

# Clinical and Translational Oncology

## Validation of SDM-Q-Doc Questionnaire to measure share decision-making physician's perspective in oncology practice.

--Manuscript Draft--

<b>Manuscript Number:</b>	
<b>Full Title:</b>	Validation of SDM-Q-Doc Questionnaire to measure share decision-making physician's perspective in oncology practice.
<b>Article Type:</b>	Research Article
<b>Keywords:</b>	cancer; medical oncologist; physician's perspective; psychometrics properties; shared decision making.
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<b>Order of Authors Secondary Information:</b>	
<b>Funding Information:</b>	
<b>Abstract:</b>	<p>Objective: The aim of this study was to analyze the psychometric properties of the Shared Decision-Making Questionnaire-Physician version (SDM-Q-Doc) in a sample of medical oncologists who provide adjuvant treatment to patients with non-metastatic resected-cancer and the correlations between the total SMD-Q-Doc score and physician satisfaction with the information provided.</p> <p>Methods: Prospective, observational and multicenter study in which 32 medical oncologists and 520 patients were recruited. The psychometric properties,</p>

dimensionality, and factor structure of the SDM-Q-Doc were assessed. Results: Exploratory factor analyses suggested that the most likely solution was two-dimensional, with two correlated factors: one factor regarding information and another one about treatment. Confirmatory factor analysis based on cross-validation showed that the fitted two-dimensional solution provided the best fit to the data. Reliability analyses revealed good accuracy for the derived scores, both total and sub-scale, with estimates ranging from 0.81 to 0.89. The results revealed significant correlations between the total SMD-Q-Doc score and physician satisfaction with the information provided ( $p < 0.01$ ); between information sub-scale scores (factor 1) and satisfaction ( $p < 0.01$ ), and between treatment sub-scale scores (factor 2) and satisfaction ( $p < 0.01$ ). Medical oncologists of older age and those with more years of experience showed more interest in the patient preferences ( $p = 0.026$  and  $p = 0.020$ , respectively). Patient age negatively correlated with SDM-information ( $p < 0.01$ ) and physicians appear to provide more information to young patients. Conclusion: SDM-Q-Doc showed good psychometric properties and could be a helpful tool that examine physician's perspective of SDM and as an indicator of quality and satisfaction in patients with cancer.

<b>Additional Information:</b>	
<b>Question</b>	<b>Response</b>
Article text word count:	3120
Structured Abstract word count:	250
No. of figures:	2
No. of tables:	3
No. of references:	24
No. of keywords:	5

**Title:**

Validation of SDM-Q-Doc Questionnaire to measure share decision-making physician's perspective in oncology practice.

**Running Head:**

Shared Decision Making- Physician's perspective in oncology.

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## ABSTRACT

*Objective:* The aim of this study was to analyze the psychometric properties of the Shared Decision-Making Questionnaire–Physician version (SDM-Q-Doc) in a sample of medical oncologists who provide adjuvant treatment to patients with non-metastatic resected-cancer and the correlations between the total SMD-Q-Doc score and physician satisfaction with the information provided.

*Methods:* Prospective, observational and multicenter study in which 32 medical oncologists and 520 patients were recruited. The psychometric properties, dimensionality, and factor structure of the SDM-Q-Doc were assessed.

*Results:* Exploratory factor analyses suggested that the most likely solution was two-dimensional, with two correlated factors: one factor regarding information and another one about treatment. Confirmatory factor analysis based on cross-validation showed that the fitted two-dimensional solution provided the best fit to the data. Reliability analyses revealed good accuracy for the derived scores, both total and sub-scale, with estimates ranging from 0.81 to 0.89. The results revealed significant correlations between the total SMD-Q-Doc score and physician satisfaction with the information provided ( $p<0.01$ ); between information sub-scale scores (factor 1) and satisfaction ( $p<0.01$ ), and between treatment sub-scale scores (factor 2) and satisfaction ( $p<0.01$ ). Medical oncologists of older age and those with more years of experience showed more interest in the patient preferences ( $p= 0.026$  and  $p= 0.020$ , respectively). Patient age negatively correlated with SDM-information ( $p<0.01$ ) and physicians appear to provide more information to young patients.

*Conclusion:* SDM-Q-Doc showed good psychometric properties and could be a helpful tool that examine physician’s perspective of SDM and as an indicator of quality and satisfaction in patients with cancer.

**Keywords:** cancer; medical oncologist; physician’s perspective; psychometrics properties; shared decision making.

## Introduction

1 Improved diagnostic and screening techniques enable ever more cancers to be detected  
2 in localized stages [1]. Systemic adjuvant treatments are being used with growing  
3 frequency and effectiveness following surgery on these early tumors to reduce relapse  
4 and mortality rates [2,3]. However, the increasing complexity of these treatments and their  
5 administration to vulnerable people have had a negative impact on patient quality of life,  
6 due to adverse effect.  
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11 In response to this growing complexity surrounding decision making, new clinical  
12 practice models have arisen in recent decades, such as the biopsychosocial [4,5] and  
13 patient-or relationship-centered models [6,7]. While all coincide in that the disease in its  
14 biological sense is the most important therapeutic target, they also seek to incorporate  
15 patients' perspectives, concerns, and preferences so as to interact on an emotional level  
16 and take them into account when deciding on the treatment plan.  
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21 Moreover, the initial interview with a medical oncologist to talk about the risk and benefit  
22 of adjuvant chemotherapy following a surgery with curative intent has its own idiosyncrasy.  
23 This peculiarity is due to the probabilistic element of the need for treatment and the risk of  
24 recurrence; to the duality of a technical, yet emotional interaction and to the regular order  
25 of events that situates this interview after surgery, which means that the diagnosis and  
26 bad news will have already been communicated. After discussing the advantages and  
27 disadvantages, individualized, consensual shared decision-making (SDM) ensues.  
28 Recent years have witnessed the evolution of decision-making tools to aid in treatment  
29 selection, providing quantitative estimations of the risks and benefits of clinical guideline  
30 recommendations [8]. Gaining insight into the physicians' points of view of this new way  
31 of making oncological decisions is one way to enrich the process and for more patients to  
32 benefit from curative cancer treatments and share in the decision.  
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41 The SDM-Questionnaire-physician version (SDM-Q-Doc) was elaborated to evaluate  
42 physicians' perspectives about these decision-making processes [9]. However, the  
43 psychometric properties and potential usefulness of this instrument in the clinical context  
44 of adjuvant cancer therapy have remained unexplored. The aim of this study was to assess  
45 the psychometric properties of the SDM-Q-Doc version in a sample of medical oncologists  
46 who provide adjuvant treatment to patients with non-metastatic resected-cancer and the  
47 correlations between the total SMD-Q-Doc score and physician satisfaction with the  
48 information provided.  
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## Methods

### Participants

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The sample consists of patients undergoing curative surgery for non-metastatic cancer and recruited from June 2015 to November 2016. Data were collected in a cross-sectional, prospective, observational study that was part of a research program on patients with cancer funded by the *Continuous Care Group* of the Spanish Society of Medical Oncology (SEOM). The study was approved by the Ethics Review Board at each institution in accordance with the 1974 Declaration of Helsinki revised in Seoul in 2008 and by the Spanish Agency of Medicines and Medical Devices (AEMPS). Data collection procedures were similar for all hospitals. Participation was voluntary, anonymous, and would not affect patient care. The participants completed the questionnaires individually, with no limit on time, and special attention was paid to ensure data privacy and confidentiality. Variables were collected via a centralized website ([www.neocoping.es](http://www.neocoping.es)).

### **Instruments and adaptation**

SDM-Q-Doc. The SDM-Q-Doc is a questionnaire that assesses the physician's perspective [9]. The questionnaire consists of nine items, each of which describes one step in the process; for instance, 'My patient and I thoroughly weighed the different treatment options'. The items are scored from 0 to 5 on a six-point Likert scale ranging from "completely disagree" (0) to "completely agree" (5). A total raw score of between 0 and 45 is calculated by adding the scores of all items. The German version of the SDM-Q-Doc was reported to have good reliability ( $\alpha = 0.88$ ) [9].

SMD-Q-Doc adaptation. The aim of the adaptation process was to keep the wording of the Spanish version as similar as possible to the original (SDM-Q-Doc), minimizing differences between both versions in item interpretation. We used the guidelines described for the process of cross-cultural adaptation of self-reported measures [10]. Specifically, for the translation, two independent bilingual translators, competent in both English and Spanish, translated the original questionnaire from English into Spanish. Translators reached consensus on the translation of words, phrases and items based on the synthesis of the translations, working from the original questionnaire as well as the first translator's and the second translator's versions. For cultural appropriateness and content validity, four independent physicians and psychologist performed testing. They rated understandability, translation equivalences and content validity. Another two bilingual translators who were blind to the original English version back translated the revised Spanish version, and finally, the study directors compared and synthesized the back-translation with original questionnaire, culminating in a final version. The final version was pre-tested with the first thirty-four adult patients attended who were invited to participate in this study. Their responses were analyzed to identify necessary modifications; however, it was not necessary to make any modification after this pre-test.

1 Physician satisfaction with the information provided. A 5-item scale was created to  
2 ascertain physicians' degree of satisfaction with the information provided about the  
3 disease, risk of recurrence, side effects of treatment, and time dedicated to informing the  
4 patient. The items were scored from 0 to 10; the higher the score, the greater the  
5 physician's satisfaction with the information provided.  
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8 Demographic data. The following data were obtained with respect to patients' medical  
9 and demographic characteristics: gender, age, marital status, educational level,  
10 occupational field, tumor site, stage, and time since diagnosis. The oncologist-related  
11 variables included age, years of experience, and area of specialization: general (treating  
12 all kinds of tumors) and super-specialized (treating one specific subtype of tumor).  
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### 17 **Statistical analyses**

18 The data analysis process can be summarized in 4 stages: (a) descriptive analyses, (b)  
19 dimensionality and structure assessment (i.e., item calibration), (c) scoring and reliability  
20 assessment, and (d) validity determination. Descriptive analyses were first conducted for  
21 each SDM-Q-Doc item score and the adequacy of the inter-item correlation matrix to be  
22 factor analyzed was examined using the Kaiser-Meyer-Olkin (KMO) index. Next, to gauge  
23 the scale's dimensionality and factor structure, and minimize capitalization on chance, the  
24 sample was randomly split into two sub-samples. First, Exploratory Factor Analysis (EFA)  
25 solutions were fitted on the first subsample by using robust, unweighted least squares  
26 estimation with mean-corrected fit statistics as implemented in the FACTOR program [11].  
27 Considering that the original scale displayed a one-dimensional structure [9], we started  
28 by testing the uni-dimensional solution.  
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38 Given that the EFA provided a clearly interpretable solution that approached simple  
39 structure, a confirmatory factor analysis (CFA) solution was next fitted to the entire sample  
40 using robust, weighted least squares estimation with mean-and-variance corrected fit  
41 statistics as implemented in the Mplus version 5.1 program [12]. In both EFA and CFA  
42 solutions, the goodness-of-fit indices used to appraise model appropriateness were: (a) Root  
43 Mean Square Error of Approximation (RMSEA), with its 90% confidence interval as a  
44 measure of approximate fit; (b) Goodness-of fit-index (GFI); (c) the root mean square of  
45 the standardized residuals (z-RMSR), as absolute measures of fit, and (d) the comparative  
46 fit index (CFI), as a relative measure of fit with respect to the null independence model.  
47 We followed the usual rules in deciding model appropriateness [13]. Once the SDM  
48 dimensionality and structure had been established, scores based on the solution adopted  
49 were obtained. We contemplated two types of scoring schemata: EAP factor scores  
50 derived from the factorial solution and the usual raw scores attained as the simple sums  
51 of the scores on the items that define the corresponding factor. Reliability was estimated  
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for both types of scores, and, in the case of raw scores, the omega reliability estimate was chosen [14].

Finally, as to validity, product-moment correlations were used to quantify the relation between SMD-based scores and physician satisfaction with the information provided and patient and physician characteristics. For this validity analysis, we used the IBM-SPSS 23.0 statistical software package (SPSS, INC., Chicago, Ill) for Windows PC.

## Results

### Sample characteristics

Thirty-two medical oncologists from 14 Spanish hospitals participated in this study; 78.1% ( $n= 25$ ) were females; mean age was 35 years ( $SD= 7.2$ , range 27-58), and 11.9 years of experience ( $SD= 8.8$ , range 3-37). No significant differences were found between male and female oncologists with respect to age ( $t= 0.308$ ,  $p= 0.760$ ) or years of experience ( $t= -1.348$ ,  $p= 0.470$ ). Most were super-specialists (68.8%) and worked at a public, teaching hospital (53.1%) (see Table 1).

These medical oncologists recruited 562 patients, of whom 42 were excluded from the study (14 because they failed to meet the inclusion criteria; 15 met an exclusion criterion, and 13 had incomplete data). Figure 1 outlines the recruitment process. The final patient sample consisted of 520 individuals; 67.1% ( $n= 313$ ) were female, with a mean age of 59.2 years ( $SD= 12.2$ , range 26-85). Most were married or partnered (77%) and had a primary level of education (69.5%). The most common employment status was retired (64.6%). As regards the sample's clinical characteristics, the most frequent kinds of cancer were colon (40.4%); breast (35.2%) and stomach (6.7%). Everyone received adjuvant chemotherapy and 36.6% received associated radiotherapy.

### Descriptive analyses

The mean sum score of SMD-Q-Doc was 4.53 ( $SD= 0.56$ ). The highest score was found on item 5, "*I helped my patient understand all the information*" mean score (4.80); whereas item 6, "*I asked my patient which treatment option he/she prefers*" scored lowest mean (4.24). No significant differences were found for clinical oncologists' specialization, type of hospital, number of years employed, or gender.

In general, item scores were distributed asymmetrically (negatively skewed) and some had skewness coefficients an absolute value of greater than one. Furthermore, given that the test is not very long and the sample is reasonably large, we considered that the best choice was to use the underlying-variables approach, and fit the FA models (both exploratory and confirmatory) to the inter-item polychoric correlation matrix [15]. Finally, results from the KMO index (0.872) and Bartlett's test ( $\chi^2= 2307.9$ ,  $df= 36$ ,  $p< 0.001$ )



1 suggested that the inter-item relations were consistent enough to be fitted by the FA  
2 model.  
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### 4 **Exploratory factor analyses**

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6 The uni-dimensional solution does not achieve an acceptable fit according to all the  
7 standards (RMSEA and z-RMSR are too high), whereas the two-factor solution fit can be  
8 deemed acceptable. Given the reduced number of items and small residual values after  
9 extracting two factors, no models with a higher number of dimensions were tried.  
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11 The Oblimin rotated two-factor solution revealed a clear structure that was easily  
12 interpretable (see table 2). Factor I, clustered items 1, 2, 3, 4, and 5, all of which assess  
13 the information and explanations the physician gives the patient regarding treatment and  
14 the advantages and disadvantages of the different treatment options. Factor II was defined  
15 by items 6, 7, 8, and 9, all of which examine the choice of the best treatment option for the  
16 patient. The rotated solution approached simple-structure conditions, with most main  
17 loadings in the 0.7 to 0.9 range and secondary loadings below 0.30. The only two  
18 exceptions detected were: (a) item 3 was found to be factorially complex, possibly because  
19 it informs of the different treatment options in a personalized way, and (b) residuals  
20 corresponding to items 8 and 9 were found to be correlated, both address treatment choice  
21 and application. Finally, the correlation between both factors was determined to be  
22 substantial ( $r= 0.69$ ,  $p< 0.001$ ).  
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### 33 **Confirmatory factor analysis**

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35 Given the clear EFA results summarized above, a CFA solution was fitted to the data with  
36 the following specifications: factor 1 was defined by items 1 to 5; factor 2, by items 6 to 9;  
37 item 3 was allowed to load on both factors, and the residual corresponding to items 8 and  
38 9 was set free. With these specifications, the fit of the proposed model in the entire sample  
39 was found to be quite acceptable. The estimates of this model in standardized metrics are  
40 presented in Figure 2.  
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### 48 **Scoring and reliability**

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50 The factor analysis solution discussed above indicates that the SMD has a clear  
51 structure in two, closely correlated factors. Hence, these factors can be also viewed as  
52 components or facets of a more general dimension of perspectives regarding the decision-  
53 making processes. It follows then that two scoring strategies can be derived from this  
54 solution: first, to use scores on two sub-scales (i.e. information and treatment), and,  
55 second, to use total scale scores based on all items SMD. In the first case, reliability  
56 estimates based on factor scores were: 0.82 (information) and 0.88 (treatment). In the  
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1 second case, estimated reliability for total scores was 0.90. If raw scores were used  
2 instead, the corresponding reliability estimates (omega coefficients) were: 0.81  
3 (information), 0.87 (treatment), and 0.88 (total). Overall, no substantial reliability gains  
4 appear to be attained by using factor scores and the simple raw scores achieve acceptable  
5 degrees of accuracy in all cases. Whether using 2 subscale scores is preferable to using  
6 a total score in clinical assessment is a matter for further research.  
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### 10 **Association with physicians' satisfaction**

11 As shown in Table 3, the results revealed significant correlations between the total SMD-  
12 Q-Doc score and physician satisfaction with the information provided ( $p<0.01$ ); between  
13 information sub-scale scores (factor 1) and satisfaction ( $p<0.01$ ), and between treatment  
14 sub-scale scores (factor 2) and satisfaction ( $p<0.01$ ). Insofar as physicians' age and years  
15 of experience, the older the physician and more years of experience, the greater interest  
16 the physician tends to display in patient preferences ( $p= 0.026$  and  $p= 0.020$ , respectively).  
17 Patient age negatively correlated with SDM-information ( $p<0.01$ ), physicians appear to  
18 provide more information to young patients.  
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### 28 **Discussion**

29 Several instruments have been developed in recent years to evaluate the SDM process  
30 and doctor-patient encounters with specific aims [16] shedding more light on the  
31 complexity of this process. The objective of this study was to analyze the psychometric  
32 properties of the SDM-Q-Doc created by Scholl *et al.* [9] in a sample of medical oncologists  
33 who care for patients with non-metastatic resected-cancer. The Spanish version of the  
34 scale showed a clear an interpretable factor structure that was close enough to simple  
35 structure to be well fitted by a CFA solution. In this solution, all the items display high main  
36 loading values (meaning that they have good discriminating power) and the scores derived  
37 from the FA solution had acceptable reliability on all the schemata considered. The good  
38 reliability results are consistent with those obtained in the original German and Dutch  
39 versions, in which Cronbach's alpha values based on the complete scale scores were  
40 between 0.88 and 0.87, respectively [9,17]. Although the two-factor solution was deemed  
41 the most appropriate, the substantial inter-factor correlation makes it compatible with a  
42 conceptualization of the two factors as facets of a more general dimension.  
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53 The physicians in general and the oncologists in particular are interested in participating  
54 in SDM with their patients [18, 19]. In our study, medical oncologists scored high on items  
55 related to providing patients with a good knowledge base about the advantages and  
56 disadvantages of treatment and in helping them to understand all the information (factor  
57 1). The high score on the item "*I helped my patient understand all the information*"  
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1 indicates that the physicians in our sample are willing to give patients an active role in the  
2 decision-making process. However, they scored lower on items that involved patient  
3 participation in the final SDM (factor 2) “*I asked my patient which treatment option he/she*  
4 *prefers*”. In order to involve the patient in SDM, physicians first need to know whether their  
5 patients want to be more active participants in the decision-making process. Secondly,  
6 they must look at what role would be the most appropriate for the patient and, in many  
7 cases, the professionals are the ones who finally choose the treatment because the patient  
8 wants them to. There are numerous benefits to SDM in cancer treatment; for instance,  
9 patients feel more committed to the decision and are more satisfied with their treatment  
10 and with their physicians [20,21].

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16 In the present study, the total SMD-Q-Doc score was unrelated to patients’ gender and  
17 age, but did correlate with physicians’ gender, age, and years of experience. Female  
18 oncologists tend to feel that they provide more information and that they are more  
19 interested in patients’ treatment preferences. With age and more years of experience, the  
20 physicians tend to engage their patients more in SDM. Similarly, in their review, Tarima *et*  
21 *al.* [22] found that physicians’ years of experience, communication style, and personal  
22 beliefs and values influence the SDM process. There is little information available about  
23 the factors that affect oncologists’ preferences to foster the use and support for SDM. In  
24 an interview conducted with 22 Australian oncologists, hematologists, and surgeons,  
25 physicians’ perceptions and values were seen to sway their support of SDM. Some  
26 physicians felt that not facilitating SDM was a sign of arrogance and that including patients  
27 in SDM reduces patients’ anxiety. Still others had their doubts as to including patients in  
28 the decision-making process because they considered that the patients might make the  
29 wrong decision [23].

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40 The SDM-Q-Doc is the first psychometrically tested instrument to assess SDM from the  
41 physician’s perspective in a sample of cancer patients. Despite its strengths, this study  
42 does present certain limitations that must be taken into account in future research. First of  
43 all, although we have worked with a large sample, the participants in this study were  
44 patients with a localized tumor who had undergone surgery. In the future, it would  
45 advisable to expand the sample to include other tumor stages with the aim of confirming  
46 these results, as well as to compare different clinical-pathological and social variables.  
47 Secondly, the SDM-Q-Doc’s self-report subjective measures cannot accurately reflect  
48 patients’ experiences, expectations, and behavior, having limitations such as response  
49 bias (social desirability, inaccurate memory, etc.) and their difficulty in fully comprehending  
50 the SDM process [24]. Finally, in addition to this type of design, it would be fitting to explore  
51 the dynamic nature of SDM processes with other longitudinal studies that make it possible  
52 to study SDM in greater depth, examining its effects before and after a decision is made.  
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1 In conclusion, within the context of the patient with a non-metastatic resected-cancer,  
2 the “Shared Decision Making Questionnaire-physician version” has good psychometric  
3 properties, similar to those previously published [9,19]. It is a simple, short, reliable, and  
4 consistent measure of physicians’ perspectives of SDM. Likewise, in light of the results  
5 obtained, oncologists’ involvement in these types of decisions poses benefits for patients’  
6 health and wellbeing, in line with the perceived satisfaction.  
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10 SDM is a process aimed at becoming acquainted with patients’ preferences and needs  
11 to empower them to take an active role in caring for their health in a manner that is  
12 consistent with their wishes. The SDM-Q-Doc can be a helpful tool in studies that examine  
13 physician’s perspective of SDM and as an indicator of quality and satisfaction in patients  
14 with cancer.  
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#### 26 **Compliance with ethical standards**

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28 **Conflict of interest:** None to declare. This is an academic study.  
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32 **Funding source:** The study was supported by the FSEOM-Onvida for Projects on Long  
33 Survivors and Quality of Life. SEOM (Spanish Society of Medical Oncology) 2015.  
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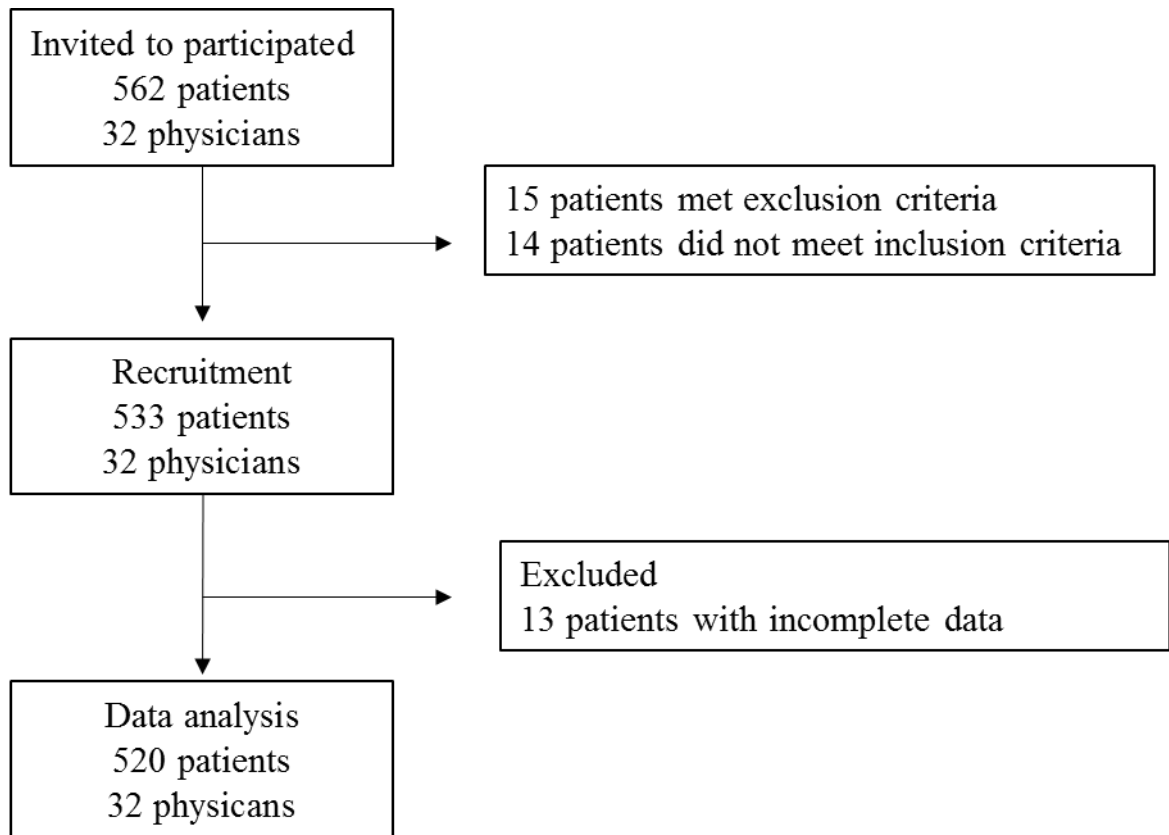
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37 **Ethical statement:** The study has been performed in accordance with the ethical  
38 standards of the Declaration of Helsinki and its later amendments. This study is an  
39 observational trial without intervention.  
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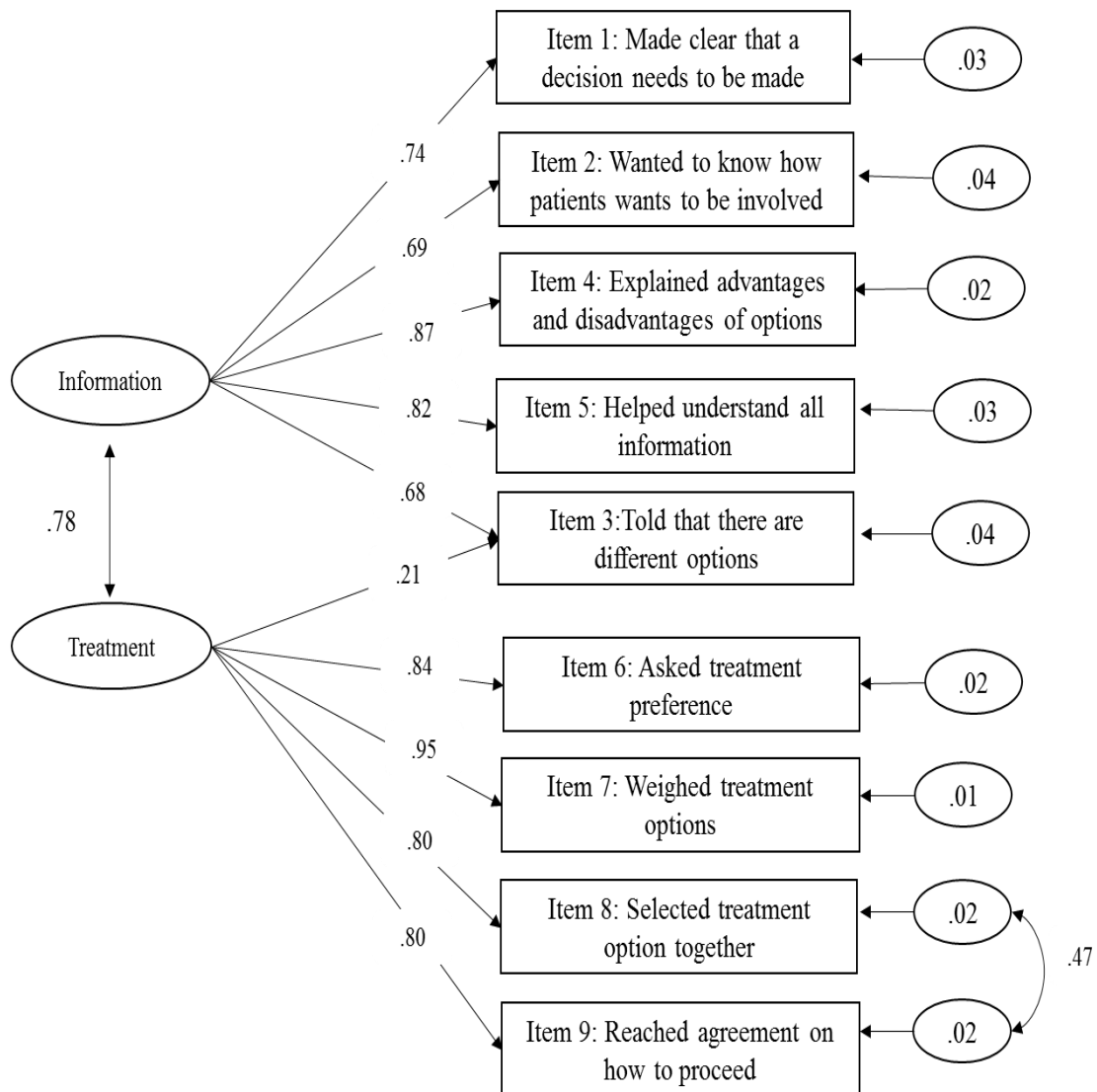
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43 **Informed consent statement:** Signed informed consent was obtained from all patients.  
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**Figure 1.** Participant flow chart

**Figure 2.** Standardized solution for the SDM-Q-Doc confirmatory factor model.

Confirmatory factor analysis model fitting results: Root Mean Square Error of Approximation (RMSEA): 0.08, goodness-of fit-index (GFI): 0.98, the root mean square of the standardized residuals (z-RMSR): 0.04, CFI: 0.99.



**Table 1.** Physicians' and patients' characteristics.

<b>Physician characteristics</b>	<b>N</b>	<b>%</b>
Gender		
Male	7	21.9
Female	25	78.1
Clinical Oncologist		
General	10	31.3
Specialized	22	68.8
Type of hospital		
Teaching	17	53.1
Non-teaching	15	46.9
Age, years, mean (SD)		35.0 (7.4)
Number of years employed, mean (SD)		11.9 (8.8)
<b>Patient characteristics</b>	<b>N</b>	<b>%</b>
Female	313	67.1
Age, years, mean (SD)		59.2 (12.2)
Married/partnered	401	77
Primary educational level	361	69.5
No working	336	64.6
Tumor side		
Colon	210	40.4
Breast	183	35.2
Stomach	32	6.7
Others	95	23.7
Time since diagnosis (days, mean; SD)		67.8 (99)

*Abbreviation:* N: number; SD: standard deviation; %: percentage.

**Table 2.** Exploratory Factor Analysis results of Shared Decision-Making Questionnaire – Physician version (SMD-Q-Doc).

Questions	M	SD	Factor I	Factor II
1 I made clear to my patient that a decision needs to be made	4.75	0.53	0.887	
2 I wanted to know exactly from my patient how he/she wants to be involved in making the decision	4.65	0.59	0.532	
3 I told my patient that there are different options for treating his/her medical condition	4.62	0.65	0.575	0.313
4 I precisely explained the advantages and disadvantages of the treatment options to my patient	4.57	0.68	0.607	
5 I helped my patient understand all the information	4.80	0.46	0.812	
6 I asked my patient which treatment option he/she prefers	4.24	0.93		0.733
7 My patient and I thoroughly weighed the different treatment options	4.28	0.83		0.806
8 My patient and I selected a treatment option together	4.31	0.81		0.934
9 My patient and I reached an agreement on how to proceed	4.53	0.73		0.657

*Abbreviation:* M: mean; SD: standard deviation; SMD-Q-Doc: Shared Decision-Making Questionnaire – Physician version.

Score range from 0 (strongly disagree) to 5 (strongly agree).

**Table 3.** Descriptive and Pearson correlation between SMD-Q-Doc and physician satisfaction, patient and physician characteristics.

Variables	SMD-Q-Doc	SMD-Q-Doc	SMD-Q-Doc
	Total	Information	Treatment
SMD- Information	0.87**		
SMD- Treatment	0.92**	0.62**	
SDM- Satisfaction	0.21**	0.24**	0.15**
Physician age	0.10*	0.06	0.10*
Number of years employed	0.10*	0.06	0.10*
Patient age	-0.09*	-0.15**	-0.04

*Abbreviation:* SMD: Shared Decision Making; SMD-Q-Doc: shared decision-making questionnaire – physician version; \*:  $p < 0.05$ , \*\*:  $p < 0.01$ .