ETHICAL ASPECTS OF PHYSIOTHERAPISTS' WORK WITH ONCOLOGY PATIENTS

Daniela Petkovska
University of St. Clement of Ohrid, Bitola, Higher Medical School Bitola, North Macedonia
daniela.petkovska@uklo.edu.mk
Izabela Filov
University of St. Clement of Ohrid, Bitola, Higher Medical School Bitola, North Macedonia
izabela.filov@uklo.edu.mk
Angelka Jankulovska
University of St. Clement of Ohrid, Bitola, Higher Medical School Bitola, North Macedonia
angelka.jankulovska@uklo.edu.mk
Denis Arsovski
University of St. Clement of Ohrid, Bitola, Higher Medical School Bitola, North Macedonia
denis.arsovski@uklo.edu.mk
Zlatko Lozanovski
University of St. Clement of Ohrid, Bitola, Higher Medical School Bitola, North Macedonia
zlatko.lozanovski@uklo.edu.mk
Tanja Jovanovska
University of St. Clement of Ohrid, Bitola, Higher Medical School Bitola, North Macedonia
tanja.jovanovska@uklo.edu.mk
Viktorija Prodanovska Stojchevska
University of St. Clement of Ohrid, Bitola, Higher Medical School Bitola, North Macedonia
viktorija.stojchevska@uklo.edu.mk

Abstract: Background:Physiotherapists working with oncology patients are frequently exposed to complex clinical, psychosocial, and ethical challenges. Despite their important rehabilitative and supportive roles, ethical aspects of physiotherapy practice in oncology remain insufficiently addressed in both research and clinical guidelines.
Aim:The aim of this study was to examine the attitudes, experiences, and ethical awareness of physiotherapists in North Macedonia regarding their work with oncology patients, with a focus on ethical principles, communication, interdisciplinary collaboration, and psychological burden.
Methods:A descriptive qualitative–quantitative study was conducted among 20 physiotherapists employed in the Department of Physical Medicine and Rehabilitation at the Clinical Hospital in Bitola. Data were collected through an anonymous structured questionnaire consisting of demographic items, Likert-scale questions on ethical awareness, and open-ended questions describing real ethical dilemmas. Quantitative data were analyzed using descriptive statistics, while qualitative responses underwent thematic analysis.
Results:The majority of participants demonstrated strong ethical awareness: 90% reported familiarity with the fundamental ethical principles of autonomy, confidentiality, beneficence, and justice. Ethical dilemmas were frequently encountered by 85% of respondents, most commonly involving patient information, communication of prognosis, emotional support, and treatment boundaries. A need for additional ethical training was expressed by 70% of physiotherapists. Effective communication (80%) and interdisciplinary collaboration (75%) were recognized as key for resolving ethical conflicts. Psychological burden was reported by 60%, indicating the emotional impact of oncology care on physiotherapists.
Conclusion:Physiotherapists show a high level of ethical consciousness but face substantial ethical and emotional challenges when working with oncology patients. The findings align with international research emphasizing the need for formal ethical education, clinical supervision, and structured interdisciplinary support. Strengthening ethical competencies, improving institutional protocols, and providing psychosocial support may enhance the quality of oncology rehabilitation and reduce moral distress among physiotherapists.
Keywords: ethics, physiotherapy, oncology rehabilitation, ethical dilemmas, interdisciplinary care, moral distress, patient communication

1. INTRODUCTION

Oncology represents one of the most complex and delicate fields in medicine, encompassing numerous clinical, emotional, and ethical challenges. With advancements in medical science and the increasing survival rates among cancer patients, there is a growing need for a deeper understanding of the ethical issues that arise during care provision (Baliga et al., 2024). Particularly significant is the perspective of healthcare professionals directly involved in treatment — doctors, nurses, physiotherapists, psychologists, and other members of the multidisciplinary team (Medina-Rincón et al., 2024).

Ethics in oncology confronts a range of sensitive and practical questions: informed consent, appropriate and truthful information delivery to patients, access to palliative care, communication with families, and decision-making in end-of-life contexts. These issues are not merely academic — they are a daily reality for healthcare workers (Neumann et al., 2019; Özbaş, 2021; Varkey, 2020).

With the dramatic global rise in cancer incidence, cancer has become one of the leading health challenges of the 21st century. According to Callahan (2015), by 2030, the annual cost of cancer treatment is projected to reach 458 billion dollars. The problem is particularly pronounced in developing countries, where limited healthcare resources lead to serious ethical dilemmas regarding equity, access to therapy, and the allocation of medical resources (Ghose, Radhakrishnan, & Bhattacharya, 2019).

Recent data show that in Spain in 2023, there were 591 new cases of cancer per 100,000 inhabitants (Asociación Española Contra el Cáncer, 2023; Medina-Rincón et al., 2024), and projections for 2024 estimate the number will reach 286,664 cases (Sociedad Española de Oncología Médica, 2024; Medina-Rincón et al., 2024). Thanks to early diagnosis and improved treatments, survival rates are increasing, resulting in a growing number of patients who require long-term rehabilitation (Costa, Alves, & Lunet, 2020; Medina-Rincón et al., 2024). These patients often face functional impairments due to the disease and its treatment: lymphedema, peripheral neuropathies, fatigue, pain, decreased physical condition, and limited range of motion (Stuiver et al., 2019; Medina-Rincón et al., 2024). Physiotherapy, especially through individualized exercise approaches, plays a crucial role in alleviating these conditions; however, its application is still insufficiently integrated into oncology practice (McNeely et al., 2016; Medina-Rincón et al., 2024).

These problems gained particular attention in North Macedonia in May 2023, when serious allegations emerged regarding the misuse of oncology therapy at the Clinic for Radiotherapy and Oncology in Skopje. Media reports highlighted shortages of immunotherapy drugs (cytostatics), with suspicions of theft and black-market sales. Searches were conducted, and the public reacted strongly — through testimonies, public appearances, and protests in front of the Government, demanding transparency and accountability. This case raised critical questions about ethical mechanisms and oversight in cancer patient care.

As part of the broader European research project MAREMOTO, which aimed to identify ethical risks and good practices in oncology care, various professional groups were included: doctors, nurses, physiotherapists, and other healthcare workers. The analysis showed that there are shared ethical themes, as well as unique challenges related to each professional role.

This paper focuses on physiotherapists — a group whose professional activities in oncology are often insufficiently elaborated in ethical discussions. Beyond their rehabilitation responsibilities, physiotherapists also actively contribute to the psychosocial support of patients, exposing them to numerous ethical dilemmas. As autonomous professionals, they face complex situations involving balancing patient needs, family expectations, and professional boundaries (Aguilar-Rodríguez et al., 2021; Delany et al., 2010; Mármol-López et al., 2023).

Developing a professional identity does not merely imply adopting technical skills but also actively practicing in accordance with ethical values, norms, and professional conventions (Kulju et al., 2016; Shulman, 2002; Mármol-López et al., 2023). Although interest in ethical issues in physiotherapy has significantly increased, there remains a gap in the practical application of ethical knowledge and tools. Research indicates that physiotherapists rarely conduct ethical analyses in daily practice (Swisher, 2002; Aguilar-Rodríguez et al., 2019; Kulju et al., 2020; Mármol-López et al., 2023), even though high-quality care requires conscious recognition and management of arising ethical issues.

This paper adopts a framework based on the four fundamental ethical principles: respect for autonomy, beneficence, fidelity, and justice (Beauchamp, 2013; 2019; Tomas, 2017). Additionally, it refers to historical documents such as the Hippocratic Oath, the Declaration of Helsinki (1964), and the Nuremberg Code (1947), which represent the foundation of modern biomedical ethics and serve as guidelines for professional practice.

By analyzing the experiences, attitudes, and ethical dilemmas of physiotherapists working with oncology patients in North Macedonia, this paper aims to expand the interdisciplinary ethical dialogue in oncology and offer guidance for improving ethical practices in clinical contexts.

2. METHODOLOGY

The aim of this research was to examine the attitudes, experiences, and ethical awareness of healthcare professionals — with a focus on physiotherapists — regarding their work with oncology patients in North Macedonia. The study is directed toward analyzing their role within the interdisciplinary team, their exposure to ethical dilemmas, and their knowledge of moral standards when working with this sensitive population.

The research was conducted as a descriptive and qualitative study, utilizing semi-structured interviews and a standardized questionnaire. It is part of a broader initiative to assess ethical challenges in oncology rehabilitation among various healthcare professionals.

A total of 20 graduate physiotherapists employed in the Department of Physical Medicine and Rehabilitation at the Clinical Hospital in Bitola, North Macedonia, participated in the study.

Inclusion criteria were: Completed higher education in physiotherapy; At least one year of professional experience; Voluntary written consent to participate in the study.

Of the total number of participants, 13 (65%) were female, and 7 (35%) were male. The age range was from 27 to 55 years, with a mean age of 38.4 years (SD = 7.9).

Professional experience: Less than 5 years: 6 participants (30%) ; 5–15 years: 9 participants (45%); More than 15 years: 5 participants (25%).

Experience with oncology patients: Regularly work with oncology patients: 8 (40%); Occasional experience: 7 (35%); No direct experience: 5 (25%).

Approximately 55% of respondents had formal training (courses, seminars) in medical ethics, while over 70% expressed interest in additional education related to ethical aspects of oncology rehabilitation.

Research instrument

An anonymous, structured questionnaire was used to collect data, which included:

• Demographic questions (age, gender, professional experience);

• Closed-ended questions using a Likert scale related to ethical awareness and the practical application of ethical principles;

• Open-ended questions describing real ethical dilemmas and personal experiences in the context of working with oncology patients.

The questionnaires were completed manually by the participants in paper form under controlled conditions, following oral and written consent. All responses were processed anonymously.

Data analysis

Quantitative data were processed using descriptive statistics (frequencies, percentages, mean values). Qualitative data from open-ended questions were analyzed using thematic analysis to identify dominant categories and patterns of behavior and thinking.

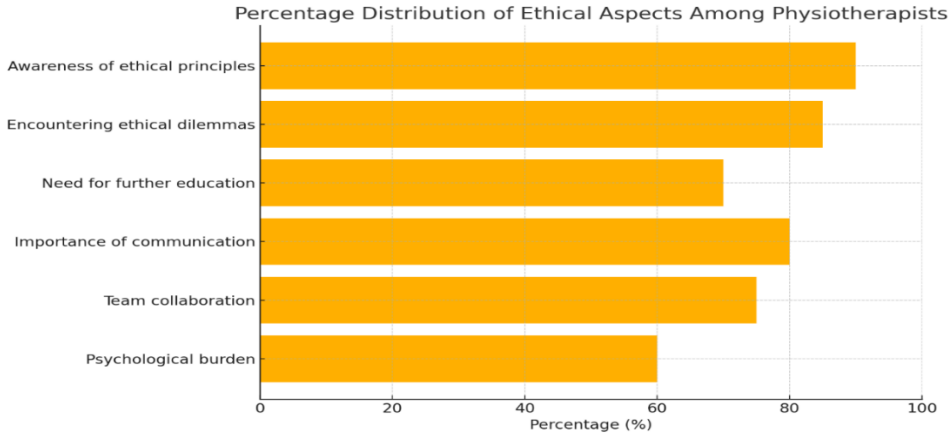
The obtained results are presented through tables and graphical displays, categorized into the following thematic areas:

• Awareness of ethical principles;
• Encountering ethical dilemmas;
• Communication with patients;
• Team collaboration;
• Psychological burden and the need for support.

3. RESULTS

Below are the results of the conducted study involving 20 physiotherapists employed in the departments of physical medicine and rehabilitation at the Clinical Hospital in Bitola. The data are presented through descriptive analysis and graphical representations.

Graf.1. The bar chart illustrates the percentage distribution of key ethical aspects reported by physiotherapists working with oncology patients.



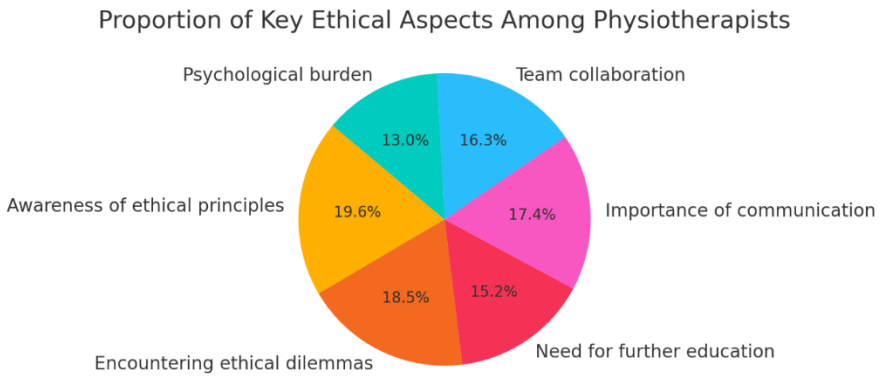
Source: Authors' research

The analysis of responses showed that:

- **90%** of the participants (18 out of 20) stated that they are familiar with the basic ethical principles in healthcare practice, including respect for autonomy, confidentiality, justice, and beneficence;
- **85%** (17 out of 20) reported encountering ethical dilemmas in their daily work with oncology patients, particularly concerning patient information, intervention boundaries, and emotional coping;
- **70%** (14 out of 20) indicated a need for additional education and training on ethical issues related to oncology rehabilitation;
- **80%** (16 out of 20) emphasized that effective communication with patients is a crucial element in resolving ethical issues;
- **75%** (15 out of 20) believe that collaboration with other members of the healthcare team plays an important role in addressing ethical dilemmas;
- **60%** (12 out of 20) reported experiencing a psychological burden due to the intensity and emotional weight of working with patients in advanced stages of the disease.

These data are presented through two types of graphical representations: a horizontal bar chart and a pie chart, which visually illustrate the distribution of key ethical aspects among the respondents.

Graf.2. Percentage distribution of ethical aspects among physiotherapists



Source: Authors' research

The pie chart shows the proportional representation of key ethical aspects reported by physiotherapists. The largest share corresponds to *awareness of ethical principles* (19.6%) and *encountering ethical dilemmas* (18.5%). This is followed by *the importance of communication* (17.4%) and *team collaboration* (16.3%). *Need for further*

education accounts for 15.2%, while *psychological burden* represents the smallest proportion at 13.0%. The distribution highlights the multifaceted nature of ethical challenges in oncology rehabilitation.

The pie chart, in particular, shows the percentage share of each element:

- Awareness of ethical principles (90%) and encountering ethical dilemmas (85%) are dominant themes in the responses;
- Psychological burden (60%), although ranked lowest compared to other aspects, remains a significant indicator of the need for psychosocial support and supervision;
- The other aspects (education, communication, collaboration) are relatively equally represented, indicating the multidimensional nature of ethical challenges.

Based on these data, it can be concluded that physiotherapists not only recognize the importance of ethics in their work but also identify specific needs for structural support, continuous education, and interdisciplinary collaboration.

4. DISCUSSION AND CONCLUSION

The findings of this study highlight several important dimensions of ethical awareness and practice among physiotherapists working with oncology patients in North Macedonia. The results demonstrate that physiotherapists possess a high level of familiarity with fundamental ethical principles, with 90% of respondents reporting knowledge of concepts such as respect for patient autonomy, confidentiality, and beneficence. This strong ethical foundation is consistent with previous research demonstrating that ethical competence is essential in delivering high-quality rehabilitation care, especially in oncology, where patient vulnerability is profound (Beauchamp & Childress, 2019).

Despite this awareness, 85% of participants reported encountering ethical dilemmas in practice, most commonly related to communication of sensitive information, emotional support, and the limits of therapeutic intervention. These findings mirror international evidence showing that physiotherapists often face moral uncertainty in oncology settings, largely due to insufficient ethical frameworks and the emotional complexity of end-of-life care (Piccoli et al., 2022). Oncology rehabilitation places physiotherapists in a unique position, where they frequently balance therapeutic goals with psychological support, which can generate ethical tension when institutional guidelines are unclear or when family expectations conflict with professional judgment.

Furthermore, 70% of respondents expressed a need for additional ethical education. This aligns with studies from Ireland and Turkey demonstrating that ethical training is often limited in physiotherapy curricula, leading many clinicians to feel underprepared for real-world ethical decision-making (Delany et al., 2010). The expressed need for training in the present study reinforces the idea that ethical competence is not static but requires continuous education, reflective practice, and team-based dialogue.

Communication and interdisciplinary collaboration also emerged as central themes. A total of 80% of physiotherapists emphasized the importance of communication, while 75% highlighted the significance of collaboration with other healthcare professionals. These findings are congruent with international literature showing that effective communication and collaborative teamwork significantly reduce ethical conflict and improve patient outcomes in oncology rehabilitation (Aguilar-Rodríguez et al., 2019).

A particularly important finding concerns the psychological burden experienced by 60% of respondents. The emotional strain associated with oncology work is well documented, with several studies showing that repeated exposure to suffering, terminal illness, and emotionally complex decisions contributes to moral distress and burnout among healthcare workers (Medina-Rincón et al., 2024). The psychological impact observed in this study underscores the need for psychological support systems, supervision, and structured opportunities for emotional reflection within clinical institutions.

The present findings also align with research involving physiotherapy students, which indicates that ethical education is often insufficiently integrated into academic programs, resulting in partial breaches of principles such as autonomy, confidentiality, and justice (Kulju et al., 2016). Strengthening ethical training at both undergraduate and postgraduate levels may therefore help reduce ethical uncertainty and improve the quality of care delivered to oncology patients.

Overall, the data from this study reinforce the relevance of four major ethical themes identified in the Italian literature: communication of patient information, balancing hope with realistic prognosis, ensuring treatment effectiveness and safety, and making ethically justified decisions regarding the continuation or withdrawal of rehabilitation interventions. The high level of ethical awareness demonstrated by respondents confirms their professionalism and moral commitment, while the frequent ethical dilemmas highlight the complexity of oncology rehabilitation. The clear need for additional education and the documented psychological burden emphasize the importance of ethical training, supervision, and emotional support.

In conclusion, this study underscores the necessity of strengthening ethical standards, enhancing interdisciplinary collaboration, and expanding ethical training opportunities for physiotherapists working with oncology patients. Providing regular ethical education, establishing structured supervision and clinical case discussions, offering psychological support services, and developing clear protocols aligned with international recommendations represent essential steps toward improving oncology rehabilitation practice in North Macedonia.

REFERENCES

Aguilar-Rodríguez, M., Kulju, K., Hernández-Guillén, D., Mármol-López, M. I., Querol-Giner, F., & Marques-Sule, E. (2021). Physiotherapy students' experiences about ethical situations encountered in clinical practices. *International Journal of Environmental Research and Public Health, 18*(16), 8489. https://doi.org/10.3390/ijerph18168489

Aguilar-Rodríguez, M., Marques-Sule, E., Serra-Añó, P., Espí-López, G. V., Dueñas-Moscardó, L., & Pérez-Alenda, S. (2019). A blended-learning program regarding professional ethics in physiotherapy students. *Nursing Ethics, 26*(5), 1410–1423. https://doi.org/10.1177/0969733017748479

Asociación Española Contra el Cáncer. (2023). *Dimensiones del cáncer*. https://observatorio.contraelcancer.es/explora/dimensiones-del-cancer

Baliga, M. S., Marakala, V., Madathil, L. P., George, T., D'souza, R. F., & Palatty, P. L. (2024). Ethical and moral principles for oncology healthcare workers: A brief report from a bioethics consortium emphasizing on need for education. *Journal of Education and Health Promotion, 13*(1), 145. https://doi.org/10.4103/jehp.jehp_1048_23

Beauchamp, T. L., & Childress, J. F. (2013). *Principles of biomedical ethics* (7th ed.). Oxford University Press.

Beauchamp, T. L., & Childress, J. F. (2019). *Principles of biomedical ethics* (8th ed.). Oxford University Press.

Costa, A. R., Alves, L., & Lunet, N. (2020). Healthcare services and medication use among cancer survivors and their partners: A cross-sectional analysis of 16 European countries. *Journal of Cancer Survivorship, 14*(5), 720–730. https://doi.org/10.1007/s11764-020-00886-8

Callahan, D. (2015). Shaping biomedical research priorities: The case of cancer. *Journal of Health Politics, Policy and Law, 40*(3), 501–523. https://doi.org/10.1215/03616878-2894758

Delany, C., Edwards, I., Jensen, G. M., Skinner, E., & Skinner, M. (2010). Ethical issues in physiotherapy practice: A survey of physiotherapists in Australia. *Physiotherapy Research International, 15*(4), 199–209. https://doi.org/10.1002/pri.471

Ghose, S., Radhakrishnan, V., & Bhattacharya, S. (2019). Ethics of cancer care: Beyond biology and medicine. *ecancermedicalscience, 13*, 911. https://doi.org/10.3332/ecancer.2019.911

Hippocratic Oath. (1943). In L. Edelstein (Ed.), *The Hippocratic Oath: Text, translation, and interpretation*. Johns Hopkins University Press. (Original work published ca. 5th century BCE)

Kulju, K., Stolt, M., Suhonen, R., & Leino-Kilpi, H. (2016). Ethical competence: A concept analysis. *Nursing Ethics, 23*(4), 401–412. https://doi.org/10.1177/0969733014567025

Kulju, K., Suhonen, R., Puukka, P., Tolvanen, A., & Leino-Kilpi, H. (2020). Self-evaluated ethical competence of a practicing physiotherapist: A national study in Finland. *BMC Medical Ethics, 21*, Article 3. https://doi.org/10.1186/s12910-020-00469-3

Mármol-López, M. I., Marques-Sule, E., Naamanka, K., Arnal-Gómez, A., Cortés-Amador, S., Durante, Á., Tejada-Garrido, C. I., Navas-Echazarreta, N., Juárez-Vela, R., & Gea, V. (2023). Physiotherapists' ethical behavior in professional practice: A qualitative study. *Frontiers in Medicine, 10*, 1158434. https://doi.org/10.3389/fmed.2023.1158434

McNeely, M., Dolgoy, N., Onazi, M., & Suderman, K. (2016). The interdisciplinary rehabilitation care team and the role of physical therapy in survivor exercise. *Clinical Journal of Oncology Nursing, 20*(Supplement 2), S8–S16. https://doi.org/10.1188/16.CJON.S2.8-16

Medina-Rincón, A., San Miguel-Pagola, M., Gargallo-Aguarón, P., Roldán-Pérez, P., Francín-Gallego, M., Villa-García, L., & Buesa-Estéllez, A. (2024). Exploring patients and caregivers needs and experiences in oncological physiotherapy: A call for collaborative care. *PLOS ONE, 19*(1), e0289563. https://doi.org/10.1371/journal.pone.0289563

Neumann, M., Edelhäuser, F., Tauschel, D., Fischer, M. R., Wirtz, M., Woopen, C., Haramati, A., & Scheffer, C. (2019). Empathy decline and its reasons: A systematic review of studies with medical students and residents. *Academic Medicine, 86*(8), 996–1009. https://doi.org/10.1097/ACM.0b013e318221e615

Nuremberg Code. (1947). *Trials of war criminals before the Nuremberg military tribunals under control council law no. 10*: Vol. 2. U.S. Government Printing Office.

Özbaş, A. (2021). Ethical problems experienced by oncology nurses in clinical practice: A qualitative study. *Nursing Ethics, 28*(3), 386–398. https://doi.org/10.1177/0969733020952108

Piccoli, P., Buciuni, S., Gandolfi, M., Modenese, A., & Vittadello, F. (2022). Ethical issues in oncology rehabilitation: A qualitative study of physiotherapists' experiences in palliative and terminal care. *Palliative & Supportive Care, 20*(6), 748–756. https://doi.org/10.1017/S1478951522000103

Shulman, L. S. (2002). Making differences: A table of learning. *Change: The Magazine of Higher Learning, 34*(6), 36–44. https://doi.org/10.1080/00091380209605567

Sociedad Española de Oncología Médica. (2024). *Las cifras del cáncer en España 2024*. https://seom.org/images/publicaciones/informes-seom-de-evaluacion-de-farmacos/LAS_CIFRAS_2024.pdf

Stuiver, M. M., Stout, N. L., Dennett, A. M., et al. (2019). An international perspective on integrating physiotherapists in oncology care. *Journal of Physiotherapy, 65*(4), 186–188. https://doi.org/10.1016/j.jphys.2019.07.004

Swisher, L. L. (2002). A retrospective analysis of ethics knowledge in physical therapy (1970–2000). *Physical Therapy, 82*(7), 692–706. https://doi.org/10.1093/ptj/82.7.692

Tomas, G. (2017). Ethical principles in clinical practice: Foundations and applications. *Journal of Clinical Ethics, 28*(4), 345–352.

Varkey, B. (2020). Principles of clinical ethics and their application to practice. *Medical Principles and Practice, 30*(1), 17–28. https://doi.org/10.1159/000509119

World Medical Association. (2013). World Medical Association Declaration of Helsinki: Ethical principles for medical research involving human subjects. *JAMA, 310*(20), 2191–2194. https://doi.org/10.1001/jama.2013.281053