" OR "spending time" OR "spent time" OR "subjective time" OR "sufficient time" OR "insufficient time" OR "take time" OR "take the time" OR "taking time" OR "taking the time" OR "took the time" OR "took time" OR "unsatisfied with the time" OR "satisfied with the time" OR "use time" OR "use of time" OR "used time" OR "using time" OR "utilizing time" OR "utilising time" OR "utilisation of time" OR "utilisation of the time" OR "utilization of time" OR "utilization of the time") OR AB ("adequate time" OR "appointment time" OR "appropriate time" OR "consider time" OR "consider the time" OR "considering time" OR "considering the time" OR "considered time" OR "considered the time" OR "conversation time" OR "dedicated time" OR "dedicated the time" OR "delay in time" OR "delay in the time" OR "discussing time" OR "discussing the time" OR "discuss time" OR "discuss the time" OR "discussed the time" OR "discussed time" OR "duration of time" OR "encounter time" OR "enough time" OR "experience of time" OR "experience the time" OR "experiencing time" OR "experiencing the time" OR "follow-up time" OR "impact of time" OR "impact of the time" OR "influence of time" OR "influence the time" OR "influencing time" OR "influencing the time" OR "insufficient time" OR "investing time" OR "investing in time" OR "investing in the time" OR "investment of time" OR "investment in time" OR "investment in the time" OR "lack time" OR "lack the time" OR "lacking time" OR "lacking the time" OR "lacked time" OR "lacked the time" OR "lack of time" OR "lag in time" OR "lagging the time" OR "lagging in time" OR "lagged the time" OR "lagged in time" OR "less time" OR "little time" OR "long time" OR "meaningful time" OR "encounter time" OR "need time" OR "needing time" OR "needed time" OR "no time" OR "perceiving time" OR "perceiving the time" OR "perceived time" OR "perceived the time" OR "perception of time" OR "prefer the time" OR "prefer time" OR "preferring the time" OR "preferring time" OR "prepare time" OR "prepare the time" OR "preparation time" OR "preparing time" OR "preparing the time" OR "pressure time" OR "proper time" OR "reconsider the time" OR "reconsider time" OR "reconsidering the time" OR "reconsidering time" OR "rethink the time" OR "rethink time" OR "rethinking the time" OR "rethinking time" OR "right time" OR "role of time" OR "scarce time" OR "scarcity of time" OR "short time" OR "spend time" OR "spend the time" OR "spending time" OR "spent time" OR "subjective time" OR "sufficient time" OR "insufficient time" OR "take time" OR "take the time" OR "taking time" OR "taking the time" OR "took the time" OR "took time" OR "unsatisfied with the time" OR "satisfied with the time" OR "use time" OR "use of time" OR "used time" OR "using time" OR "utilizing time" OR "utilising time" OR "utilisation of time" OR "utilisation of the time" OR "utilization of time" OR "utilization of the time")	45,104
S5	S3 AND S4	74
S4	TI ("time-related barrier*" OR "time barrier*" OR "time break*" OR "time constraint*" OR "time for conversation" OR "time cost*" OR "time for a decision" OR "time for the decision" OR "time for a delay*" OR "time for delay*" OR "time for discuss*" OR "time for a discuss*" OR "time duration" OR "time for an encounter" OR "time for the encounter" OR "time enough" OR "time experienc*" OR "time factor" OR "time follow-up " OR "time impact*" OR "time influence" OR "time is insufficient" OR "time invest*" OR "time lag*" OR "time left " OR "time for a medical encounter" OR "time for the medical encounter" OR "time needed" OR "time percept*" OR "time perspective*" OR "time prefer*" OR "time to prepare " OR "time for preparation" OR "time pressure" OR "time for a reconsider*" OR "time for reconsider*" OR "time to reconsider*" OR "time for a rethink*" OR "time to rethink*" OR "time for rethink*" OR "time is right " OR "time role" OR "time satisfaction" OR "time is satisfying" OR "time is satisfied" OR "time scarcity" OR "time is scarce" OR "time spent" OR "time is spent" OR "time is sufficient" OR "time is insufficient" OR "time to talk" OR "time for talking" OR "time use" OR "time used" OR "time is used" OR "time utilization " OR "time utilisation " OR "time	48,922

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#	Query	Results
	workload") OR AB ("time-related barrier*" OR "time barrier*" OR "time break*" OR "time constraint*" OR "time for conversation" OR "time cost*" OR "time for a decision" OR "time for the decision" OR "time for a delay*" OR "time for delay*" OR "time for discuss*" OR "time for a discuss*" OR "time duration" OR "time for an encounter" OR "time for the encounter" OR "time enough" OR "time experienc*" OR "time factor" OR "time follow-up" OR "time impact*" OR "time influence" OR "time is insufficient" OR "time invest*" OR "time lag*" OR "time left" OR "time for a medical encounter" OR "time for the medical encounter" OR "time needed" OR "time percept*" OR "time perspective" OR "time prefer*" OR "time to prepare" OR "time for preparation" OR "time pressure" OR "time for a reconsider*" OR "time for reconsider*" OR "time to reconsider*" OR "time for a rethink*" OR "time to rethink*" OR "time for rethink*" OR "time is right" OR "time role" OR "time satisfaction" OR "time is satisfying" OR "time is satisfied" OR "time scarcity" OR "time is scarce" OR "time spent" OR "time is spent" OR "time is sufficient" OR "time is insufficient" OR "time to talk" OR "time for talking" OR "time use" OR "time used" OR "time is used" OR "time utilization" OR "time utilisation" OR "time workload") OR SU ("time-related barrier*" OR "time barrier*" OR "time break*" OR "time constraint*" OR "time for conversation" OR "time cost*" OR "time for a decision" OR "time for the decision" OR "time for a delay*" OR "time for delay*" OR "time for discuss*" OR "time for a discuss*" OR "time duration" OR "time for an encounter" OR "time for the encounter" OR "time enough" OR "time experienc*" OR "time factor" OR "time follow-up" OR "time impact*" OR "time influence" OR "time is insufficient" OR "time invest*" OR "time lag*" OR "time left" OR "time for a medical encounter" OR "time for the medical encounter" OR "time needed" OR "time percept*" OR "time perspective" OR "time prefer*" OR "time to prepare" OR "time for preparation" OR "time pressure" OR "time for a reconsider*" OR "time for reconsider*" OR "time to reconsider*" OR "time for a rethink*" OR "time to rethink*" OR "time for rethink*" OR "time is right" OR "time role" OR "time satisfaction" OR "time is satisfying" OR "time is satisfied" OR "time scarcity" OR "time is scarce" OR "time spent" OR "time is spent" OR "time is sufficient" OR "time is insufficient" OR "time to talk" OR "time for talking" OR "time use" OR "time used" OR "time is used" OR "time utilization" OR "time utilisation" OR "time workload")	
S3	S1 AND S2	4728
S2	DE "Decision Making" OR DE "Choice Behavior" OR DE "Group Decision Making" OR DE "Management Decision Making" OR TI ("decision making" OR "decision proces*") OR AB ("decision making" OR "decision proces*") OR SU ("decision making" OR "decision proces*")	162,707
S1	DE "Neoplasms" OR DE "Benign Neoplasms" OR DE "Breast Neoplasms" OR DE "Endocrine Neoplasms" OR DE "Leukemias" OR DE "Melanoma" OR DE "Metastasis" OR DE "Nervous System Neoplasms" OR DE "Terminal Cancer" OR TI ("neoplas*" OR "tumor*" OR "tumour*" OR "cancer*" OR "lymphoma*" OR "malignan*" OR "oncolog*" OR "carcinom*" OR "melanom*" OR "leukemi*" OR "leukaemi*" OR "kahler*" OR "myeloma" OR "sarcoma*" OR "myxoma*") OR AB ("neoplas*" OR "tumor*" OR "tumour*" OR "cancer*" OR "lymphoma*" OR "malignan*" OR "oncolog*" OR "carcinom*" OR "melanom*" OR "leukemi*" OR "leukaemi*" OR "kahler*" OR "myeloma" OR "sarcoma*" OR "myxoma*") OR SU ("neoplas*" OR "tumor*" OR "tumour*" OR "cancer*" OR "lymphoma*" OR "malignan*" OR "oncolog*" OR "carcinom*" OR "melanom*" OR "leukemi*" OR "leukaemi*" OR "kahler*" OR "myeloma" OR "sarcoma*" OR "myxoma*")	97,988

Search strategy in Web of Science (2021 October 5th).

#	Query	Results
#8	#5 OR #7	590
#7	#3 AND #6	418
#6	TS= ("adequate time" OR "appointment time" OR "appropriate time" OR "consider time" OR "consider the time" OR "considering time" OR "considering the time" OR "considered time" OR "considered the time" OR "conversation time" OR "dedicated time" OR "dedicated the time" OR "delay in time" OR "delay in the time" OR "discussing time" OR "discussing the time" OR "discuss time" OR "discuss the time" OR "discussed time" OR "discussed the time" OR "duration of time" OR "encounter time" OR "enough time" OR "experience of time" OR "experience the time" OR "experiencing time" OR "experiencing the time" OR "follow-up time" OR "have time" OR "have the time" OR "having time" OR "having the time" OR "impact of time" OR "impact of the time" OR "influence of time" OR "influence the time" OR "influencing time" OR "influencing the time" OR "insufficient time" OR "investing time" OR "investing in time" OR "investing in the time" OR "investment of time" OR "investment in time" OR "investment in the time" OR "lack time" OR "lack the time" OR "lacking time" OR "lacking the time" OR "lacked time" OR "lacked the time" OR "lack of time" OR "lag in time" OR "lagging the time" OR "lagging in time" OR "lagged the time" OR "lagged in time" OR "less time" OR "little time" OR "long time" OR "meaningful time" OR "encounter time" OR "need time" OR "needing time" OR "needed time" OR "no time" OR "perceiving time" OR "perceiving the time" OR "perceived time" OR "perceived the time" OR "perception of time" OR "prefer time" OR "prefer the time" OR "preferring the time" OR "preferring time" OR "prepare time" OR "prepare the time" OR "preparation time" OR "preparing time" OR "preparing the time" OR "pressure time" OR "proper time" OR "reconsider the time" OR "reconsider time" OR "reconsidering the time" OR "reconsidering time" OR "rethink the time" OR "rethink time" OR "rethinking the time" OR "rethinking time" OR "right time" OR "role of time" OR "scarce time" OR "scarcity of time" OR "short time" OR "spend time" OR "spend the time" OR "spending time" OR "spent time" OR "spent the time" OR "subjective time" OR "sufficient time" OR "insufficient time" OR "take time" OR "take the time" OR "taking time" OR "taking the time" OR "took the time" OR "took time" OR "unsatisfied with the time" OR "satisfied with the time" OR "use time" OR "use of time" OR "used time" OR "using time" OR "utilizing time" OR "utilising time" OR "utilisation of time" OR "utilisation of the time" OR "utilization of time" OR "utilization of the time")	288,308
#5	#3 AND #4	205
#4	TS= ("time-related barrier*" OR "time barrier*" OR "time break*" OR "time constraint*" OR "time for conversation" OR "time cost*" OR "time for a decision" OR "time for the decision" OR "time for a delay*" OR "time for delay*" OR "time for discuss*" OR "time for a discuss*" OR "time duration" OR "time for an encounter" OR "time for the encounter" OR "time enough" OR "time experienc*" OR "time factor" OR "time follow-up" OR "time impact*" OR "time influence" OR "time is insufficient" OR "time invest*" OR "time lag*" OR "time left" OR "time for a medical encounter" OR "time for the medical encounter" OR "time needed" OR "time percept*" OR "time perspective" OR "time prefer*" OR "time to prepare" OR "time for preparation" OR "time pressure" OR "time for a reconsider*" OR "time for reconsider*" OR "time to reconsider*" OR "time for a rethink*" OR "time to rethink*" OR "time for rethink*" OR "time is right" OR "time role" OR "time satisfaction" OR "time is satisfying" OR "time is satisfied" OR "time scarcity" OR "time is scarce" OR "time spent" OR "time is spent" OR "time is sufficient" OR "time is insufficient" OR "time to talk" OR "time for talking" OR "time use" OR "time used" OR "time is used" OR "time utilization" OR "time utilisation" OR "time workload")	126,557
#3	#1 AND #2	32,246
#2	TS= ("decision making" OR "decision proces*") TS= ("neoplas*" OR "tumor*" OR "tumour*" OR "cancer*" OR "lymphoma*" OR "malignan*" OR "oncolog*" OR "carcinom*" OR "melanom*" OR "leukemi*" OR "leukaemi*" OR "kahler*" OR "myeloma" OR "sarcoma*" OR "myxoma*")	389,427
#1	TS= ("neoplas*" OR "tumor*" OR "tumour*" OR "cancer*" OR "lymphoma*" OR "malignan*" OR "oncolog*" OR "carcinom*" OR "melanom*" OR "leukemi*" OR "leukaemi*" OR "kahler*" OR "myeloma" OR "sarcoma*" OR "myxoma*")	4,838,855

Appendix C. – Publication of which the full-text could not be screened

Author(s)	Year	Title	Reason
	2011	Prolonged illness and grieving. When terminal illness last a long time, so does saying goodbye	No access to full-text
V. Basketter; M. Benney; L. Causer; L. Fleure; D. Hames; S. Jones; K. Patel; L. White	2018	The role of the CNS in the mCRPC patient pathway	No access to full-text
D. Y. Brockopp; P. Ryan; S. Warden	2003	Nurses' willingness to manage the pain of specific groups of patients	No access to full-text
N. Chawla	2012	South Asian women with breast cancer: Navigating cancer care and the role of social capital in obtaining cancer resources	No access to full-text
R. Dalton; N. Forsyth; C. Vickery; I. Eyre-Brook	2010	Assessing patients views of a dedicated colorectal cancer clinic	No access to full-text
K. B. Donaghy	2003	Fostering sound medical treatment decision making	No access to full-text
C. Frank; D. K. Heyland; D. Pichora	2006	CARENET: A resource for researchers in end-of-life care	No access to full-text
P. Giamougiannis; G. Walker; C. Martin	2014	During the south east scotland gynaecological oncology multidisciplinary meeting: Is the time allocated to the individual patient for discussion adequate?	No access to full-text
J. S. Kutner; K. Foehner; J. F. Steiner	1999	Evaluation of the impact of a pre-visit questionnaire for addressing cancer patients' information needs	No access to full-text
K. Oktay	2003	Fertility preservation in female cancer patient	No access to full-text
A. H. Partridge	2009	Optimal survivorship care begins at diagnosis	No access to full-text
F. Quereda; A. Bataller; C. Núñez-Micó; P. Acién	2011	Hrt and breast cancer in the clinical setting of a menopause unit	No access to full-text
F. Siedentopf; M. Nagel; K. Weidner; H. Kentenich	2008	Body image and the decision-making process in breast cancer patients	No access to full-text
M. Verhoef; M. Koithan; A. Mulkins; E. McKenzie; L. Balneaves	2010	Cancer treatment decision making: Describing and understanding patients' pathways of care	No access to full-text
E. Wallwork	2001	What psychiatry can offer ethics: Psychodynamic contributions	No access to full-text
B. Böttcher	2015	Ethical aspects of fertility preservation in female cancer patients	Full-text is in German
J. Ernst; E. Brähler; G. Weißflog	2014	Patient involvement in medical decision making—an overview on patient preferences and impacting factors	Full-text is in German
H. Feussner; M. Baumgartner; J. Harms; D. Wilhelm; G. Wessels; J. R. Siewert	2000	'Second opinion' in difficult cases of visceral surgery	Full-text is in German
F. Kendel; I. Otto; J. Engler; M. Schrader; C. Holmberg	2018	Living with Localized Prostate Cancer - Decision-Making and Coping with the Illness	Full-text is in German
J. G. Meran	2001	Patient education and informed consent in hemato-oncology—limits and problems from the physician's viewpoint	Full-text is in German
M. Platten; J. P. Steinbach; W. Wick	2013	Personalized neurooncology	Full-text is in German
J. Rau; J. Teichmann; F. Petermann	2009	Motivation for exercise of cancer patients - Results of randomized-efficacy study	Full-text is in German
J. Schildmann; J. Vollmann	2010	Treatment decisions in advanced cancer. An empirical-ethical study on physicians' criteria and the process of decision making	Full-text is in German
M. Simon; M. Habeck; D. Büttner; U. Habeck; T. Nölling; M. Krause; G. Brix; N. Willich; F. Wenz; H. Schmidberger; J. Debus; M. Baumann	2015	Approval procedures for clinical trials in the field of radiation oncology	Full-text is in German
R. Souchon	2004	Bone metastases - Treatment is dictated by the desired outcome	Full-text is in German
C. Bouleuc; A. Bredart; S. Dolbeault; G. Ganem; L. Copel	2010	How to improve cancer patients' satisfaction with medical information	Full-text is in French
G. Créhange; J. Y. Mabrut; M. Rouffiac	2018	Surgery after upfront radiochemotherapy for locally advanced esophageal cancer: To do or not to do?	Full-text is in French
L. Digue; S. Pedeboscq	2014	Quality assurance in head and neck medical oncology	Full-text is in French
A. Fléchon; C. Villeminey; F. Despiaud; C. Bertrand; E. Lecarpentier; F. Joly	2019	Securing patients pathways treated by oral antitumoral: Guidelines for better organization of departments and management of incoming calls	Full-text is in French
S. Gregoire; C. Maltais; M. Laliberte	2013	Clinical management in oncological physiotherapy: promotion of a shared decision in the context of palliative care	Full-text is in French
M. Ledoux; W. Rhondali; L. Monnin; C. Thollet; P. Gabon; M. Filbet	2013	Advanced directives: nurses' and physicians' representations in 2012	Full-text is in French
M. László; T. Tamás; Z. Antal; B. Imre	2018	The possible role of the timing of the first oncological treatment on the survival rate of cancer diseases	Full-text is in Hungarian
L. Mangel; E. Kövér; I. Szilágyi; Z. Varga; E. Bércesi; Z. Nagy; T. Holcz; O. Karádi; R. Farkas; S. Csák; T. Csere; M. Kásler	2012	Novel quality assurance method in oncology: The two-level, multi-disciplinary and oncotherapy oncology team system	Full-text is in Hungarian
T. Kanno; M. Kubota; H. Sakamoto; R. Nishiyama; T. Oida; T. Okada; T. Akao; Y. Higashi; J. Kawamura; H. Yamada	2016	The factors that affect the decision to perform laparoscopic partial nephrectomy for small renal tumor	Full-text is written in Japanese
Y. Narita; Y. Miyakita; H. Momota; R. Miyahara; S. Shibui	2009	A survey of neurosurgeons' policies and attitudes regarding the disclosure of a diagnosis of glioma and the decision to pursue end-of-life care in glioma patients	Full-text is written in Japanese
A. Tsumura; A. Yamazaki; K. Kamibeppu	2010	Nursing strategies to help malignant glioma patients and their families make end-of-life decisions	Full-text is written in Japanese

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Author(s)	Year	Title	Reason
R. Jorge; A. Teixeira; N. Calanzani; R. Nunes; L. Sousa	2019	Older people's preferences for prognostic information in a situation of serious illness with less than a year to live	Full-text is written in Portuguese
L. Timonen; M. Sihvonen	1998	Guidance for breast cancer patients in the surgical ward and in the outpatient department	Full-text is in Finnish
H. J. Joh; J. H. Lee; S. H. Choi; H. K. Kim; K. S. Kim	2015	Job Analysis Based on Working Hours and Activities of Oncology Advanced Practice Nurses	Full-text is in Korean
C. Pérez; M. M. Acebal; E. Alonso; G. Carmona; M. Álvarez; B. Dueñas; A. Caro; M. Á. Hernández; C. Domínguez; J. L. Padilla; J. A. Virizueta; E. Bayo; J. A. Moreno	2010	Diseño del instrumento de ayuda para la toma de decisiones: "Alternativas de tratamiento para el cáncer de mama: ¿Qué opción prefiero?"	Full-text is in Spanish

Appendix D. Supporting information

Supplementary data associated with this article can be found in the online version at [doi:10.1016/j.synthmet.2024.117624](https://doi.org/10.1016/j.synthmet.2024.117624).

References

- Hamelinck VC, Bastiaannet E, Pieterse AH, Jannink I, van de Velde CJ, Liefers G-J, et al. Patients' preferences for surgical and adjuvant systemic treatment in early breast cancer: a systematic review. *Cancer Treat Rev* 2014;40(8):1005–18.
- van der Horst DE, Garvelink MM, Bos WJW, Stiggelbout AM, Pieterse AH. For which decisions is shared decision making considered appropriate? – A systematic review. *Patient Educ Couns* 2022;106:3–16.
- Kuijpers MM, van Veenendaal H, Engelen V, Visserman E, Noteboom EA, Stiggelbout AM, et al. Shared decision making in cancer treatment: a Dutch national survey on patients' preferences and perceptions. *Eur J Cancer Care* 2022; 31:e13534.
- Kuusmanen L, Hupli M, Ahtiluoto S, Haavisto E. Patient participation in shared decision-making in palliative care - An integrative review. *J Clin Nurs* 2021;30: 3415–28.
- Snijders HS, Kunneman M, Bonsing BA, De Vries AC, Tollenaar R, Pieterse AH, et al. Preoperative risk information and patient involvement in surgical treatment for rectal and sigmoid cancer. *Colorectal Dis* 2014;16(2):O43–9.
- Kunneman M, Engelhardt EG, Ten Hove F, Marijnen CAM, Portielje JEA, Smets EMA, et al. Deciding about (neo-) adjuvant rectal and breast cancer treatment: missed opportunities for shared decision making. *Acta Oncol* 2016;55 (2):134–9.
- Driever EM, Stiggelbout AM, Brand PL. Do consultants do what they say they do? Observational study of the extent to which clinicians involve their patients in the decision-making process. *BMJ Open* 2022;12(1):e056471.
- Keij SM, Lie HC, Laidsaar-Powell R, Kunneman M, de Boer JE, Moaddine S, et al. Patient-related characteristics considered to affect patient involvement in shared decision making about treatment: a scoping review of the qualitative literature. *Patient Educ Couns* 2023;111:107677.
- Joseph-Williams N, Elwyn G, Edwards A. Knowledge is not power for patients: a systematic review and thematic synthesis of patient-reported barriers and facilitators to shared decision making. *Patient Educ Couns* 2014;94(3):291–309.
- Mokhles S, Maat A, Aerts J, Nuytens J, Bogers A, Takkenberg JJM. Opinions of lung cancer clinicians on shared decision making in early-stage non-small-cell lung cancer. *Inter Cardiovasc Thorac Surg* 2017;25(2):278–84.
- Frerichs W, Hahlweg P, Müller E, Adis C, Scholl I. Shared decision-making in oncology - a qualitative analysis of healthcare providers' views on current practice. *PloS One* 2016;11(3):e0149789.
- van Veenendaal H, Chernova G, Bouman CM, van Etten-Jamaludin FS, van Dieren S, Ubbink DT. Shared decision-making and the duration of medical consultations: a systematic review and meta-analysis. *Patient Educ Couns* 2022; 107:107561.
- Bomhof-Roordink H, Fischer MJ, van Duijn-Bakker N, Baas-Thijssen MC, van der Weijden T, Stiggelbout AM, et al. Shared decision making in oncology: a model based on patients', health care professionals', and researchers' views. *Psychooncology* 2019;28(1):139–46.
- Politi MC, Studts JL, Hayslip JW. Shared decision making in oncology practice: what do oncologists need to know? *Oncologist* 2012;17(1):91–100.
- Pieterse AH, Stiggelbout AM, Montori VM. Shared decision making and the importance of time. *JAMA* 2019;322(1):25–6.
- Peters MDJ, Godfrey C, McInerney P, Munn Z, Tricco AC, Khalil H. Chapter 11: scoping reviews. In: Aromataris E, Munn Z, editors. *JBI Manual for Evidence Synthesis*. JBI; 2020. p. 406–51.
- Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Ann Intern Med* 2018;169(7):467–73.
- Microsoft Corporation. Microsoft Excel 2018. Available from: (<https://office.microsoft.com/excel>).
- Landis JR, Koch GG. The measurement of observer agreement for categorical data. *Biometrics* 1977;33(1):159–74.
- Bartholomäus M, Zomorodbakhsch B, Micke O, Prott FJ, Rudolph I, Seilacher E, et al. Cancer patients' needs for virtues and physicians' characteristics in physician-patient communication: a survey among patient representatives. *Support Care Cancer* 2019;27(8):2783–8.
- Charles C, Gafni A, Whelan T. Self-reported use of shared decision-making among breast cancer specialists and perceived barriers and facilitators to implementing this approach. *Health Expect* 2004;7(4):338–48.
- Denis L, Joniau S, Bossi A, Baskin-Bey E, Fitzpatrick JM. PCA: prostate cancer, patient-centred approach or both? *BJU Int* 2012;110(1):16–22.
- Fancher TT, Palesty JA, Thomas R, Healy T, Fancher JM, Ng C, et al. A woman's influence to choose mastectomy as treatment for breast cancer. *J Surg Res* 2009; 153(1):128–31.
- Janz NK, Wren PA, Copeland LA, Lowery JC, Goldfarb SL, Wilkins EG. Patient-physician concordance: preferences, perceptions, and factors influencing the breast cancer surgical decision. *J Clin Oncol* 2004;22(15):3091–8.
- Holmes-Rovner M, Montgomery JS, Rovner DR, Scherer LD, Whitfield J, Kahn VC, et al. Informed decision making: assessment of the quality of physician communication about prostate cancer diagnosis and treatment. *Med Decis Mak* 2015;35(8):999–1009.
- Mohamedali HZ, Breunis H, Panju A, Alibhai SMH. Information needs, decisional regret and satisfaction of older and younger adults with acute myeloid leukemia. *J Geriatr Oncol* 2010;1(2):66–72.
- Mastaglia B, Kristjanson LJ. Factors influencing women's decisions for choice of surgery for Stage I and Stage II breast cancer in Western Australia. *J Adv Nurs* 2001;35(6):836–47.
- Vivian E, Oduor H, Lundberg L, Vo A, Mantry PS. A cross-sectional study of stress and the perceived style of decision-making in clinicians and patients with cancer. *Health Serv Res Manag Epidemiol* 2019;6:1–16.
- Song L, Chen RC, Bensen JT, Knaf GJ, Nielsen ME, Farnan L, et al. Who makes the decision regarding the treatment of clinically localized prostate cancer - the patient or physician?: Results from a population-based study. *Cancer* 2013;119(2):421–8.
- Shepherd HL, Tattersall MH, Butow PN. Physician-identified factors affecting patient participation in reaching treatment decisions. *J Clin Oncol* 2008;26(10): 1724–31.
- Obeidat RF, Lally RM. Jordanian physicians' perceived barriers and facilitators to patient participation in treatment decision-making: an exploratory study. *Indian J Cancer* 2018;55(4):377–81.
- Nakashima M, Kuroki S, Shinkoda H, Suetsugu Y, Shimada K, Kaku T. Information-seeking experiences and decision-making roles of Japanese women with breast cancer. *Fukuoka Acta Med* 2012;103(6):120–30.
- Maes-Carballo M, Martín-Díaz M, Mignini L, Khan KS, Trigueros R, Bueno-Cavanillas A. Evaluation of the use of shared decision making in breast cancer: International survey. *Int J Environ Res Public Health* 2021;18(4):1–15.
- Sainio C, Eriksson E, Lauri S. Patient participation in decision making about care: the cancer patient's point of view. *Cancer Nurs* 2001;24(3):172–9.
- Sainio C, Lauri S, Eriksson E. Cancer patients' views and experiences of participation in care and decision making. *Nurs Ethics* 2001;8(2):97–113.
- Netsey-Afedo MML, Ammentorp J, Osther PJS, Birkelund R. No time for reflection: patient experiences with treatment-related decision-making in advanced prostate cancer. *Scand J Caring Sci* 2020;34(4):880–8.
- LeBlanc TW, Fish LJ, Bloom CT, El-Jawahri A, Davis DM, Locke SC, et al. Patient experiences of acute myeloid leukemia: a qualitative study about diagnosis, illness understanding, and treatment decision-making. *Psychooncology* 2017;26(12): 2063–8.
- Herrmann A, Hall A, Zdenkowski N. Women's experiences with deciding on neoadjuvant systemic therapy for operable breast cancer: a qualitative study. *Asia Pac J Oncol Nurs* 2018;5(1):68–76.
- Henman MJ, Butow PN, Brown RF, Boyle F, Tattersall MHN. Lay constructions of decision-making in cancer. *Psychooncology* 2002;11(4):295–306.
- Hahlweg P, Härter M, Nestoriuc Y, Scholl I. How are decisions made in cancer care? A qualitative study using participant observation of current practice. *BMJ Open* 2017;7(9):e016360.
- Cohen H, Britten N. Who decides about prostate cancer treatment? A qualitative study. *Fam Pr* 2003;20(6):724–9.

- [42] Back AL, Arnold RM, Baile WF, Tulskey JA, Fryer-Edwards K. Approaching difficult communication tasks in oncology. *CA Cancer J Clin* 2005;55(3):164–77.
- [43] Balogh EP, Ganz PA, Murphy SB, Nass SJ, Ferrell BR, Stovall E. Patient-centered cancer treatment planning: improving the quality of oncology care. Summary of an institute of medicine workshop. *Oncologist* 2011;16(12):1800–5.
- [44] Seale C. Portrayals of treatment decision-making on popular breast and prostate cancer web sites. *Eur J Cancer Care* 2005;14(2):171–4.
- [45] Waldron T, Carr T, McMullen L, Westhorp G, Duncan V, Neufeld SM, et al. Development of a program theory for shared decision-making: a realist synthesis. *BMC Health Serv Res* 2020;20(59):1–17.
- [46] van Dulmen S., Roodbeen R., Noordman J. 2020. Tijd voor samen beslissen: Perspectieven van patiënten, zorgverleners en zorgverzekeraars ten aanzien van tijd om samen te beslissen. Nivel.
- [47] Keij SM, Stiggelbout AM, Pieterse AH. Patient readiness for shared decision making about treatment: conceptualisation and development of the Ready^{SDM}. *Health Expect* 2024;27:e13995.
- [48] Roulston A. The impact of time and communications on professional decision-making regarding patients with advanced lung cancer: interpretative phenomenological analysis of focus groups with specialist palliative care professionals. *Acta Missiologica* 2021;15(1):7–25.
- [49] Noordman J, Driesenaar JA, Henselmans I, Verboom J, Heijmans M, van Dulmen S. Patient participation during oncological encounters: barriers and need for supportive interventions experienced by elderly cancer patients. *Patient Educ Couns* 2017;100(12):2262–8.
- [50] Cobiachi L, Dal Mas F, Agnoletti V, Ansaloni L, Biffi W, Butturini G, et al. Time for a paradigm shift in shared decision-making in trauma and emergency surgery? Results from an international survey. *World J Emerg Surg* 2023;18(14):1–16.
- [51] Montori VM. Why we revolt: a patient revolution for careful and kind care. 2nd edition. Mayo Clinic Press; 2020.
- [52] Montori V, Hargraves IG, Breslin M, Shaw K, Morera L, Branda M, et al. Careful and kind care requires unhurried conversations. *NEJM Catal* 2019.
- [53] Scholl I, Kobrin S, Elwyn G. “All about the money?” A qualitative interview study examining organizational-and system-level characteristics that promote or hinder shared decision-making in cancer care in the United States. *Implement Sci* 2020;15(81):1–9.