

Supplementary Table 1. Predictors of VR usefulness perception

Characteristics	Usefulness (Understanding)			Usefulness (Initiation)			Usefulness (Adherence)		
	Not Useful	Useful	<i>p</i> -value ^b	Not Useful	Useful	<i>p</i> -value ^b	Not Useful	Useful	<i>p</i> -value
	N = 34 ^a	N = 16		N = 34	N = 16		N = 37	N = 13	
Specialty			0.659			0.659			0.999
Oncology	31 (91%)	14 (88%)		31 (91%)	14 (88%)		33 (89%)	12 (92%)	
Pulmonology	1 (2.9%)	2 (13%)		1 (2.9%)	2 (13%)		2 (5.4%)	1 (7.7%)	
Surgery	1 (2.9%)	0 (0%)		1 (2.9%)	0 (0%)		1 (2.7%)	0 (0%)	
Other	1 (2.9%)	0 (0%)		1 (2.9%)	0 (0%)		1 (2.7%)	0 (0%)	
Year of Practice	3.69 ± 3.58	5.16 ± 4.17	0.237	4.00 ± 4.08	4.50 ± 3.22	0.642	3.86 ± 3.65	5.00 ± 4.22	0.399
Number of patients seen annually	148.85 ± 248.03	107.50 ± 116.48	0.426	156.06 ± 4.07	92.19 ± 3.22	0.208	150.03 ± 3.65	94.62 ± 4.22	0.246
Familiarity with VR			0.891			0.799			0.234
Very familiar	2 (5.9%)	0 (0%)		2 (5.9%)	0 (0%)		2 (5.4%)	0 (0%)	
Familiar	7 (21%)	4 (25%)		6 (18%)	5 (31%)		7 (19%)	4 (31%)	
Neutral	6 (18%)	2 (13%)		6 (18%)	2 (13%)		8 (22%)	0 (0%)	
Somehow unfamiliar	10 (29%)	4 (25%)		9 (26%)	5 (31%)		11 (30%)	3 (23%)	

Not at all familiar	9 (26%)	6 (38%)		11 (32%)	4 (25%)		9 (24%)	6 (46%)	
---------------------	------------	---------	--	-------------	------------	--	------------	------------	--

^a Mean $\pm$ SD; n (%)

^b Two-sample *t*-tests were applied for the continuous variable, and Fisher's exact test was applied for the categorical variable.

Supplementary Table 2. Survey and Interview Questions

	Question	Survey or Interview	Options (if any)
Demographics & Background	What is your specialty?	Both	oncology, pulmonology, radiology, surgery, other)
	How many years have you been in practice?	Both	Number Input
	How many patients do you see annually?	Both	Number Input
Familiarity with VR	How familiar are you with the use of VR?	Survey	1–5 Likert scale
Potential benefits of VR	How useful do you believe VR is for helping patients adhere to treatment regimens	Survey	5-point Likert scale
	How useful do you believe VR is for helping patients understand treatment options	Survey	5-point Likert scale
	How useful do you believe VR is for helping patients initiate treatment	Survey	5-point Likert scale
	What potential benefits do you see in using VR for patient education and support?	Survey	Improved patient understanding, enhanced engagement, expectation management, increased emotional support, other
Potential challenges of VR	What challenges do you foresee in adopting VR tools for lung cancer patients?	Survey	technical/usability issues, resistance to technology, discomfort, tool/system/provider-related challenges, inadequate training, high costs, limited accessibility, other
	How can these challenges be addressed to ensure successful implementation?	Survey	Open-ended
Design Preferences	What features would you like to see in the VR tool?	Survey	detailed explanations, interactive demos, side effect info, testimonials, videos, symptom guides, relaxation, virtual tours, other
	Which interactive features would be most beneficial?	Survey	symptom tracking, quizzes, guided meditation, treatment simulations, support groups, role-playing, other
	How should the information be presented in the VR tool?	Survey	video explanations, text with images, audio narration, interactive animation
Delivery & Implementation	When and how should the technology be delivered to avoid workflow interference?	Survey	Time and location input
	How frequently should the VR tool provide updates/content?	Survey	Number input

	What support is necessary for effective VR implementation?	Survey	provider training, patient technical support, ongoing updates, integration with healthcare systems, other
	Who should deliver the educational sessions via VR?	Survey	Open-ended
	How involved should healthcare providers be while patients use the tool?	Survey	1–5 Likert scale
Benefits of VR:	What benefits do you see in using VR technology for patient education and support?	Interview	Open-ended
Challenges of VR	What concerns do you have about using VR technology in cancer care settings?	Interview	Open-ended
	What challenges do you foresee in VR adoption and use by patients?	Interview	Open-ended
	How can these challenges be addressed to ensure successful implementation?	Interview	Open-ended
	Do you have concerns about the long-term use of VR in patient care? How can we avoid those?	Interview	Open-ended
Design Preferences	What modules and features would you like to see included in the VR tool?	Interview	Open-ended
	How should the information be presented to be most effective?	Interview	Open-ended
	How long should the sessions be to retain patient attention?	Interview	Open-ended
	How frequently should VR sessions be offered?	Interview	Open-ended
Delivery & Implementation	Do you have any concerns about implementing this technology?	Interview	Open-ended
	What support is necessary for effective implementation?	Interview	Open-ended
	How involved should providers be while patients use the tool?	Interview	Open-ended
	When and how do you envision implementation to minimize workflow disruption?	Interview	Open-ended