Study Number	First Author Surname	Publication year	Publication Type	Study design	Country
S1	Linder	2019	Journal	single group study	USA
S2	Salgado	2017	Journal	Pilot study	Australia
S3	Spoelstra	2016	journal	RCT	USA
S4	Greer	2020	Journal	RCT	USA
S5	Sadigh	2023	Journal	Pilot study	USA
S6	Krok-Schoen	2019	Journal	Pilot study	USA
S7	Karaaslan-Esser	2021	Journal	RCT	Turkey
S8	Psihogios	2023	Journal	Pilot study	USA
S9	Yanez	2022	Journal	RCT	USA
z10	Heneghan	2021	Journal	cross-sectional survey	USA
z11	Passardi	2022	Journal	Prospective trial	Italy

Table 1

Study Number	First Author Sur name	Sample size (number of participants)	Male/female ratios in the study	Mean age of the participants
S1	Linder	23	1.556	20
S2	Salgado	9	2	54
S3	Spoelstra	75	0.83	60
S4	Greer	181	0.86	54
S5	Sadigh	29	0	57
S6	Krok-Schoen	39	0	59
S7	Karaaslan-Esser	84	1.2	60
S8	Psihogios	18	3.5	19
S9	Yanez	95	0	33
S10	Heneghan	64	0.6	parents 39, patients 17
S11	Passardi	40	0.6667	42-82

Table 2

Cancer categorization	Grand Total	References
Mixed malignancies	2	Greer S4, LinderS1
Hematologic malignancy	3	Heneghan S10, Psihogios S8, Salgado S2
Solid tumors	6	Karaaslan-Esser S7, Krok- Schoen S6, Passardi S11, Sadigh S5, Spoelstra S3, Yanez S9
Grand Total	11	

Table 3

Categorized cancer medications	Grand Total	Reference
Mixed	4	S4,7,1,11
oral chemotherapy	3	\$10,8,3
ткі	2	S5,2
Anti hormonal therapy	2	S6,9
Grand Total	11	

Table 4

Name of the feature	Grand Total	Reference	
Reminders	11	\$1,2,3,4,5,6,7,8,9,10,11	
Adherence assessment	10	\$1,2,4,5,6,7,8,9,10,11	
Side effects reporting	5	S2,3,4,6,11	
Patient Education	5	S2,3,4,7,11	
Symptoms assessment	4	S3,4,6,11	
Interaction with clinicians	3	S2,5,11	
E-capsules	2	S1,4	
Interaction with other users	2	S2,11	
Patient feedback	2	S8,9	
Medication information	2	S7,10	
Confirms administration	1	S3	
Drug-drug interaction	1	S11	
Signs assessment	1	S11	
Refill reminder	1	S10	
referral request	1	S5	
Calendar sync	1	S7	

Table 5

Adherence assessment	Grand Total	Reference
Author-specific questionnaire/App generated	9	S1,2,3,5,7,8,9,10,11
Morisky Medication Adherence Scale	2	S4,6
Adherence outcome	Total	Reference
Negative	2	S4, S9
Neutral	1	S10

Table 6

Compatibility	Grand Total	Reference
Laptop/desktop and Smartphones IOS/Android	3	S11,2,9
Smartphones IOS/Android	7	\$4,7,6,1,8,5,3
Smartphones, Tablets, IOS/Android	1	\$10
System characteristic	Total	Reference
Stand alone	6	\$4,7,6,1,8,3
Web page	3	S5,2,9
App and webpage	1	S10
Not reported	1	S11

Table 7

References

- [S1] Linder LA, Wu YP, Macpherson CF, Fowler B, Wilson A, Jo Y, et al. Oral Medication Adherence Among Adolescents and Young Adults with Cancer Before and Following Use of a Smartphone-Based Medication Reminder App. J Adolesc Young Adult Oncol 2018;8:122–30. https://doi.org/10.1089/jayao.2018.0072.
- [S2] Pereira-Salgado A, Westwood JA, Russell L, Ugalde A, Ortlepp B, Seymour JF, et al. Mobile health intervention to increase oral cancer therapy adherence in patients with chronic myeloid leukemia (The REMIND system): Clinical feasibility and acceptability assessment. JMIR Mhealth Uhealth 2017;5. https://doi.org/10.2196/mhealth.8349.
- [S3] Spoelstra SL, Given CW, Sikorskii A, Coursaris CK, Majumder A, DeKoekkoek T, et al. Proof of Concept of a Mobile Health Short Message Service Text Message Intervention That Promotes Adherence to Oral Anticancer Agent Medications: A Randomized Controlled Trial. Telemedicine and E-Health 2015;22:497–506. https://doi.org/10.1089/tmj.2015.0126.
- [S4] Greer JA, Jacobs JM, Pensak N, Nisotel LE, Fishbein JN, MacDonald JJ, et al. Randomized Trial of a Smartphone Mobile App to Improve Symptoms and Adherence to Oral Therapy for Cancer. Journal of the National Comprehensive Cancer Network J Natl Compr Canc Netw 2020;18:133–41. https://doi.org/10.6004/jnccn.2019.7354.
- [S5] Sadigh G, Meisel JL, Byers K, Robles A, Serrano L, Jung OS, et al. Improving palbociclib adherence among women with metastatic breast cancer using a CONnected CUstomized Treatment Platform: A pilot study. Journal of Oncology Pharmacy Practice 2023;29:1957–64. https://doi.org/10.1177/10781552231161823.
- [S6] Krok-Schoen JL, Naughton MJ, Young GS, Moon J, Poi M, Melin SA, et al. Increasing Adherence to Adjuvant Hormone Therapy Among Patients With Breast Cancer: A Smart Phone App-Based Pilot Study. Cancer Control 2019;26:1073274819883287. https://doi.org/10.1177/1073274819883287.
- [S7] Karaaslan-Eşer A, Ayaz-Alkaya S. The effect of a mobile application on treatment adherence and symptom management in patients using oral anticancer agents: A randomized controlled trial. European Journal of Oncology Nursing 2021;52:101969. https://doi.org/https://doi.org/10.1016/j.ejon.2021.101969.
- [S8] Psihogios AM, Li Y, Ahmed A, Huang J, Kersun LS, Schwartz LA, et al. Daily text message assessments of 6-mercaptopurine adherence and its proximal contexts in adolescents and young adults with leukemia: A pilot study. Pediatr Blood Cancer 2021;68:e28767. https://doi.org/https://doi.org/10.1002/pbc.28767.
- [S9] Yanez B, Oswald LB, Van Denburg AN, Baik SH, Czech KA, Buitrago D, et al. Rationale and usability findings of an e-health intervention to improve oral anticancer adherence among breast cancer survivors: The My Journey mindfulness study. Contemp Clin Trials Commun 2022;26:100898. https://doi.org/https://doi.org/10.1016/j.conctc.2022.100898.
- [Z10] Heneghan MB, Hussain T, Barrera L, Cai SW, Haugen M, Morgan E, et al. Access to Technology and Preferences for an mHealth Intervention to Promote Medication Adherence in Pediatric Acute Lymphoblastic Leukemia: Approach Leveraging Behavior Change Techniques. J Med Internet Res 2021;23:e24893. https://doi.org/10.2196/24893.
- [Z11] Passardi A, Foca F, Caffo O, Tondini CA, Zambelli A, Vespignani R, et al. A Remote Monitoring System to Optimize the Home Management of Oral Anticancer Therapies (ONCO-TreC): Prospective Training-Validation Trial. J Med Internet Res 2022;24. https://doi.org/10.2196/27349.