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## **French general practitioners' attitude towards breast cancer in older women: a qualitative study.**

Marine Zavaroni <sup>a (MD)</sup>, Agnès Oudé-Engberink <sup>b,c,d,e (MD)</sup>, Valéry Antoine <sup>a,e\*(MD)</sup>.

<sup>a</sup> Department of Geriatric Medicine, CHU Nîmes, Univ Montpellier, Nîmes, France

<sup>b</sup> Department of General Medicine, Univ Montpellier, Montpellier, France

<sup>c</sup> CEPS platform, site Saint-Charles, 34000 Montpellier, France

<sup>d</sup> Maison de santé pluri-professionnelle universitaire Avicenne, 2 rue Ibn Sinai dit Avicenne, 66300 Cabestany, France

<sup>e</sup> Institut Desbrest d'Epidemiologie et de Sante Publique, IDESP UMR UA11 INSERM - Univ. Montpellier

To whom correspondence should be addressed: Valéry Antoine, Service de Gérontologie, CHU de Nîmes, Place du Professeur Debré, 30029 Nîmes Cedex 09; Tel: +33 (0)4 66 68 31 49; Email: [valery.antoine@chu-nimes.fr](mailto:valery.antoine@chu-nimes.fr)

### ***Author Contributions***

Conception and design: VA, AOE

Development of methodology: VA, AOE, MZ

Acquisition of data: MZ, VA

Analysis and interpretation of data: MZ, VA

Writing original draft: VA, MZ

Review and/or revision of the manuscript: VA, MZ, AOE

Study supervision: VA

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a qualitative study.**

## Abstract

**Introduction.** In France, general practitioners (GPs) are usually the first-line healthcare contact for breast cancer (BC) screening/diagnosis in older women, information about therapies, access to cancer specialists, management of comorbidities and follow-up. GPs' practices may influence the factors involved in the unfavorable prognosis of BC in older patients: delay in diagnosis, insufficiently active treatment and the impact of associated morbidities.

**Objective.** The aim of this study was to explore GPs' experience, to understand the factors which shape their care of older women with BC and to identify ways in which this care might be improved.

**Method.** This was a two-part qualitative study among GPs following COREQ guidelines. We analysed themes arising from group and semi-directive personal interviews.

**Results.** GPs had diverse attitudes caused by 1/ the GPs' professional values, in response to their mission for local referral, their overall knowledge of the patient's context and wishes; 2/ the impact of comorbidities; 3/ the GPs' own experiences (confrontation with the disease, emotional ties established with the patient, embarrassment about examinations); 4/ prejudicial connotations (therapies judged as being too aggressive). GPs expressed interest for training, for inclusion in a coordinated multidisciplinary organisation with oncologists and geriatricians, confirming the GP's position (to better inform their patients, participate in the therapeutic decision and ensure the continuity of care).

**Conclusion.** To improve their care of older patients with BC, GPs would welcome improved relationships with geriatricians and oncologists, more information support and a more clearly defined role in the geriatric oncology care pathway.

## **Introduction**

Breast cancer (BC) is the most common malignant tumour in older women and its incidence is growing (1). Systematic screening is not recommended beyond 75 years, yet anti-cancer therapies may still be curative. Older patients have poorer relative survival rates, arising from delayed diagnosis, under-treatment and co-morbidities (1, 3, 4).

Selected older women may benefit from early BC diagnosis (1, 2, 5, 6), and patients often express regret at not being diagnosed earlier. One study showed that more diagnoses in older women were from patient-suspected anomalies (58%), compared to clinical screening examination by their doctor (4%), screening mammogram (22%) or by chance (15%) (7).

General practitioners (GPs) and geriatricians should screen patients who could most benefit from early diagnosis and treatment. They could optimize access to cancer care and provide treatment for co-morbidities (1-6). Obstacles to screening/diagnosis of BC in primary healthcare from the patient's viewpoint have been previously studied: various factors may interfere with the patient's compliance such as a decline in the patient's general condition, absence of symptoms, disinterest for preventive medicine, discomfort related to the test, difficulty of access to test, cost of test, fear of diagnosis, fatalism, or lack of advice from the doctor (8). However, no qualitative studies have yet explored GPs' experience, perceptions, attitudes and professional practices regarding specifically older women with BC. As GPs may influence the factors involved in the unfavorable prognosis of BC in older patients, it is important to understand what determines their practices.

The purpose of this qualitative study was to describe the determinants of GP's attitudes, based on their experience, ideas and needs about screening, diagnosis and care of BC in older women. This could define the key factors to consider for improving the prognosis of these patients.

## **Method**

An institutional review board (IRB) approval was granted by the local university hospital committee. This qualitative study was conducted according to the COREQ (COnsolidated criteria for REporting Qualitative research) checklist for interviews and focus groups (9).

**Research team description.** The research team consisted of one investigator and one research director. The investigator was a resident student at the General Medicine Department of a French School of Medicine. Her training involved outpatients' consultation in general medicine and a six-month hospital course in geriatric medicine. She wished to acquire methods and experience in qualitative research, leading her to study the factors that determine how GPs work.

The research director was a senior consultant specialised in geriatrics. He was working at the geriatric acute care department of a French University Hospital and was in charge of geriatric oncology consultations as part of the regional geriatric oncology coordination unit (UCOG). He holds several university diplomas including one in geriatric oncology and has previous experience of clinical and qualitative research. His interest in the question was motivated by the fact that, in his clinical activity, he had noticed the frequency of late breast tumour

diagnosis and the importance that older patients with cancer patients gave to their GP at all stages of cancer management.

**The steps of the qualitative study** are displayed in **Figure 1**.

**Recruitment.** GPs were selected by sampling from the doctor's surgeries where the investigator had been previously employed around a French University Hospital area. Selection was performed to obtain a wide range of participants with variations in age, sex, place of work and way of working (alone or associate at the surgery, with/without practice in a hospital), experience and further training. The investigator contacted each doctor by phone, e-mail or in person. After presentation of the researcher, study objectives and method, GPs gave an oral agreement for personal or group interview and analysis of related data.

**Data collection.** The interview guide was designed by the investigator and questions validated by the research director (**Table 1**). The comprehensibility of the questions was verified by a resident in general medicine. The questions chosen were open, coherent, neutral and related to the participants' experience. Interviews were conducted via personal interviews and a group interview.

- Personal interviews were conducted by the investigator. They aimed to understand GPs' experience in depth. They allowed the "more reserved" informants to explain things more freely. These interviews were semi-structured, based on the interview guide. The questions were not sent to the participants ahead of the interview. The personal interviews took place from May 2<sup>nd</sup>, 2018 to October 31<sup>st</sup>, 2018 at each participating doctor's workplace. The order

of questions and the way they were asked was flexible. Questions were gradually unveiled. After confirmation of oral agreement from all participants, the investigator timed and audio-taped the interviews and took notes. On average, the personal interviews lasted 14.5 minutes (range 11-18 minutes). An analysis of the answers was made after each interview to identify any new themes as they emerged, or to check that data saturation was achieved. Saturation thresholds were met during the personal interviews by sampling until absence of new trends or new emerging themes.

- The group interview took place at the home of one of the participating doctors on July 12<sup>th</sup>, 2018. Nobody outside the study was present. After confirmation of oral agreement from all participants, the investigator timed and audio-taped the interview and took notes. The session began with an open-ended question: “What does the question of BC in women over 75 years of age represent for you?” to generate a broad discussion about the theme under study (**Table 1**). The moderator (the research director) also aimed to facilitate interaction among the participants to generate data. The aim was not to create a consensus of opinion but to encourage discussion and reveal differences of opinion and knowledge, leading to new questioning and interpretations, and thereby examine the question from the participants’ viewpoint. The moderator therefore encouraged the participants to exchange their experiences, express their opinions and explain their point of view, as long as the group interaction produced supplementary information. The moderator used the interview guide designed for personal interviews to address related themes if they were not broached spontaneously. The discussion lasted until there were no new ideas and the moderator had checked that the participants had nothing else to add. The absence of new emerging information (after all points of the interview guide discussed) indicated data saturation after 109 minutes of the group discussion.

**Data analysis.** A combined transcript from the personal interviews and the group session was prepared by the investigator.

The researchers analysed the themes without software. The thematic analysis aimed more to explore the way participants understood their role in caring for older women with BC than to describe what participants said. Textual data were analysed in stages: several readings of the verbatim report and conversion into “units of meaning”, identification of meaningful categories and classification of the themes. Selected verbatim analyses’ were independently performed by the investigator and the research director, then compared and discussed for validation of the interpretation and design of a coding tree of emerging themes. Finally, a summary of the interpretation of results was produced and sent to the participants, requesting feedback by e-mail about the interpretation of their verbatim transcripts. The investigator noted any items highlighted in the feedback.

## **Results**

**Participants.** Among the 21 GPs contacted (**Figure 1**), seven GPs refused to participate (lack of time and interest for the subject of research). Three, who had initially agreed to do the personal interviews, refused to participate in the group interview offered to them later on because data saturation had been achieved during the personal interviews. Eleven participants were included: five in the personal interviews (D1 to D5) and six others in the group interview (DA to DF). None of them were directly involved in an ambulatory or hospital BC care system. Their characteristics are described in **Table 2**: they were mainly women (81.8%),



mean age 38.9 (range 25 - 65) years old, practicing freelance general medicine in the departments of the Gard (n=9) and the Hérault (n=2) in the south of France. Half the doctors had been in practice for more than twenty years. The majority worked in a surgery with associates, two worked alone. The work environment was semi-rural for nine GPs, urban for three of them. None of the doctors were medical coordinators in a nursing home; two had a mixed activity as they were both GPs but also attached to a hospital. One doctor had a certificate of proficiency in geriatrics; the others had no particular qualifications in geriatrics, gynaecology or oncology. In their practices, all encountered women aged over 75 years old who may have had several disorders and were living in various conditions (at home, in special housing or in a nursing home).

The participants at the group interview all knew each other before the study: they met together several times a year to discuss their practices. The investigator and five doctors taking part had been in professional contact before the start of the study. The participants knew the investigator's qualifications and purpose and the research director presented his professional activity to the doctors who had participated in the group interviews. The investigator's and research director's motivations were clearly explained to all participants (by oral introduction at the first meeting).

**Data collection and analysis.** Six documents (the five personal interviews transcripts and the group session transcript) were combined for analysis.

Analysis of the verbatim report identified some significant themes. The coding tree is described in **Table 3**: 13 explicit themes were identified by the investigator and research director. Grouping the themes into main thematic categories led to subsequent discussion

among the research team, especially for the wording of two categories: “GP’s professional values” and “Need for a clear definition of GP’s role in the care pathway”.

Factors limiting the GPs’ decision to examine the breasts of older women, to resort to complementary examinations or to seek expert advice are displayed in **Table 4**.

Half the participants gave feedback on the researcher’s interpretation. This feedback was positive and confirmed that their opinions, experience, feelings and practices had been accurately interpreted. They all added that their participation had been thought-provoking, encouraging them to more often consider the necessity for breast examinations for their older patients. Some also specified that they had requested advice from an onco-geriatrician.

*Description of emergent themes derived from participants’ verbatim reports.*

**GPs’ attitudes are guided by their healthcare mission and patient requests.** In the context of BC screening, continuing to prescribe a mammogram after 75 years’ old might depend on the patient’s request (*D2: “unless the request is completely irrational, I tend to trust what my patients feel. And when they are anxious, if it reassures them, and also relative to their quality of life, then why not?”*). Other GPs systematically screened, due to difficulties in justifying stopping screening after 75 (*DD: “with the increase in life expectancy, it really does seem unreasonable to stop screening...but at a lower frequency”*). Perception of controversies over the benefit of mammograms prompted clinical examination (*DC: “currently there’s a lot of vagueness about mammograms for young women, so for elderly women... and that’s why I continue to examine systematically”*).

However, some GPs only did a breast examination upon patient request or suspicious symptoms. Others trusted self-examination but did not all agree on its efficacy. Some doctors said that they did not perform breast examinations for patients monitored by an oncologist or undergoing screening mammograms.

GPs also perceived an interest in early diagnosis due to the increase in life expectancy in spite of some patients' preconceptions (*DA: "exact words used by one patient: 'After 75 you're not worth anything anymore', I [the GP] tell them that these are only probabilities, for public health"*).

**Breast examination practices are influenced by the GPs' overall knowledge of their patients.** The existence of comorbidities has a greater impact on GPs' practices than age. Chronological age did not affect the decision to examine the breasts (*DA: "the age on the identity card is insufficient"*). For older patients, clinical examination habits varied according to the presence of "*frailties*" (*DC and D5*) and a "*complexity of the general health*" (*DE*). A significant alteration in the general health and loss of independence (bedridden, chronic organ failure, advanced cognitive disorders) were cited as factors limiting diagnostic practices. A few GPs stated that breast examination was not required if carrying out complementary examinations and resorting to expert advice was not envisaged due to degradation of the patient's overall health (*DC: "it's not because she's old that I wouldn't do what I have to do, except for cognitive disorders, with agreement from the family"*). Social isolation was also evoked as a limitation for breast examination because of predicted difficulties in organization of cares.

**Attitudes are guided by the relationship of trust built up between the GP and their patients.** The dialogue of trust includes respecting patient-reported obstacles. Patients only infrequently refused breast examination or further explorations (*D1: "I had one patient with a very large lump who said nothing about it because she didn't want us tampering with her"; D3: "I'm not so old at 75 years of age, but I'm not worth screening"*). Women who refused the breast examination were described as possibly anxious, in denial of illness, more preoccupied by other active pathologies or had always refused screening. They would sometimes explain their refusal by a feeling of incurability of the disease in relation to their comorbidities or their age, or because they were unsure of the therapeutic possibilities and were afraid of their potential impacts on quality of life. (*D4: "what we often hear is 'anyway at my age I'm not going to undergo any heavy treatment even if they find something'. As soon as we mention chemotherapy there's a barrier"*). Refusal from the family for the same reason was also reported.

GPs rarely decided against further investigations in cases of suspected BC, and were motivated mainly by the patient's or family's refusal to investigate further (*D4: "I also had another patient who had already had breast cancer 20 years before and she told me that if there was a relapse she wouldn't do anything"*).

**GPs' habits are influenced by their own previous experiences and emotions.** GPs who had previously discovered BC in an older patient said they systematically included a breast examination in the clinical examination of older people (*D3: "after my experience with the patients I've followed, I examine the breasts of all women, even if they're 80 years old"*). Doctors experienced a range of emotions when faced with the patient's disease. Some said they were most affected when they had known the patient a long time (*D3: "when you've known people a long time, you hope it isn't that"*). Others said they were less affected by

cancers discovered in advanced age (*D1: "I'm less afraid of cancer in an elderly person than in a young, 40 year-old woman"*).

Male GPs said they often felt the patient was embarrassed but sometimes felt embarrassment themselves about breast examination (*DD: "I think the perception of a problem in gynaecological follow-up is intrinsic to male doctors...I'm not very comfortable with gynaeco-mammary examinations: patients often tend to consult a female doctor for that"; D3: "It's not my cup of tea"*).

**Attitudes are little influenced by preconceived ideas about BC and its treatments.** The GPs had variable ideas about the prevalence of BC in older women and the possible severity: several GPs were unable to answer this question (*DA: "no idea"*). Aggressiveness of cancer was poorly understood (*DB: "it most often develops more slowly, but sometimes it can be very aggressive and in that case the patient is condemned"; D1: "the older the patient, the less aggressive it is"*).

The therapeutic possibilities were considered aggressive and detrimental to quality of life (*DC: "for aggressive cases it's not worth thinking about chemotherapy: far too tiring and aggressive"; DE: "treatments may be frightening"*) but potentially serious side-effects might constitute a barrier to diagnostic explorations only in cases of significant comorbidities.

**GPs attitudes are guided by a desire for collegiality and multidisciplinary reflection.** Certain GPs said that referral to a cancer specialist in suspected BC was often necessary, as they attempted to establish collegiality in deciding on the therapeutic options (*DB: "It isn't easy to make the decision alone. Alone with the family isn't necessarily ideal because we don't master the subject"*). Although most doctors felt it was essential to consider all frailties, it was sometimes complex and only a few doctors had consulted an oncogeriatrician (*DD: "In*

*particular situations, an oncogeriatrician's opinion is of great importance. In order to completely evaluate the situation, you have to personalise, not standardise").*

**A desire for training on therapeutic specificities.** The GPs clearly expressed their lack of knowledge about the various therapeutic options, specifically the latest therapies for indications, contraindications or potential side-effects, and cited the paucity of available information centred around a GP's practice (DB: *"It would be a good idea to create documents to send to the general practitioner to explain the latest treatment and the expected side-effects"; DA: "We don't know which studies to read"*).

The GPs also noted that these limits to their knowledge might detriment informing patients and decision-making. All noted the high expectations patients had of their GP in helping them make the right therapeutic decision (DA: *"Patients come and consult us after a while to discuss their decision to refuse what the specialists have proposed. I don't have the specialist's knowledge but, at the same time, I know more about the patient's background and why she wants to refuse: That's where it would be interesting to discuss it with the specialist so that I can give him/her my knowledge, and then give clear, loyal, appropriate information to the patient"*).

**A desire to optimise multidisciplinary coordinated organisation of the care pathway.**

Participants cited barriers to collaboration and communication with cancer specialists. Phone conversations and e-mails were the most common means of communication. All the GPs described the lack of availability of hospital doctors (DF: *"In fact you feel embarrassed about calling them for advice..."*), and feeling a lack of consideration (DA: *"Our time is less valuable than theirs. For us it doesn't matter, we can spend half an hour trying to contact them, and when the patient is with us at the surgery... their lack of availability is a*

*nuisance!*"). Most participants reported difficulty in getting a rapid consultation with the specialist. They all described the feeling that the specialists distrusted GPs (DD: *"Our opinion is debatable, not often taken into account, and the hospital often tends to minimize things so as not to add extra work or disturb them in their hospital duties"*). Participants were disappointed not to be involved in therapeutic decisions and the Multidisciplinary Consultation Meetings (MCMs), where they felt they could add valuable information. Some proposed at least one systematic phone call, or intervening only for the so-called "complicated" patients (D3: *"no, I don't think I have any place there...if I were invited to them, I could give my opinion, or in some cases even take part in them because they're held in the evening, if I felt as though I had something to say there, but in a normal case I wouldn't need to go."*). GPs also said the cancer specialists' reports were often unsuitable for them, preferring pertinent information about the specialists' reasons for their therapeutic choices and the follow-up and less about the patient history. Finally, GPs were unaware of the possibility of referral for oncogeriatric consultations. Most doctors had never had any contact with an oncogeriatric team and were unaware of its existence or purpose in the care pathway. Those who had worked with oncogeriatric consultants reported receiving very complete, relevant reports (DF: *"I got some really useful feedback from oncogeriatrics: there were 3 pages of reports! It's fantastic, they manage to work all kinds of things out, there's everything. They take it a long way!"*).

**The GPs described their needs as follows:** prioritised phone access, detailed information about the side-effects of therapies and better accessibility to direct hospitalisation.

**The researcher's summary of interpretation of the results** is displayed in **Table 5**.

# **Discussion**

## ***Main results***

The thematic analysis shows that the professional values and complexity of coordinating the care pathway with the cancer specialists are major determining factors in the practices of GPs in the care of older women with BC. Barriers for diagnosis included patient-related factors (refusal of a breast examination, fatalism, fear or refusal of treatments), and doctor-related factors (less frequent examinations due to a lack of recommendations, fear of the treatment side-effects and embarrassment felt when examining breasts).

The presence of comorbidities (and, more rarely, age alone) limited diagnostic explorations and treatments when there was a serious deterioration in the patient's general health rather than by prioritising other pathologies. The GPs confirmed their willingness to invest in their roles as information-givers, responsible for education, patient care and follow-up, in line with patient wishes. The overview of the patient's situation was considered essential in decision-making, both by the patients and cancer specialists.

## ***Strengths***

This study followed the COREQ criteria (9) and the interview guide was reviewed by a member of the General Medicine Department who was not involved in the research. Participants were selected to diversify data. Internal validity was controlled by the triangulation of two different means of data collection (personal interviews and a group session) and data saturation was monitored according to pre-defined criteria. Thematic classification of transcripts was validated by the research director and confirmed by the



participants to optimize the control of validity. The emergent themes were illustrated by a verbatim report to externally 'audit' the researcher's interpretation.

Our study provides complementary information about the multiple factors influencing GPs' practices for screening, diagnosis and management of older patients with BC and qualifies the suggestion about the GPs' possible involvement in failing to diagnose BC early on, due to a tendency to over-simplify the clinical examination or give greater priority to other pathologies. GPs' desires to be involved in cancer diagnosis have been raised in previous studies. Patients' expectations place particular importance on the relationship of trust built up with their GP (15) to discuss the diagnosis and therapeutic options (11,16). GP implication allows a personalised diagnosis considering the psychological context and the patient's personality (16), improves the therapeutic decision by taking into account the patient's comorbidities, lifestyle and reports from family and friends (16,17), and improves overall patient care by optimising the psycho-social context and treatment of comorbidities (14,16-18).

### ***Limitations***

The relatively low number of participants did not limit the results of our study. Indeed, qualitative research is characterised by the use of relatively restricted samples which have been purposely chosen. Sampling is not determined by the need to generalise or to predict, but by the need to create new interpretations and acquire a better understanding of the topic under study. Random sampling is not usually suitable for qualitative research as it is uncertain whether the representation of diversity of informants in the population chosen is evenly distributed: the researcher is therefore likely to miss certain important information. The

investigator therefore chose people, places and activities to represent a wide range of characteristics that would be significant for the theme under study.

However, despite selection of participants, interviews of GPs with other working conditions (GPs working alone or in very rural areas, coordinators of nursing homes) may have brought supplementary information to better inform the study goal. The interview guide may have introduced bias as certain highly-specific questions may have restricted participants from broaching new themes or limited their scope to self-reflect about their own practices. The relative brevity of the five personal interviews may have restricted data collection, but these data were enriched by information collected from the longer group session, beginning with an open-ended question and where the absence of new emerging themes was monitored. GPs recognised their lack of knowledge or frequent experience on this subject, which may have limited the production of information concerning patients care pathway.

No data-coding software was used. Coding of the verbatim report was done manually, without altering the results. Indeed, although computer programmes facilitate coding, sorting and seeking qualitative data, they cannot substitute the researcher in determining significant themes or establishing significant relationships between concepts and, therefore, do not guarantee methodological quality.

Finally, there may be a difference between what GPs say they do and what they actually do in clinical practice. Obstacles to screening/diagnosis of BC in primary healthcare from the patient's viewpoint must also be taken into account (8).

### ***Comparison with existing literature***

Because of the diversity of health-systems in different countries, there are variations in the remit of a GP and healthcare pathways. Our data and literature references are therefore not

always directly applicable to all countries. Nevertheless, our French data may help to bring arguments regarding controversies about BC screening after 75 years' old, attribution of GPs' role in BC care pathway, needs for balance of the risk of under/over-diagnosis and the challenge of tailoring healthcare to the needs and preference of older patients.

In our study, some GPs continue screening for BC beyond 75 years, although many may wait for symptoms to appear, and consider the overall patient profile. One French survey on BC screening showed that most GPs thought individual screening should be considered on a case-by-case basis after 75 years old (19). Yet in a previous French qualitative study (on any type of cancer), the majority of GPs did not favour screening for cancer in patients with dementia (20). Interestingly, GPs did not cite risk factors of BC as affecting their decision to continue screening or not (1). A systematic review identified additional factors affecting screening to those in our study (lack of time for screening procedures, absence of financial compensation for screening practices, remoteness from a cancer institute, discomfort due to the mammography) (8). The need to take patient preferences into account in continuing screening, as evoked by the International Society of Geriatric Oncology recommendations (1), underlines the importance of a dialogue of trust between the patient and her doctor, and therefore, the importance of the GP's role due to the privileged relationship with the patients, to facilitate shared decision-making.

The GPs' decision-making process in diagnosing and/or referring the patient to a cancer specialist was affected by their identity values (response in case of symptoms, taking the whole patient profile into account and listening to patients). Previous studies have also shown that GPs practices regarding any type of cancer were guided by their will to: respond to the presence of symptoms; respond to the patient's and/or family's desires and respect their

advance directives (16,17,21,22); prioritise independence and autonomy, comorbidities, cognitive status, nutritional status, quality of life and living conditions over chronological age (17).

GPs' previous experiences, emotions and representations of the disease also affected their practices. Doctors should be aware that their impressions may influence their management of older patients (21). Previous studies concerning any type of cancer have shown that the type and/or stage of cancer and anticipating the consequences of the side-effects of treatments (especially regarding quality of life) may influence GP's decision-making in diagnosing cancer. Furthermore, female doctors may be more sensitive to BC (17).

The importance of an individualised decision process was also noted in a qualitative French study (22). Another study found that the presence of advance directives influenced the GPs' decision-making for the management of older patients with cancer (21). However, the absence of a unique strategy for managing older patients with cancer might represent a barrier to involving GPs in cancer management (18, 21). The need for suitable information materials for GPs has been previously shown. Other studies have found that GPs regretted the lack of information on existing recommendations (18,20) and new treatments for cancer (14,18), and wished for easily-accessible training sessions (14,17). Meeting this need for information and training will improve GPs' knowledge of the disease and aid early diagnosis. Indeed, doctors with complementary training in gynaecology were significantly more likely to pursue clinical breast examinations in older patients. Better trained GPs are also reassuring to patients (14,15, 23).

Improved communication between the GP, the cancer specialist and the oncogeriatrician is essential to ensure optimal therapeutic decision-making and patient follow-up, especially for patients who would most benefit from treatment. A coordinated multi-disciplinary

organisation between GPs and cancer specialists is preferred by patients (10-12,14,15) and cancer specialists, especially to get GPs to participate in the MCMs. Indeed, the GPs' participation at the MCMs would help guide the therapeutic decision (30), would allow easier monitoring of patients and remove the burden of follow-up consultations by the cancer specialists (14,18,26). Better coordination will benefit the GPs (14,16,17,23-27). One study showed that around half of GPs referred systematically to a cancer specialist for both early- and advanced-stage diagnoses, including for the organisation of palliative care (17), and that 50% had encountered difficulties in referring to a cancer specialist (17) for a diagnostic opinion or re-hospitalisation if required (14). Other GPs who reported difficulties in organising care referred less often to the help of a cancer specialist (17). Furthermore, one British study on various types of cancer, showed that GPs did the least explorations for BC before referring to help from a specialist (in 3% of cases, compared with 45% of cases on average for other cancers, and 76% of prostate cancer) (28).

One of the most frequently cited factors impacting GPs' involvement in managing older patients with cancer was access to advice and reports from an oncology specialist (21). The lack of communication with and between the various oncologists (18, 24), and the inability to identify a specific oncologist to refer to hindered GP's involvement (16). Other factors include distance from the healthcare centre (17, 21), access to palliative care (17, 21), and the possibility of coordinating professionals at home (17, 21).

Interest in, and unawareness of, the possibility of resorting to a consultation for oncogeriatric evaluation has been found in two previous studies (16, 21). Furthermore, in our study, very few participants had already accessed this help. The complexity of certain older patients was often mentioned, underlining the need for help via a geriatrician.

Finally, the necessity of defining the GP's role in the care pathway, including follow-up and comorbidities, was found in previous studies on other types of cancer (14, 30). Indeed, the barriers to the GP's involvement in cancer management clearly included the lack of a properly-defined role for each doctor (18, 26).

### ***Implication for practice and clinical research.***

Earlier diagnosis of BC by GPs is likely to benefit to select (non frail) women after 75 years of age. When making decision about BC in older patients, GPs have to consider frailty, dependency, chronic co morbidities and social context, rather than just chronological age. Referral to a geriatrician may help GP's decision making. Formal contact with GPs should be an essential step for oncologists and geriatricians to optimize information, treatment decision and follow-up. Policy-makers should consider the need to establish a clear pathway from the diagnosis and management of older women with BC, defining the role of primary and secondary care clinicians and the ways in which they should communicate.

By unveiling multiple issues concerning GPs and BC in older patients, our study may help to design future qualitative studies, at different stages of the disease (screening, diagnosis, treatment), that may also include GPs with an identified previous experience of a patient being diagnosed with BC, treated or not treated. Our results may also help to orientate questions of an interview guide, including the experience of the care pathway, with the aim to generate broader information on the topic of GP involvement in BC (**Table 6**).

## ***Conclusion***

The indications for BC screening in older individuals have not been truly formalised, thus the pivotal role attributed to GPs is of great interest. The early diagnosis of BC in selected patients over 75, suitable management of cancer and consideration of comorbidities remain challenges. Faced with these difficulties, GPs expressed their desire for greater involvement. Their practices are guided by their professional values, influenced by their own experiences and ideas about the disease. They are willing to remain a local source of primary care; informing and educating their patients. Better information for GPs about BC issues in older patients and the definition of their role in the geriatric oncology care pathway should be considered. Development of links between oncologists, geriatricians and GPs also represents a priority for optimising the overall prognosis of older women with BC.

## ***Author Contributions***

Conception and design: VA, AOE

Development of methodology: VA, AOE, MZ

Acquisition of data: MZ, VA

Analysis and interpretation of data: MZ, VA

Writing original draft: VA, MZ

Review and/or revision of the manuscript: VA, MZ, AOE

Study supervision: VA

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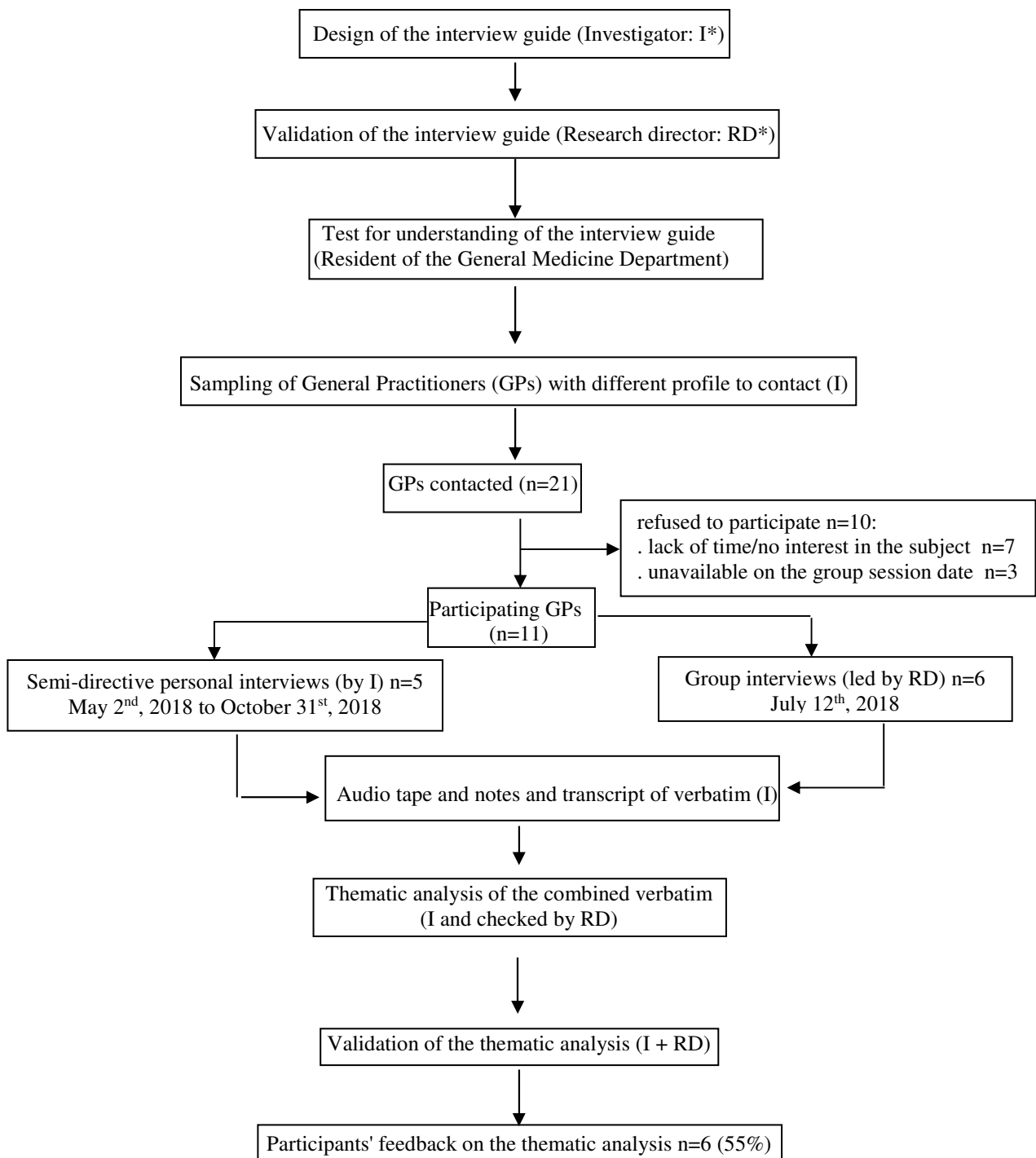
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Figure 1. Qualitative study design: stages and participants.



\*:

I : Investigator

RD : Research director

**Table 1. Interview guides**

**Semi-directive personal interviews:**

What does breast cancer in older women represent for you in terms of frequency?

What does breast cancer in elderly women represent for you in terms of severity?

What are the factors that influence your clinical examination (breast examination) and why?

(Is the patient's age mentioned? If not, ask: Are your practices the same for patients over 75 years of age compared with younger patients?)

In your opinion, would there be any point in screening for breast cancer in women aged over 75?

In your opinion and from your experience, for what reasons might patients refuse screening after 75 years of age?

What are the circumstances/situations/reasons why you would not/did not request a complementary examination or expert advice in the case of suspected breast cancer in a person over 75 years of age?

Are there any circumstances that would incite you **not** to treat breast cancer in women over 75 years old?

Do you take part in the therapeutic decision-making or decisions not to treat?

**Group interview:**

“What does the question of breast cancer in women over 75 years of age represent for you?”

*The questions detailed in the box above were then asked if the corresponding themes had not been spontaneously addressed during the group discussions.*

**Table 2. Main characteristics of the general practitioners who took part in the interviews**

<i>Characteristics of participants</i>		<i>Total</i>	<i>Participants in focus group</i>	<i>Participants in the semi-directive interviews</i>
		<i>n =11</i>	<i>n=6</i>	<i>n=5</i>
<i>Sex</i>	<i>female</i>	9	5	4
	<i>male</i>	2	1	1
<i>Age</i>	<i>25 to 45 years old</i>	5	3	2
	<i>45 to 65 years old</i>	6	3	3
<i>Years in practice as a GP</i>	<i>&lt; 10 years</i>	4	3	1
	<i>From 10 to 20 years</i>	1	0	1
	<i>&gt; 20 years</i>	6	3	3
<i>Heard about this study by</i>	<i>word of mouth</i>	6	6	0
	<i>face to face with the investigator</i>	3	0	3
	<i>by e-mail</i>	2	0	2
<i>Contact with one of the investigators before the study</i>	<i>yes</i>	5	0	5
	<i>no</i>	6	6	0
<i>Place of work</i>	<i>associate at the surgery</i>	9	5	4
	<i>surgery alone</i>	2	1	1
	<i>pluri-professional health house</i>	0	0	0
	<i>nursing home</i>	0	0	0
	<i>part-time at the hospital</i>	2	2	0
<i>Area of exercise</i>	<i>urban</i>	2	0	2
	<i>rural</i>	0	0	0
	<i>semi-rural</i>	9	6	3
<i>Have female patients &gt;74 years old:</i>	<i>with comorbidities</i>	11	6	5
	<i>cognitive disorders</i>	11	6	5
	<i>isolated at home</i>	11	6	5
	<i>family/friends at home</i>	10	6	4
	<i>in a retirement home</i>	7	4	3
	<i>in a nursing home</i>	3	2	1
<i>Distance from nearest medical imaging facility</i>	<i>&lt; 10km</i>	3	0	3
	<i>10 to 20 km</i>	8	6	2
	<i>20 to 50km</i>	0	0	0
<i>Distance from the nearest medical cancer institute</i>	<i>&lt; 10km</i>	1	0	1
	<i>10 to 20 km</i>	7	6	1
	<i>20 to 50km</i>	3	0	3
<i>Further training in Gynaecology/Oncology/Geriatrics</i>		1	1	0
<i>Elderly patients with breast cancer recently dealt with</i>	<i>yes</i>	2	1	1
	<i>no</i>	9	5	4

**Table 3. Thematic analysis coding tree of general practitioners' interviews about their practice and needs for diagnosis and management of breast cancer in older patients:**

Main thematic categories		Explicit themes in participants verbatim (n= 13)
Each situation is a different experience	GP's professional values	<ul style="list-style-type: none"> <li>- Response to the mission of first-line referral: diagnostic response in case of symptoms or request from patients; education; continuity of care.</li> <li>- Overall knowledge of patients: cancer associated morbidities and dependence, social context, (age).</li> <li>- Relationship of trust between the GP, the patient and his/her family: attentiveness to patients' barriers, respect for their wishes and for advance directives; information and advice for patients.</li> </ul>
	GP's previous experience	<ul style="list-style-type: none"> <li>- Previous confrontation with the disease.</li> <li>- Emotional ties with the patient.</li> <li>- Embarrassment on examining private parts of the body.</li> </ul>
	GP's representations of the disease	<ul style="list-style-type: none"> <li>- Possible aggressiveness of the tumour.</li> <li>- Side-effects of treatments.</li> </ul>
Willingness for collegiality	Need for specific information materials	<ul style="list-style-type: none"> <li>- Absence of clear recommendations about continuing screening</li> <li>- Difficulties in identifying relevant information resources, unsuitability of reference materials to the GPs' practices</li> </ul>
	Optimize the coordination of a multidisciplinary organisation	<ul style="list-style-type: none"> <li>- Communication with cancer specialists: difficulties in contacting specialists, waiting times for consultations or hospitalisation, specialists' reports not adapted for GPs.</li> <li>- Referral to a geriatrician: lack of knowledge about the possibility of referral for a geriatric oncology consultation</li> </ul>
	Need for a clear definition of GP's role in the care pathway	<ul style="list-style-type: none"> <li>- Initial contact and consideration for the GP's opinion by the cancer specialists before making the therapeutic decision and throughout follow-up</li> </ul>

**Table 4. Factors identified during the interviews limiting general practitioners decision for breast examination on older women, resorting to complementary examinations or seeking expert advice.**

<p>Lack of information and guidelines targeted to GPs about BC and its management in older patients</p> <p>Communication difficulty with cancer specialist</p> <p>Feeling of lack of consideration from cancer specialist</p> <p>Lack of knowledge of the geriatric oncology consultation</p> <p>Absence of definition of a proper role for GPs in the care pathway</p>
<p>Lack of experience with the disease in older woman</p> <p>Refusal from the patient (fatalism in old age, fear of diagnosis and treatment)</p> <p>Absence of symptoms</p> <p>Possibility of self-examination by the patient</p> <p>Lack of confidence in mammogram performance to correctly screen tumours</p> <p>Patients typology: rarely age &gt; 85 years, but: advanced organ morbidities, advanced cognitive disorders, loss of autonomy / bedridden, significant alteration in the general condition</p> <p>Embarrassment felt (by the doctor or the patient) in breast examination</p> <p>Perception of the therapeutic possibilities as being aggressive</p> <p>Social isolation of the patient</p> <p>Advance directives of treatment limitations</p> <p>Refusal by the family in case of patient's severe cognitive disorder</p>



**Table 5. French GPs' attitude towards breast cancer in older women.**

GPs' perceptions of non-systematised screening/diagnostic practices are shaped by their personal experience, because of :

- the GPs' professional values, ie responding to their mission for local referral (for patient diagnosis and information), taking into account their overall knowledge of patients and their respect for the physician-patient relationship (respecting the patient's wishes, considering the obstacles evoked by patients)
- the impact of comorbidities rather than the patient's age (that may lead to prioritisation of other disorders or limitations in diagnostic research for cancer)
- the GPs' own experiences (previous confrontation with the disease, emotional ties established with the patient, embarrassment about examinations)
- their idea of the disease (fear of the possible aggressiveness of the tumour, fear of the deleterious effects of treatments, questions about the implications of the diagnosis).

GPs expressed their interest and desire for training and information, joint reflection, involvement in a coordinated multidisciplinary organisation (with cancer specialists, geriatricians) confirming the GP's position (to better inform their patients, participate in the therapeutic decision due to their medico-psycho-social knowledge of patients and ensure the continuity of the overall patient care) because :

- their knowledge is generally accepted as being insufficient in the specific context of BC in older women (especially due to lack of support from suitable training for the GP) or rather with prejudicial connotations (therapies judged as being too aggressive)
- of the complexity of exchanges throughout the care pathway, which may also lead to a feeling of lack of consideration by the cancer specialists.

**Table 6. Possible questions to develop the interview guide, for future qualitative study on the topic of general practitioners' involvement in older adults' breast cancer.**

When you have been confronted to an older patient with a suspected/confirmed breast cancer:

What were your representations of the disease in the particular context of older patients?

What were your impressions?

What have you done?

How did you perceive your role, as a general practitioner, in the diagnosis process? Why?

Did you feel any barriers or facilitators for diagnosis and cares? Which ones? How did you deal with the barriers?

What were your needs?

What kind of information materials did you use and how? What did you think about these materials?

Did you feel you needed to contact a cancer specialist? Why? Can you imagine situations where you may have felt differently?

How did you perceive the access to the cancer specialist and the discussion with the cancer specialist?

How do you perceive your role, as a general practitioner, in the treatment decision process? Why?

What would be the added value of referring your patient to a geriatrician? In what circumstances?

According to your experience, what measures could be useful to enhance the patients' care-pathway?

According to your experience, what measures could be useful to enhance the coordination of cares between general practitioners, geriatrician and cancer specialist?