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# BMJ Open

## "Models of support to family members during the trajectory of cancer – A scoping review protocol"

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3 **Models of support to family members during the trajectory of cancer – a scoping review**  
4 **protocol**  
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10 Maria Samuelsson<sup>1</sup> RN, RSCN, doctoral student

11 Anne Wennick<sup>1</sup> RN, RSCN, PhD, senior lecturer

12 Jenny Jakobsson<sup>1</sup> RN, PhD, lecturer

13 Mariette Bengtsson<sup>1</sup> RN, PhD, associated professor

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15  
16  
17  
18  
19  
20  
21  
22 <sup>1</sup> Malmö University, Faculty of Health and Society, Department of Care Science, Malmö,  
23 Sweden  
24

25  
26 **Corresponding author:**  
27

28 Maria Samuelsson

29 Address: Jan Waldenströms gata 25, 205 06 Malmö, Sweden

30 Telephone: +46 708-996911

31 E-mail: maria.samuelsson@mau.se  
32  
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46 Author contribution: MS led the design, search strategy and conceptualization  
47 of this work and drafted the protocol. AW, JJ and MB were involved in the  
48 conceptualization of the review design, inclusion and exclusion criteria and  
49 provided feedback on the methodology and the manuscript. All authors give their  
50 approval to the publishing of this protocol manuscript.  
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## ABSTRACT

### Introduction

A cancer diagnose, e.g. colorectal cancer, not only affects the cancer-person stricken, but also the surrounding family. Thus, this scoping review intends to identify appropriate models of support that will guide the development of a model of support to family members during the trajectory of colorectal cancer.

### Methods and analysis

This scoping review will be guided by the methodological framework developed by Arksey and O'Malley, which was refined by Levac et al. and Colquhoun et al., and later on described by the Joanna Briggs Institute. All the stages will be conducted iteratively and reflexively. Firstly, a search strategy will be developed with an experienced librarian and applied in the following peer-reviewed databases: PubMed, CIHNAL and PsycINFO. Additional searches will be performed in Google Scholar and SwePub for identification of grey literature and hand searched in the reference lists of all studies included. The searches will be conducted from December 2019 to February 2020. A draft of the preliminary search strategy was performed in PubMed in November 2019. Subsequently, using a charting form, three members of the research team will independently screen all abstracts for relevance, as well as the full-text articles. Studies meeting the inclusion criteria will be critically evaluated using the Critical Appraisal Skills Programme. A descriptive summary of study characteristics and of the scoping review process will be presented, including a visual flow diagram. Lastly, a narrative synthesis will be conducted using a thematic analysis as presented by Braun and Clarke. To enhance validity, contact nurses of persons with colorectal cancer will be provided an overview of the preliminary results.

### Ethics and dissemination

Being a secondary analysis, ethical approval is not needed for this study.

**Keywords:** Cancer Care, Colorectal cancer, Family, Model of Support, Psychosocial support system, Scoping review

### Strengths and limitations of this study:

- The scoping review will enable identification of both appropriate models of support to family members during the trajectory of cancer and gaps in knowledge, which will guide the development of a model of support and future studies.
- Search strategies will be developed in collaboration with a research librarian well versed in using research databases and in developing search strategies.
- The search strategy will include three different databases with peer-reviewed literature, with no restrictions in study design or publication year, and with an additional search of grey literature.
- A quality assessment will be made to enable identification of quantitative as well as qualitative gaps in the literature.
- Only literature in English and Swedish will be included.

### INTRODUCTION

Throughout the trajectory of cancer – from diagnose, through treatment and on to survivorship or palliative care – family members are described as the most important means of support<sup>1, 2</sup>. Though the provided support is important, it is not unproblematic. It is well known that family members play an important role in the stricken person's compliance with treatment regimens and activities in her or his everyday life<sup>3, 4</sup>, or even that being married or in a similar relationship has a positive impact on the person's survival<sup>3</sup>. Nevertheless, family members of persons diagnosed with cancer themselves are at risk of becoming ill<sup>3, 4, 5</sup>. Family members show higher rates of anxiety, depression and weakened immune response<sup>3</sup>, reactions to severe stress and ischemic heart disease<sup>5</sup>. In addition, being a family member to a person with a cancer diagnose means an increased likelihood of long-term medical problems and higher mortality<sup>4</sup>. Likewise, family members of persons diagnosed with colorectal cancer describe how they become responsible for not only the stricken person's wellbeing but also compliance with hers or his everyday life – a responsibility experienced as a heavy burden<sup>1, 2</sup>. Moreover, the treatment and recovery process from colorectal cancer is described as having a severe impact on family members<sup>1</sup>. Furthermore, an illness, e.g. colorectal cancer, not only affects the family members but also the relationships within the family, and it challenges established communication patterns, roles and responsibilities<sup>6</sup>. Thus, colorectal cancer is an illness that may affect the family system itself. For this reason, health professionals must be aware of the possible needs of family members; and even if they demonstrate a range of strengths, they are vulnerable during this stressful period<sup>7</sup>. Consequently, there is a necessity

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3 not only to address the needs of support of the ill person's partner but also the needs of other  
4 family members.  
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8 In short, even though support resources exist within a family, there is no guarantee such  
9 potential support can overcome the negative impact colorectal cancer may have on both the  
10 family members and on the family system. This means that without adequate support, family  
11 members themselves are at risk of becoming ill; thus, the most prominent resource of support  
12 may be lost. Despite the severe impact colorectal cancer has on family members, the support  
13 offered by health care professionals is experienced as entirely patient-focused<sup>1, 6</sup>. Therefore,  
14 this scoping review will be conducted to address the apparent need to focus on the family  
15 members' needs of support. In addition, as no support model was found focusing on the  
16 families of persons diagnosed with colorectal cancer, the review will scope the literature on  
17 support provided to family members during the trajectory of all cancers. Thus, the scoping  
18 review intents not only to identify appropriate models of support, but also to identify gaps in  
19 knowledge regarding, e.g., phases of the trajectory. The results will guide the development of  
20 a model of support to family members during the trajectory of colorectal cancer care and the  
21 design of further studies. In preparation for this scoping review, searches were made to locate  
22 a comparable systematic and/or scoping review. However, none were identified.  
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### 36 **AIM**

37 The aim of the scoping review is to map the existing literature on models of support provided  
38 to family members during the trajectory of cancer.  
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### 43 **METHODS AND ANALYSIS**

44 The study will be conducted as a scoping review of the existing literature on models of  
45 support provided to family members during the trajectory of cancer. A scoping review was  
46 chosen as it, according to Levac et al<sup>8</sup>, facilitates the mapping of new concepts, types of  
47 evidence and gaps of knowledge. To ensure rigor in methodology reporting, the present study  
48 will follow the six-stage approach developed by Arksey and O'Malley<sup>9</sup>, refined by Levac<sup>8</sup>  
49 and Colquhoun<sup>10</sup>, and described by the Joanna Briggs Institute<sup>11</sup>: 1) Identifying the research  
50 question, 2) identifying relevant studies, 3) selecting studies, 4) charting the data, 5) collating,  
51 summarizing and reporting the results, 6) consultation. Reporting will be compliant with the  
52 Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping  
53 Reviews Checklist<sup>12</sup> (PRISMA-ScR).  
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## Stage 1: Identifying the research question

The research question for this scoping review is as follows: *What is known from the existing literature about models of support provided to family members during the trajectory of cancer?* In line with the recommendations by Arksey and O'Malley<sup>9</sup>, the research question was formulated to generate breadth of coverage by maintaining a wide approach. Since scoping is an iterative process, additional questions may be added based on our findings along the review process.

The initial specific research questions of this scoping review are the following:

- i) What are the characteristics of the models described?
- ii) During which phase of the trajectory is the described support provided?
- iii) What are the aims of the support?
- iv) To whom is the support directed? (to multiple family members or to which family member?)

## Stage 2: Identify relevant studies

The initial search protocol was designed by the research team and developed in collaboration with a research librarian well versed using research databases. The scoping review will use the mnemonic Participants, Concept and Context (PCC), described by Joanna Briggs Institute<sup>11</sup> (Table 1) to establish effective search criteria.

**Table 1.** The Population Concept and Context mnemonic as recommended by Joanna Briggs Institute

<b>Participants</b>	Family members of a person diagnosed with cancer.
<b>Concept</b>	Models of Support.
<b>Context</b>	The trajectory of cancer. Both in hospital and home setting.

To get a wide-ranging picture of the existing research, studies of different designs will be included, that is, qualitative, quantitative and mixed method-design, to address the research questions. The search strategy will be conducted iteratively by the research team, which means the researcher being reflexive at all steps and, when necessary, repeating steps to



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3 ensure that the literature is covered in a comprehensive way<sup>9</sup>. Electronic searches will be  
4 conducted in the following peer-reviewed databases: PubMed, Cumulative Index to Nursing  
5 and Allied Health Literature (CINAHL) and PsycINFO. Search tools such as Medical Subject  
6 Headings, Headings, Thesaurus and Boolean operators (AND/OR) will be used to expand and  
7 narrow the search and keywords, e.g. support, neoplasm and synonyms of e.g. family, next of  
8 kin, partner, nuanced to apply to the different databases. No limitations will be set to the year  
9 of publication. Finally, search strategies will be developed in collaboration with a research  
10 librarian. A draft search of the preliminary search strategy was conducted in PubMed in  
11 20191114 (Supplementary file). In accordance with the Johanna Briggs Institute<sup>11</sup>, the process  
12 will start with a broad search to inform the subsequent. Words contained in the title and  
13 abstracts, and the index terms describing the papers, will be analyzed by two members of the  
14 research team and the search strategy refined before conducted in all databases. As a third  
15 step in the search strategy, the reference lists of retrieved articles will be hand searched for  
16 additional studies. Searches will also be conducted using Google Scholar and SwePub to  
17 identify grey literature.  
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### 30 Inclusion and exclusion criteria

31 Types of studies to be considered for inclusion are articles that present a) primary research  
32 about support provided by health care b) to family members c) during the trajectory of cancer  
33 d) of an adult person e) in Swedish or English f) studies evaluated with moderate or high  
34 methodological quality according to the Critical Appraisal Skills Programme (CASP)<sup>13</sup>. The  
35 references in the grey literature will be searched to identify unpublished studies. The scoping  
36 review will exclude books, book reviews, commentaries, letters to the editor and abstracts for  
37 conferences, as the interest pertains to models of support described in original research.  
38 Reviews will be excluded, but their reference list will be hand searched. The inclusion and  
39 exclusion criteria may be modified within the iterative, dynamic process, resulting in  
40 revisiting and refining the search strategy, as described by Colquhoun et al <sup>10</sup>. If so, the  
41 process will be described in the final manuscript.  
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### 53 Stage 3: Study selection

54 All the titles from the second search will be screened for relevance by one member of the  
55 research team. If the title is in line with the aim of the study, the abstracts will be read and  
56 independently assessed with the eligibility criteria by three members of the research team. As  
57 recommended by Levac<sup>8</sup>, the research team will meet at the start, middle and end of the  
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3 abstract review process to discuss any challenges and, if needed, to refine the search strategy.  
4 If any disagreement appears, a fourth research member will be consulted. Studies selected for  
5 inclusion will be retrieved in full-text and imported into Endnote to identify and discard  
6 duplicates. A flow diagram of the search and selection process is presented in Figure 1.  
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#### 10 11 **Stage 4: Charting the data**

12 The full-text articles will be screened independently by three members of the research team  
13 using a charting form. The charting form has been developed to extract the study  
14 characteristic and findings, which will be piloted by two researchers on three articles and  
15 cross-checked for reliability. The charting form will include the inclusion criteria and an  
16 explanation of why the study is included or excluded at this stage in the process. Charting the  
17 data is also an iterative process, whereby the charting table will be continually updated. If  
18 there are any disagreements, a fourth researcher will be consulted until consensus is reached.  
19 Any changes will be highlighted in the final manuscript. Information that will be extracted  
20 includes study characteristics, designs and findings in relation to the review question. The  
21 following findings will be extracted from the included studies:  
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- 30 I) Model of support
  - 31 II) Phase of the trajectory
  - 32 III) Aim of the support
  - 33 IV) Participating family members
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40 Assessment of study quality is not generally performed in scoping reviews<sup>9</sup>. However, quality  
41 assessment enables identification of not only quantitative but also qualitative gaps in the  
42 literature, which is why this will be conducted at this stage using the CASP checklist<sup>13</sup>.  
43 Studies not selected for full text retrieval will be documented in a separate file. A visual flow  
44 diagram (PRISMA<sup>14</sup>) will outline the decision-making process to enable replications by others  
45 and to further increase reliability of the findings and for methodological accuracy<sup>9</sup>.  
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#### 53 **Stage 5: Collating, summarizing and reporting the results**

54 To support rigor, the reporting will be compliant with the PRISMA-ScR 22 item checklist<sup>12</sup>.  
55 In addition, a descriptive summary of the scoping review process and of study characteristics  
56 will be presented. Subsequently, data will be analysed using inductive methodology and  
57 thematic analysis presented by Braun and Clark<sup>15</sup>. Thematic analysis is a method for  
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3 identifying, analyzing and reporting patterns within data. It allows a large amount of data and  
4 can highlight differences and similarities across a data set. This stage will be segmented into  
5 the three steps suggested by Levac<sup>8</sup>: analysing the data; reporting the results linked to the  
6 research question; and interpreting the implications of the results for research, policy and  
7 practice. Lastly, a descriptive (narrative) summary of the included articles and the results that  
8 relate to the research question will be presented.  
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### 15 **Stage 6: Consultation**

16 Even though consultation is optional<sup>9</sup>, it enhances the methodological rigor and the validity of  
17 the outcome. Therefore, it is suggested as a compulsory stage in a scoping review<sup>8</sup>. To  
18 confirm our findings and interpretations, contact nurses will be approached for consultation  
19 and provided with the preliminary results.  
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### 25 **ETHICS AND DISSIMINATION**

26 The aim of this scoping review is to map the existing literature on support provided to family  
27 members during the continuum of cancer care. Since the methodology applied consists of  
28 reviewing and collecting data from publicly available material, this study does not require an  
29 ethical approval. To disseminate the findings the scoping review will be published as an  
30 academic article and presented at academic conferences. In addition, the findings will guide  
31 the design of future studies and the development of a model of support to family members  
32 during the trajectory of colorectal cancer.  
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**Draft of the preliminary search strategy. PubMed (NBCI)191114****Population**

#1	Title/abstract	Famil*	1064402
#2	MESH	Family (MESH)	309483
#3	Title/abstract	Next of kin	1391
#4	Title/abstract	Relative*	1357149
#5	Title/abstract	Partner*	167087
#6	Title/abstract	Couple*	350174
#7	OR	#1 OR #2 OR #3 OR #4 OR #5 OR #6	2932304

**Concept**

#8	Title/abstract	Support	953773
#9	Title/abstract	"Support intervention"	966
#10	Title/abstract	"Nursing intervention"	2373
#11	Title/abstract	Family centered care	1515
#12	MESH	Family Nursing	1435
#13	Title/abstract	"Support model"	564
#14	OR	#8 OR #9 OR #10 OR #11 OR #12 OR #13	957897

**Context**

#15	Title/abstract	Cancer*	1723541
#16	MESH	Neoplasm	3271117
#17	Title/abstract	Neoplasm*	268818
#18	Title/abstract	Oncology	96946
#19	Title/abstract	Oncological*	23082
#20	OR	#15 OR #16 OR #17 OR #18 OR #19	3779871

#21	AND	#7 AND #14	3691910
#22	AND	#20 AND #21	423935

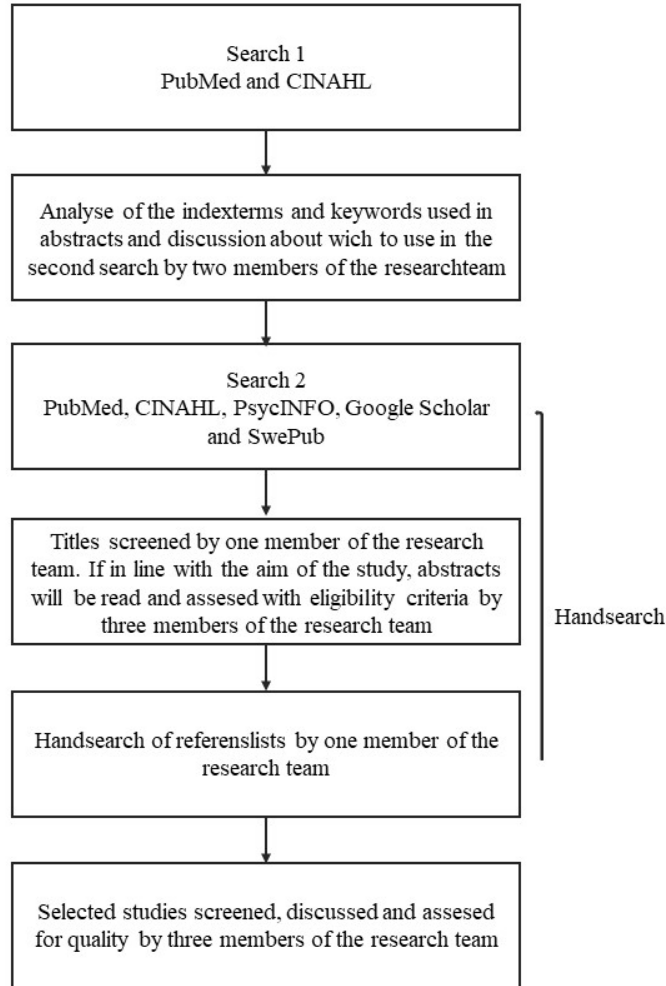


Figure 1. A flow diagram of the search and selection process

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Secondary Subject Heading:	Oncology
Keywords:	Adult oncology < ONCOLOGY, Protocols & guidelines < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Quality in health care < HEALTH SERVICES ADMINISTRATION & MANAGEMENT

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10 Maria Samuelsson<sup>1</sup> RN, RSCN, doctoral student

11 Anne Wennick<sup>1</sup> RN, RSCN, PhD, senior lecturer

12 Jenny Jakobsson<sup>1</sup> RN, PhD, lecturer

13 Mariette Bengtsson<sup>1</sup> RN, PhD, associated professor

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18  
19  
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21  
22 <sup>1</sup> Malmö University, Faculty of Health and Society, Department of Care Science, Malmö,  
23 Sweden  
24

25  
26 **Corresponding author:**

27 Maria Samuelsson

28 Address: Jan Waldenströms gata 25, 205 06 Malmö, Sweden

29 Telephone: +46 708-996911

30 E-mail: maria.samuelsson@mau.se  
31  
32  
33  
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49 of this work and drafted the protocol. AW, JJ and MB were involved in the  
50 conceptualization of the review design, inclusion and exclusion criteria and  
51 provided feedback on the methodology and the manuscript. All authors give their  
52 approval to the publishing of this protocol manuscript.  
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## ABSTRACT

### Introduction

A cancer diagnose, e.g. colorectal cancer, not only affects the cancer-person stricken, but also the surrounding family. Thus, this scoping review intends to identify appropriate models of support that will guide the development of a model of support to family members during the trajectory of colorectal cancer.

### Methods and analysis

This scoping review will be guided by the methodological framework developed by Arksey and O'Malley, refined by Levac et al. and Colquhoun et al., and described by the Joanna Briggs Institute. All the stages will be conducted iteratively and reflexively. Firstly, a search strategy will be developed with a librarian and applied in the following peer-reviewed databases: PubMed, CIHNAL and PsycINFO. Additional searches will be performed in Google Scholar and SwePub for identification of grey literature and hand searched in the reference lists. Searches will be conducted from December 2019 to February 2020. A draft of the preliminary search strategy was performed in PubMed in November 2019. Subsequently, three members of the research team will independently screen all abstracts for relevance, as well as the full-text articles. Studies meeting the inclusion criteria will be critically evaluated using the Joanna Brigg Institute Critical Appraisal Tools. A descriptive summary of study characteristics and of the scoping review process will be presented, including a visual flow diagram. Lastly, a thematic analysis as presented by Braun and Clarke will be conducted. To enhance validity, contact nurses of persons with colorectal cancer will be provided an overview of the preliminary results.

### Ethics and dissemination

Being a secondary analysis, ethical approval is not needed for this study. The findings of the analysis will be used to inform the design of a future study aiming to develop a model of support and an upcoming scoping review, which will be published in a scientific journal and presented at relevant conferences.

**Keywords:** Cancer Care, Colorectal cancer, Family, Model of Support, Psychosocial support system, Scoping review

### Strengths and limitations of this study:

- The scoping review will enable identification of appropriate models of support to family members during the trajectory of cancer, which will guide the development of a model of support and future studies.
- Search strategies will be developed in collaboration with a research librarian well versed in using research databases and in developing search strategies.
- The search strategy will include three different databases with peer-reviewed literature, with no restrictions in study design or publication year, and with an additional search of grey literature.
- Only literature in English and Swedish will be included.

### INTRODUCTION

Throughout the trajectory of cancer – from diagnose, through treatment and on to survivorship or palliative care – family members are described as the most important means of support<sup>1, 2</sup>. Though the provided support is important, it is not unproblematic. It is well known that family members play an important role in the stricken person's compliance with treatment regimens and activities in her or his everyday life<sup>3, 4</sup>, or even that being married or in a similar relationship has a positive impact on the person's survival<sup>3</sup>. Nevertheless, family members of persons diagnosed with cancer themselves are at risk of becoming ill<sup>3, 4, 5</sup>. Family members show higher rates of anxiety, depression and weakened immune response<sup>3</sup>, reactions to severe stress and ischemic heart disease<sup>5</sup>. In addition, being a family member to a person with a cancer diagnose means an increased likelihood of long-term medical problems and higher mortality<sup>4</sup>. Likewise, family members of persons diagnosed with colorectal cancer describe how they become responsible for not only the stricken person's wellbeing but also compliance with hers or his everyday life – a responsibility experienced as a heavy burden<sup>1, 2</sup>. Moreover, the treatment and recovery process from colorectal cancer is described as having a severe impact on family members<sup>1</sup>. Furthermore, an illness, e.g. colorectal cancer, not only affects the family members but also the relationships within the family, and it challenges established communication patterns, roles and responsibilities<sup>6</sup>. Thus, colorectal cancer is an illness that may affect the family system itself. For this reason, health professionals must be aware of the possible needs of family members; and even if they demonstrate a range of strengths, they are vulnerable during this stressful period<sup>7</sup>. Consequently, there is a necessity not only to address the needs of support of the ill person's partner but also the needs of other family members.

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5 In short, even though support resources exist within a family, there is no guarantee such  
6 potential support can overcome the negative impact colorectal cancer may have on both the  
7 family members and on the family system. This means that without adequate support, family  
8 members themselves are at risk of becoming ill; thus, the most prominent resource of support  
9 may be lost. Despite the severe impact colorectal cancer has on family members, the support  
10 offered by health care professionals is experienced as entirely patient-focused<sup>1, 6</sup>. Therefore,  
11 this scoping review will be conducted to address the apparent need to focus on the family  
12 members' needs of support. In addition, as no support model was found focusing on the  
13 families of persons diagnosed with colorectal cancer, the review will scope the literature on  
14 support provided to family members during the trajectory of all cancers. Thus, the scoping  
15 review intends not only to identify appropriate models of support, but also to identify gaps in  
16 knowledge regarding, e.g., phases of the trajectory. The results will guide the development of  
17 a model of support to family members during the trajectory of colorectal cancer care and the  
18 design of further studies. In preparation for this scoping review, searches were made to locate  
19 a comparable, published or on-going, systematic and/or scoping review in PubMed, CIHNAL,  
20 Cochrane Library and PROSPERO. However, none were identified.

## 31 32 33 34 **AIM**

35 The aim of the scoping review is to map the existing literature on models of support provided  
36 to family members during the trajectory of cancer.

## 37 38 39 40 41 **METHODS AND ANALYSIS**

42 The study will be conducted as a scoping review of the existing literature on models of  
43 support provided to family members during the trajectory of cancer. A scoping review was  
44 chosen as it, according to Levac et al<sup>8</sup>, facilitates the mapping of new concepts, types of  
45 evidence and gaps of knowledge. To ensure rigor in methodology reporting, the present study  
46 will follow the six-stage approach developed by Arksey and O'Malley<sup>9</sup>, refined by Levac<sup>8</sup>  
47 and Colquhoun<sup>10</sup>, and described by the Joanna Briggs Institute<sup>11</sup>: 1) Identifying the research  
48 question, 2) identifying relevant studies, 3) selecting studies, 4) charting the data, 5) collating,  
49 summarizing and reporting the results, 6) consultation. Reporting will be compliant with the  
50 Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping  
51 Reviews Checklist<sup>12</sup> (PRISMA-ScR).

## Stage 1: Identifying the research question

The research question for this scoping review is as follows: *What is known from the existing literature about models of support provided to family members during the trajectory of cancer?* In line with the recommendations by Arksey and O'Malley<sup>9</sup>, the research question was formulated to generate breadth of coverage by maintaining a wide approach. Since scoping is an iterative process, additional questions may be added based on our findings along the review process.

The initial specific research questions of this scoping review are the following:

- i) What are the characteristics of the models described?
- ii) During which phase of the trajectory is the described support provided?
- iii) What are the aims of the support?
- iv) To whom is the support directed? (to multiple family members or to which family member?)

## Stage 2: Identify relevant studies

The initial search protocol was designed by the research team and developed in collaboration with a research librarian well versed using research databases. The scoping review will use the mnemonic Participants, Concept and Context (PCC), described by Joanna Briggs Institute<sup>11</sup> (Table 1) to establish effective search criteria.

**Table 1.** The Population Concept and Context mnemonic as recommended by Joanna Briggs Institute

<b>Participants</b>	Family members of a person diagnosed with cancer.
<b>Concept</b>	Models of Support.
<b>Context</b>	The trajectory of cancer. Both in hospital and home setting.

To get a wide-ranging picture of the existing research, studies of different designs will be included, that is, qualitative, quantitative and mixed method-design, to address the research questions. The search strategy will be conducted iteratively by the research team, which means the researcher being reflexive at all steps and, when necessary, repeating steps to ensure that the literature is covered in a comprehensive way<sup>9</sup>. Electronic searches will be conducted in the following peer-reviewed databases: PubMed, Cumulative Index to Nursing

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3 and Allied Health Literature (CINAHL) and PsycINFO. Search tools such as Medical Subject  
4 Headings, Headings, Thesaurus and Boolean operators (AND/OR) will be used to expand and  
5 narrow the search and keywords, e.g. support, neoplasm and synonyms of e.g. family, next of  
6 kin, partner, nuanced to apply to the different databases. No limitations will be set to the year  
7 of publication. Finally, search strategies will be developed in collaboration with a research  
8 librarian. A draft search of the preliminary search strategy was conducted in PubMed in  
9 20191114 (Supplementary file). In accordance with the Johanna Briggs Institute<sup>11</sup>, the process  
10 will start with a broad search to inform the subsequent. Words contained in the title and  
11 abstracts, and the index terms describing the papers, will be analyzed by two members of the  
12 research team and the search strategy refined before conducted in all databases. As a third  
13 step in the search strategy, the reference lists of retrieved articles will be hand searched for  
14 additional studies. Searches will also be conducted using Google Scholar and SwePub to  
15 identify grey literature.  
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### 27 Inclusion and exclusion criteria

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29 Types of articles to be considered for inclusion are articles that present a) primary research  
30 about support provided by health care b) to family members c) during the trajectory of cancer  
31 d) of an adult person e) in Swedish or English f) studies evaluated with moderate or high  
32 methodological quality. The references in the grey literature will be searched to identify  
33 unpublished studies. The scoping review will exclude books, book reviews, commentaries,  
34 letters to the editor and abstracts for conferences, as the interest pertains to models of support  
35 described in original research. Reviews will be excluded, but their reference list will be hand  
36 searched. The inclusion and exclusion criteria may be modified within the iterative, dynamic  
37 process, resulting in revisiting and refining the search strategy, as described by Colquhoun et  
38 al<sup>10</sup>. If so, the process will be described in the final manuscript.  
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### 48 **Stage 3: Study selection**

49 All the titles from the second search will be screened for relevance by one member of the  
50 research team. If the title is in line with the aim of the study, the abstracts will be read and  
51 independently assessed with the eligibility criteria by three members of the research team. As  
52 recommended by Levac<sup>8</sup>, the research team will meet at the start, middle and end of the  
53 abstract review process to discuss any challenges and, if needed, to refine the search strategy.  
54 If any disagreement appears, a fourth research member will be consulted. Eligible articles will  
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3 be retrieved in full-text and imported into Endnote to identify and discard duplicates. A flow  
4 diagram of the study search and selection process is presented in Figure 1.  
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#### 8 **Stage 4: Charting the data**

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10 The full-text articles will be screened independently by three members of the research team  
11 using a charting form. The charting form has been developed to extract the study  
12 characteristic and findings, which will be piloted by two researchers on three articles and  
13 cross-checked for reliability. The charting form will include the inclusion criteria and an  
14 explanation of why the study is included or excluded at this stage in the process. Charting the  
15 data is also an iterative process, whereby the charting table will be continually updated. If  
16 there are any disagreements, a fourth researcher will be consulted until consensus is reached.  
17 Any changes will be highlighted in the final manuscript. Information that will be extracted  
18 includes study characteristics, designs and findings in relation to the review question. The  
19 following findings will be extracted from the included studies:  
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- 27 I) Model of support
  - 28 II) Phase of the trajectory
  - 29 III) Aim of the support
  - 30 IV) Participating family members
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35 Data that intends to be charted concerning model of support are: type of support, delivery  
36 mode and who delivers the support. Phase of trajectory relates to the timing of the support  
37 provided, e.g. at diagnosis or during treatment. This might be modified during the process of  
38 charting the data.  
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43 In general, the quality of a study is not assessed in scoping reviews<sup>9</sup>. However, the eligible  
44 full-text articles will be assessed using the Joanna Briggs Institution Critical Appraisal tools<sup>13</sup>  
45 as they enable a systematic exclusion of articles with incomplete methodological description.  
46 Thus, a cut-off will be set at studies not presenting: aim, criteria for inclusion and  
47 exclusion, participants, data collection, description and analysis of dropouts and the process of  
48 analysis. These studies will be categorized as having “low quality”. Studies not selected for  
49 inclusion will be documented with reason for exclusion in a separate file. A visual flow  
50 diagram (PRISMA<sup>14</sup>) will outline the decision-making process to enable replications by others  
51 and to further increase reliability of the findings and for methodological accuracy<sup>9</sup>.  
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### **Stage 5: Collating, summarizing and reporting the results**

To support rigor, the reporting will be compliant with the PRISMA-ScR 22 item checklist<sup>12</sup>. In addition, a descriptive summary of the scoping review process and of study characteristics will be presented. Subsequently, data will be analysed using inductive methodology and thematic analysis presented by Braun and Clark<sup>15</sup>. Thematic analysis is a method for identifying, analyzing and reporting patterns within data. It allows a large amount of data and can highlight differences and similarities across a data set. This stage will be segmented into the three steps suggested by Levac<sup>8</sup>: analysing the data; reporting the results linked to the research question; and interpreting the implications of the results for research, policy and practice. Lastly, a descriptive (narrative) summary of the included articles and the results that relate to the research question will be presented.

### **Stage 6: Consultation**

Even though consultation is optional<sup>9</sup>, it enhances the methodological rigor and the validity of the outcome. Therefore, it is suggested as a compulsory stage in a scoping review<sup>8</sup>. Thus, to confirm our findings, contact nurses at a cancer clinic will be identified and approached for consultation by a gatekeeper. Subsequently, the identified contact nurses will be informed about the purpose of the consultation and, if consenting, provided with the preliminary results. After a weeks' time to reflect about the findings, the participants will be contacted digitally at their convenience by the first author and asked to share their thoughts. According to Swedish Law, this consultation does not require ethical approval from the Swedish Ethical Review Authority.

**Patient and Public Involvement:** No patient involved.

### **ETHICS AND DISSIMINATION**

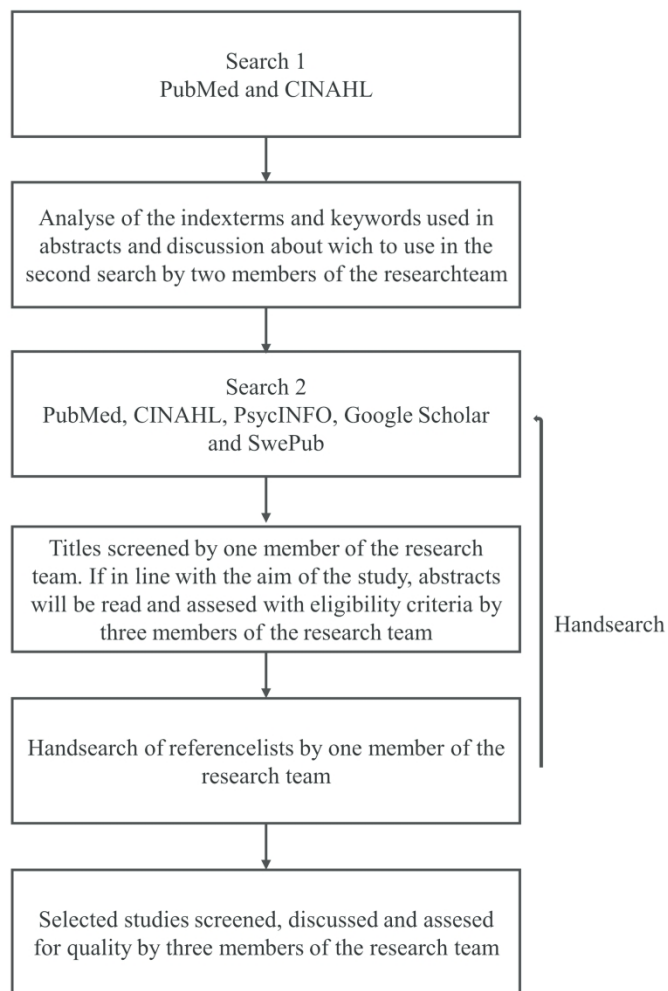
The aim of this scoping review is to map the existing literature on support provided to family members during the continuum of cancer care. Since the methodology applied consists of reviewing and collecting data from publicly available material, this study does not require an ethical approval. To disseminate the findings an upcoming scoping review will be published in a scientific journal and presented at relevant conferences. In addition, the findings will be used to inform the design of a future study aiming to develop a model of support to family members during the trajectory of colorectal cancer.



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3 **Figure 1.** A flow diagram of the study search and selection process  
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For peer review only

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**Figure 1.** A flow diagram of the search and selection process

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**Draft of the preliminary search strategy. PubMed (NBCI)191114****Population**

#1	Title/abstract	Famil*	1064402
#2	MESH	Family (MESH)	309483
#3	Title/abstract	Next of kin	1391
#4	Title/abstract	Relative*	1357149
#5	Title/abstract	Partner*	167087
#6	Title/abstract	Couple*	350174
#7	OR	#1 OR #2 OR #3 OR #4 OR #5 OR #6	2932304

**Concept**

#8	Title/abstract	Support	953773
#9	Title/abstract	"Support intervention"	966
#10	Title/abstract	"Nursing intervention"	2373
#11	Title/abstract	Family centered care	1515
#12	MESH	Family Nursing	1435
#13	Title/abstract	"Support model"	564
#14	OR	#8 OR #9 OR #10 OR #11 OR #12 OR #13	957897

**Context**

#15	Title/abstract	Cancer*	1723541
#16	MESH	Neoplasm	3271117
#17	Title/abstract	Neoplasm*	268818
#18	Title/abstract	Oncology	96946
#19	Title/abstract	Oncological*	23082
#20	OR	#15 OR #16 OR #17 OR #18 OR #19	3779871
#21	AND	#7 AND #14	3691910
#22	AND	#20 AND #21	423935