Supplementary table 1 Overview of measurements

Measurement	Instrumentation
Baseline questionnaire	
Health literacy	Patient's ability to perform the basic reading and numerical tasks required to function in the health care environment, was assessed using the 3-item Set of Brief Screening Questions (SBSQ) (1) on a 5-point Likert scale (1-5). We used the previously translated Dutch version (SBSQ-D) (2,3). Based on previous literature, health literacy was considered low if the mean of the three items was ≤2, and adequate for >2.
Sense of hope	The Herth Hope Index (HHI) (4) was used to measure a global, non-time oriented sense of hope. The 12 items have a 4-point Likert scale (1-4) and were previously translated and authorised in Dutch(5). Since it was advised for the Dutch version to use the scale as a whole rather than using subscales, the items were summed to a total score within a range between 12-48.
Health-related quality of life	Quality of life was assessed with the QLQ-C30 version 3.0 (6) in Dutch of the European Organisation for Research and Treatment of Cancer (EORTC). In this manuscript, we only report the Global health status (2 items), which was assessed on a 7-point Likert scale (1-7). Following the EORTC manual (7), linear transformation was applied to obtain a score between 0-100.
Technology acceptance*	Measurements from the Technology Acceptance Model (TAM), adapted in the Unified Theory of Acceptance and Use of Technology (UTAUT) (8–10). In total, 15 items on a 7-point Likert scale (1-7) were included divided over 5 subscales, i.e. Performance expectancy (3 items), Effort expectancy (4 items), Social influence (3 items), Facilitating conditions (2 items), and Behavioural intention (3 items).
Satisfaction with the tool*	A Dutch version of the Website Satisfaction Scale (11–14) was used, consisting of the subscales Satisfaction with comprehensibility (3 items), Satisfaction with attractiveness (5 items) and Satisfaction with emotional support (4 items), all on a 7-point Likert scale (1-7).
Tracking data from the OnVaCT	
Actual OnVaCT usage*	To analyse the actual usage of the OnVaCT, Google Analytics was used to log the number of website visits (i.e. the number of times someone visited/used the tool), the time spent on the website (i.e. the accumulated time someone used the tool) and the number and kind of pages viewed.
Analysis of the recorded consultation	
Extent to which oncologists involve patients in SDM	Using the adapted Observer OPTION-MCC (15) (based on the OPTION-5 (16)), six behavioural competences for medical oncologists were assessed, i.e.: Goal talk, Option talk: present options, Team talk, Option talk: discuss pros and cons, Decision talk: elicit preferences, and Decision talk: decide together. Each competence was coded on a 5-point Likert Scale (0='the behaviour is not observed' – 4='the behaviour is observed and executed to a high standard'). The items 'preparation talk' and 'evaluation talk' were excluded for this study, as these items often take place before and after the consultation respectively and are therefore often not recorded. Following OPTION-5 guidelines, the scores were transformed to a 0-100 score. Four observers rated 15 pre-intervention consultations and resolved discrepancies by discussion. After this training phase, recordings were divided between the observers with every fourth recording assigned to multiple observers for rating and discussion in order to establish a stable inter-observer reliability. The majority of pre-intervention recordings (i.e. recordings that were not yet coded) and a similar number of post-intervention recordings were assigned a random six-digit number to enable blind coding (i.e. without the observers knowing the study phase). The few remaining post-intervention recordings were assessed non-blinded.
Extent to which patients and relatives participate in SDM	The six behavioural competences that were encoded for the oncologists with the OPTION-MCC (15), were also used to assess the extent to which patients and relatives participate in these steps of SDM. In the original OPTION-MCC, patients and relatives were each assigned a score from 0 (passive) to 2 (active). For ease of interpretation and comparison to the oncologists' scores, we applied scores from 0 (passive) to 4 (very active). The procedure of coding the consultations was the same as for the extent to which oncologists involve patients in SDM.
Consultation length	The consultation length was measured as the duration of the recording in minutes.
Final questionnaire	
Decisional conflict	The validated Dutch version (17) of the Decisional Conflict Scale (DCS) (18,19) was used. The DCS consists of 16 items on a 5-point Likert scale (0=strongly agree, 4=strongly disagree) within the Informed (3 items), Values clarity (3 items), Support (3 items), Uncertainty (3 items), and Effective decision (4 items) subscales. In line with the user manual (19), all items were summed, divided by 16 and multiplied by 25 to get a total score for decisional conflict on a 0-100 scale. Scores below 25 are associated with being able to implement a decision, and above 37.5 with decision delay.

** These measurements were only included in the post-intervention phase*

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