

## HUMAN RIGHTS IN INTERNATIONAL ORGAN DONATION: A COMPARATIVE LEGAL ANALYSIS OF UZBEKISTAN, LITHUANIA, AND UKRAINE

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**Accepted**

4. 11. 2025

**Revised**

10. 2. 2026

**Published**

1. 4. 2026

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**Abstract** The study examines approaches to safeguarding human rights in the context of international organ transplantation. A political, economic, social, technological, environmental, and legal (PESTEL) analysis was conducted to identify external factors influencing organ donation practices. The comparative analysis focuses on three countries – Uzbekistan, Lithuania, and Ukraine – whose legislation was compared in terms of these factors: objects of transplantation, donors and conditions for removal, donor and recipient consent, liability of parties, age restrictions for donors, international cooperation, ethical standards and human rights, donor registries, control and monitoring, and special conditions for vulnerable groups. The analysis identified three key areas for improvement in protecting human rights: the consent system, oversight mechanisms, and international cooperation. The study provides recommendations aimed at strengthening international cooperation in ethical and legal organ donation practices.

**Keywords**

transplantation law,  
consent to organ  
donation,  
donor and recipient  
rights,  
cross-border  
transplantation,  
international medical  
cooperation

<https://doi.org/10.18690/mls.19.1.73-96.2026>

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## 1 Introduction

Organ transplantation has become a medical achievement that helps save and improve human life. However, organ transplantation operations require addressing a number of issues, the most important of which is how best to protect human rights in the context of donation. A comparative analysis of international experience allows for the development of strategies to protect the rights of the parties involved in the transplantation process.

Medicines' development has turned organ transplantation into a routine operation, helping to save the lives of thousands of people around the world. In 2023, a total of 172,409 organs were transplanted worldwide (Global Observatory on Donation and Transplantation, 2024). Despite the impressive figure, the number of operations performed is still insufficient to meet the global need for transplantable organs. In the United States alone, 103,223 people are on the waiting list for a donor organ, and 13 patients die every day while waiting for a transplant (Health Resources & Services Administration, 2025). The cited data indicate a mismatch between the number of patients in need of organ transplantation and the number of potential donors. Meanwhile, studies by the Health Resources & Services Administration suggest that one donor can save eight lives and improve the quality of life for 75 others.

Khomenko et al. (2021) argued the discrepancy between the number of people in need of transplants and the number of donors can lead to various violations, including human trafficking. As stated by Hidayat Romadhoni et al. (2024), the discrepancy was most prevalent in low-income countries. Using the Indonesian context, the cited experts emphasized the obligations imposed by international legal instruments, such as the Palermo Protocol and the Council of Europe Convention, to prevent and criminalize human trafficking, including for the purpose of organ removal. Diana et al. (2023) also pointed to the functioning of Law No. 21 of 2007<sup>1</sup> and Law No. 36 of 2009<sup>2</sup> on health in Indonesia, which criminalize human trafficking for the purpose of organ removal. Basalyk & Tyshchuk (2025), who also

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<sup>1</sup> Law of the Republic of Indonesia Number 21 Year 2007 on the Eradication of the Criminal Act of Trafficking in Persons. (2007). Retrieved from: <https://www.warnathgroup.com/wp-content/uploads/2015/03/Indonesia-TIP-Law-2007.pdf>

<sup>2</sup> Law of Republic of Indonesia Number 36 Year 2009 Concerning Health. (2009). Retrieved from: <https://faolex.fao.org/docs/pdf/ins160173.pdf>

studied human trafficking for organ transplantation, emphasized the growing rates of this crime. Human trafficking represents a grave violation of fundamental human rights, particularly the rights to life, freedom, and human dignity (Khadjibaev et al., 2024). While using kidney and liver transplantation in Uzbekistan as a research context, Akbarov et al. (2023) argued that the absence of rigid liability requirements and the failure to address moral and ethical dilemmas can undermine public trust in the field and reduce the number of prospective donors. Considering the study by Alameer et al. (2024), low public trust in the national medical segment, coupled with the subsequent rise of the black market, was partly due to a lack of awareness of the effects of such intervention on the donor's health and life. Based on the cited sources, it can be argued that insufficient legislative regulation of the organ removal and transplantation process increases the risks of a shadow segment.

Legal regulation of ethical issues related to the need for organ transplantation is also significant. This includes the recognition of individuals' rights to make independent decisions regarding their own bodies both during life and after death (Ehtuish, 2024). This principle is also reflected in international human rights law, particularly in the recognition of bodily autonomy and informed consent as core elements of the rights to human dignity and private life, as articulated in international legal instruments and bioethical conventions, including the Council of Europe Convention on Human Rights and Biomedicine<sup>3</sup>. The realization of this right includes, among other things, the independent decision regarding posthumous organ donation. Drawing on international experience, the author proposed four options for realizing this right, including consent to posthumous donation or refusal of it, mandatory or voluntary active choice.

Lewis & Gardiner (2023) emphasized that organ transplantation implies guarantees of the rights not only of donors but also of recipients. The authors note that donors' rights are guaranteed by the "consent rule", while recipients' rights are ensured by the "fair transplantation rule", which provides for the equitable distribution of donor organs. Analysing the experience of organ transplantation for Syrian refugees in Turkey, Birtan & Akpınar (2024) concluded that the legislatively regulated fair

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<sup>3</sup> Council of Europe Convention on Human Rights and Biomedicine (Oviedo Convention). (1997). Retrieved from: <https://www.coe.int/en/web/human-rights-and-biomedicine/oviedo-convention>

distribution of donor organs is one of the ways to address humanitarian crises, including those caused by military conflicts.

Ambagtsheer et al. (2024) emphasized that despite existing legislative initiatives, organ trafficking remains a global crime. Bakhtiar & Maddussila (2024) explained this trend is the result of legislative loopholes that make illegal organ transplantation possible. One such loophole is the possibility of entering into a fictitious marriage to legalize the transplantation. The authors suggest that the commercialization of organ transplantation can be prevented by ensuring that the relationship between the donor and the recipient is based on family or kinship ties. Patil (2024) further argued that commercialization might be avoided by using blockchain technology, helping to track each donated organ. The survey of Calik & Bendeche (Calik & Bendeche, 2024) revealed that the technology has been successfully implemented in some countries, including Lithuania. Nevertheless, there is a lack of effective mechanisms capable of accurately determining such ties.

As of 2025, the number of studies conducting a comparative analysis of human rights protection mechanisms in the context of international organ donation remains limited, making the proposed study relevant. The purpose of the study was to examine the specifics of human rights protection in the context of international organ donation. The tasks of the study included a comparative analysis of the legislative frameworks of Uzbekistan, Lithuania, and Ukraine and developing recommendations to better protect the rights of donors and recipients during organ transplantation.

## 2 Materials and Methods

The study conducted a comparative analysis of the legal framework regulating organ and tissue transplantation in Uzbekistan, Lithuania, and Ukraine. The main materials used included the following documents: the Law of the Republic of Uzbekistan No. ZRU-768 “On Transplantation of Human Organs and Tissues”<sup>4</sup>, the Republic of Lithuania Law No I-1626 “On Donation and Transplantation of Human Tissues,

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<sup>4</sup> Law of the Republic of Uzbekistan No. ZRU-768 “On Transplantation of Human Organs and Tissues”. (2022). Retrieved from: <https://www.lex.uz/ru/docs/6906782>

Cells and Organs”<sup>5</sup>, and the Law of Ukraine No. 2427-VIII “On the Implementation of Transplantation of Human Anatomical Materials”<sup>6</sup>. We analyzed the selected documents in terms of key aspects of organ donation and transplantation: transplantation objects, donors and conditions for the removal of anatomical materials, donor and recipient consent, as well as the responsibilities of the parties.

The research process involved a PESTEL analysis aimed at examining external factors shaping international organ donation. We conducted the analysis to detect the factors both facilitating and hindering the organ donation process in the international domain. The PESTEL analysis involved a range of countries, including Spain, Sweden, Estonia, the United States, Japan, and the UK in order to obtain a comprehensive understanding of the international organ donation process. The PESTEL analysis provided insights into the strategies currently used by those countries to promote human rights in the context of the international organ donation.

As a part of the data collection process, the research utilized comparative analysis. The two European countries – Lithuania and Ukraine – were added to the sample and further compared to Uzbekistan located in the Central Asian region. The comparative analysis aimed to detect and examine any potential differences in the western and eastern legislation enacted to regulate organ donation. The goal was also to identify the similarities which could be used to identify common regulatory approaches in the international organ donation.

We further utilized the data collected from both the PESTEL and comparative analysis in order to generate recommendations so as to strengthen human rights protection in international organ donation. The research also employed Kurt Lewin’s change model as a conceptual framework to better understand how to best implement these recommendations in order to promote legal and ethical organ donation across different regulatory contexts. Kurt Lewin’s change model conceptualises change as a three-stage process involving unfreezing existing

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<sup>5</sup> Republic of Lithuania Law No I-1626 “On Donation and Transplantation of Human Tissues, Cells and Organs”. (1996). Retrieved from:

<https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/0c7d80622aca11e58a4198cd62929b7a?jfwid=46jpeqd4v>

<sup>6</sup> Law of Ukraine No. 2427-VIII “On the Implementation of Transplantation of Human Anatomical Materials”. (2018). Retrieved from: <https://zakon.rada.gov.ua/laws/show/en/2427-19?lang=en#Text>

practices, implementing change, and refreezing new institutional arrangements. According to this model, any transformation involves unfreezing, change itself, and refreezing (Anjum et al., 2024). Our proposed recommendations are designed to apply at each stage of this process.

### 3 Results

#### 3.1 Factors Preconditioning International Organ Donation

International organ donation is a multifaceted process shaped by a repertoire of external factors, the principle components of which are documented in the table below (Table 1).

**Table 1: PESTEL Analysis of the International Organ Donation**

Factor	Content
Political	<ul style="list-style-type: none"> <li>– Government regulations and legal frameworks for organ donation (e.g., consent laws, eligibility criteria)</li> <li>– International agreements and cooperation in cross-border organ transplants</li> <li>– Policies on ethical standards, anti-trafficking measures, and protection of donors' rights</li> <li>– Political stability and governance impact the effectiveness of transplantation systems</li> </ul>
Economic	<ul style="list-style-type: none"> <li>– Availability of funding for public health initiatives, awareness campaigns, and transplantation programs</li> <li>– Economic disparities affecting access to transplantation services</li> <li>– Costs of transplantation procedures and long-term care for recipients</li> <li>– The impact of illegal organ trade driven by economic inequality</li> </ul>
Social	<ul style="list-style-type: none"> <li>– Cultural beliefs and societal attitudes towards organ donation (e.g., religious perspectives, family consent)</li> <li>– Public awareness and education regarding the importance and safety of organ donation</li> <li>– Social stigmas or misconceptions about organ donation after death</li> <li>– Ethical concerns over consent and exploitation of vulnerable populations</li> </ul>
Technological	<ul style="list-style-type: none"> <li>– Advances in transplantation technology, such as 3D-printed organs and xenotransplantation</li> <li>– Development of organ preservation techniques to extend viability</li> <li>– Improvements in matching technologies, such as genetic testing for compatibility</li> <li>– Innovations in medical logistics for rapid and safe organ transportation</li> </ul>
Environmental	<ul style="list-style-type: none"> <li>– Climate and environmental stability affecting organ transportation logistics</li> <li>– Regulations regarding biomedical waste management from transplant surgeries</li> </ul>

	– Natural disasters or crises that disrupt medical supply chains and donor registration
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Factor	Content
Legal	<ul style="list-style-type: none"> <li>– National and international laws governing organ donation and transplantation</li> <li>– Legislation against organ trafficking and commercialization</li> <li>– Legal requirements for donor consent (opt-in vs. opt-out systems)</li> <li>– Legal protection for living donors and their health rights</li> </ul>

Source: compiled by the authors based on Alghalyini et al. (2024), Olawade et al. (2025b), Qu et al. (2024).

Table 1 suggests that political factors play a considerable role in protecting human rights in the organ donation domain. Furthermore, regulations differ significantly across countries, which might cause misconceptions in the international organ donation domain and create loopholes for unlawful practices, such as human trafficking. The dramatic differences can be detected when comparing Spanish and German legislation concerning organ donation. Spain has adopted the “opt-out” approach, where all citizens are considered organ donors unless they explicitly refuse, contributing to one of the highest organ donation rates globally (De Andrade et al., 2024). In contrast to Spain, German citizens are not automatically considered to become organ donors, until they explicitly register their consent (Zeybek et al., 2025). The identified differences indicate the need for more coherent regulatory approaches at the cross-country level. In this context, the European Union facilitates cross-border organ transplantation through programmes such as Eurotransplant, enhancing organ sharing among participating countries. Eurotransplant is an international collaborative network that coordinates cross-border organ allocation among member states on the basis of medical compatibility, urgency, and waiting time. The system operates independently of national consent models and is compatible with both opt-in and opt-out donation frameworks (Eurotransplant International Foundation, 2025).

Economic factors also have a considerable impact on the segment, as relatively high transplantation costs precondition the emergence of the black market for organs (Orobets et al., 2025). In the United States, for example, a kidney transplant can cost as much as USD 442,500, which makes it unaffordable for most citizens without proper insurance coverage (Wang & Hart, 2021). The cited case suggests that the growing cost of organ transplantation further widens the gap between the rich and the poor, and creates favourable conditions in the black market for organs, especially in poor countries. As mentioned by Gonzalez et al. (Gonzalez et al., 2020), people

from India, Pakistan, and other low-income countries are forced to sell their organs because of desperation.

Social cultures, taking the form of cultural beliefs, religious attitudes, public awareness, and family consent, are also important factors when considering measures to protecting human rights in the organ donation domain. Cultural norms emphasizing the sanctity of the body after death might explain why in eastern countries, such as Japan, organ donation rates are considerably lower than in western countries, such as the United States (Kattoach et al., 2024). Furthermore, religious beliefs might have a considerable effect on an individual's consent to become a donor posthumously: while some religions interpret organ donation as an encroachment on the highest will, others might treat it as an act of kindness. Furthermore, efforts to protect human rights in organ donation depend on the public awareness of the issue. This statement can be illustrated in the context of the U.K., where the "Be a Hero" awareness campaign has significantly boosted donor registration rates (McCormick, 2020). Public awareness efforts are targeted at overcoming prejudice towards organ donation as a potentially illegal and ethically wrong procedure.

Technological factors help to ensure the transparent and just distribution of scarce resources in the organ transplantation domain. As explained by Olawade et al. (Olawade et al., 2025a), an increase in the use of artificial intelligence-driven matching algorithms has helped to identify the best donor-recipient matches. These algorithms further guarantee that organ transplantation is performed in compliance with human rights, including the right to equality. Simultaneously, the transparent distribution of organs is ensured by the use of the blockchain technology. The case of Estonia, which is now piloting the technology, suggests that the blockchain approach might increase equity and transparency in organ transplantation (Anselmo et al., 2023).

In addition to the mentioned factors, protecting human rights in the context of international organ donation is shaped by a repertoire of environmental factors, including transportation logistics, sustainability concerns, climate impact, and geographical barriers. Transport logistics might be disturbed by hurricanes or natural disasters that can disrupt flights and organ transport, impacting the success rate of transplants. Transplantation efforts can also be hindered by sustainability concerns, since medical waste from surgeries and preservation containers poses an

environmental hazard (Narzullaeva et al., 2025; Smoilov et al., 2015). Furthermore, carbon footprint results in rising temperatures in some regions, which might affect the ability to store and transport organs safely (De Simone et al., 2025; Wall & Testa, 2024). Geographical barriers include, for example, the disparities that frequently exist between people living in urban and rural areas. Since medical facilities are most often concentrated in urban areas, populations in such areas are more likely to have access to organ transplants. The opposite is usually true in rural areas, where access to transplant centers is limited or absent altogether.

Legal factors ensuring that human rights are protected (or perhaps not protected adequately) are numerous and differ considerably across the countries. In the European Union, for example, major attention is paid to protecting donors’ right to autonomous decision-making through criminalization of the illegal organ trade. Donors’ and recipients’ rights are articulated in the Council of Europe Convention against Trafficking in Human Organs<sup>7</sup>. Some European countries, including Austria, have adopted a “presumed consent” approach, which assumes an individual’s consent to donate organs, unless explicitly refused (Krenz & Perez, 2024). Moreover, European countries have adopted legal rules designed to ensure that donor information is securely handled and kept confidential.

### 3.2 Government Regulation of Organ Donation

The results of the comparative analysis of government regulation of organ donation in the selected countries is documented in the Table 2.

Table 2: Government Regulation of Organ Donation in Uzbekistan, Lithuania, and Ukraine

Parameter	Uzbekistan	Lithuania	Ukraine
Objects of transplantation	Human organs and tissues. Artificially grown organs are not included	Human organs, tissues, and cells. Artificially grown organs are not permitted for transplantation	Human organs, tissues, cells, and anatomical materials, including stem cells
Donors and conditions for removal	Living donor – only with notarized consent,	Living donor – only for close relatives or	Living donor – upon medical indications and

<sup>7</sup> Council of Europe Convention against Trafficking in Human Organs. (2015). Retrieved from: <https://rm.coe.int/16806dca3a>

Parameter	Uzbekistan	Lithuania	Ukraine
	provided there is no risk to life	through a cross-donation program	with consent. Cross-donation is allowed
Donor eligibility requirements	Deceased donor – only with a notarized consent given during the donor’s lifetime	Deceased donor – if there is no refusal during life. Relatives can make the decision	Deceased donor – presumption of disagreement. Only with confirmed consent from the donor
Donor and recipient consent	Written, notarized consent. The recipient also provides signed consent	Written or oral consent during life. Relatives can decide if there is no registered refusal	Written consent from the donor; the recipient signs informed consent
Liability of parties	Criminal liability for coercion, violation of conditions, and commercial operations	Commercial transactions involving organs and tissues are prohibited; criminal liability is enforced	Criminal liability for sale, purchase, coercion, and violation of transplantation procedures
Age restrictions for donors	Minimum age: 18 years. No maximum age specified, but medical evaluation is required	Minimum age: 18 years for living donors. No maximum limit, subject to medical evaluation	Minimum age: 18 years. Maximum age determined by medical assessment
International cooperation	Allowed with bilateral agreements and international protocols. Strict regulation for export/import of organs	Permitted within EU legislation and international agreements. Cross-border donation is possible	Permitted under international agreements. Collaboration with European registries is allowed
Ethical standards and human rights	Prohibition of organ trade; state monitoring for ethical compliance	Ethical review boards control compliance; strict prohibition of illegal organ trade	Strict monitoring for prevention of organ trafficking; cooperation with international human rights organizations
Donor registries	National registry for living and deceased donors. Access restricted and monitored by health authorities	Centralized national registry; information is confidential but accessible for medical purposes	National registry with open access for medical institutions; integrated with European networks
Control and monitoring	Ministry of Health and specialized agencies oversee the legality of all procedures	State Health Inspectorate monitors all transplantation activities	Ministry of Health and independent regulatory bodies monitor and control transplantation
Special conditions for vulnerable groups	Donor consent from vulnerable groups (e.g., persons with disabilities) requires enhanced legal protection	Additional ethical reviews are required for donations from minors or vulnerable groups	Legally protected with additional oversight; minors are strictly prohibited as living donor

Source: compiled by the authors based on the Law of Ukraine No. 2427-VIII “On the Implementation of Transplantation of Human Anatomical Materials” (2018), Law of the Republic of Uzbekistan No. ZRU-768 “On Transplantation of Human Organs and Tissues” (2022), Republic of Lithuania Law No I-1626 “On Donation and Transplantation of Human Tissues, Cells and Organs” (1996).

Based on this analysis, we concluded that the legislation of Uzbekistan and Lithuania contained similar provisions regarding the objects of transplantation. According to the table, Uzbekistan allows only human organs and tissues for transplantation, explicitly excluding artificially grown organs. Lithuania similarly restricts transplants to natural human organs, tissues, and cells, while also prohibiting artificial organ use. In turn, Ukraine expands the definition of the “objects of transplantation” to include anatomical materials and stem cells, reflecting a broader legal framework for transplantation (Melnyk & Avramenko, 2023).

All three countries impose specific legal frameworks for living and deceased donors. Uzbekistan mandates notarized consent from living donors and only allows organ removal from deceased donors if consent was notarized during the donor’s lifetime. Lithuania permits living donations within family circles or cross-donation programs, and deceased donations are contingent on the absence of refusal during life, with relatives empowered to decide. Ukraine differs notably with a “presumption of disagreement”, requiring explicit consent from the donor for deceased donation, thus prioritizing individual autonomy and reducing ambiguities in consent.

Consent mechanisms vary, with Uzbekistan demanding notarized written consent for both donor and recipient. Similarly, Ukraine maintains rigid standards that require written consent, mirroring its approach to deceased donors. Lithuania allows a more flexible consent framework, accepting both written and oral consent if there is no formalized refusal. Despite the detected differences, Uzbekistan, Lithuania, and Ukraine set similar age requirements for potential donors. Each country sets the minimum age for donors at 18, with no fixed upper age limit, although medical evaluation is a prerequisite. This ensures ethical standards are maintained, minimizing health risks associated with age. The selected countries also apply additional eligibility standards to safeguard the rights of vulnerable population groups. Uzbekistan mandates enhanced legal safeguards, Lithuania requires additional ethical review for minors and vulnerable groups, and Ukraine imposes strict prohibitions on living donations from minors, reflecting a high ethical standard. National registries are established in all three jurisdictions, though access

varies. Uzbekistan restricts access strictly to health authorities, Lithuania maintains confidentiality with medical-purpose access, and Ukraine adopts a more integrated European approach, allowing medical institutions broader access.

The comparative analysis further revealed that ethical compliance is a core principle across all three countries. Uzbekistan and Lithuania implement strict prohibitions on organ trade, with state monitoring to ensure ethical practices. Ukraine further partners with international human rights organizations, highlighting its commitment to transparency and ethical oversight.

Regulatory oversight is stringent across the board. Uzbekistan assigns its Ministry of Health and specialized agencies, while Lithuania's State Health Inspectorate manages transplant activities. Ukraine relies on its Ministry of Health alongside independent bodies, signifying a commitment to decentralized regulatory practices (Korobtsova et al., 2025).

The comparative analysis, hence, revealed that Uzbekistan, Lithuania, and Ukraine share foundational principles in transplantation law, prioritizing ethical standards, consent mechanisms, and state monitoring. However, Ukraine's broader definition of transplantation objects and integration with European networks positions it as more progressive in terms of international alignment and medical cooperation (Marmura, 2022).

The identified regulatory differences and similarities demonstrate that the effectiveness of organ donation systems is closely linked to the level of protection of donors' and recipients' rights. Variations in consent procedures, oversight mechanisms, and international cooperation frameworks indicate the need for strengthened human rights safeguards. These aspects are further addressed in the following section, which outlines strategies to enhance protecting human rights in the context of international organ donation.

### **3.3 Strategies to Protect Human Rights in the context of International Organ Donation**

The conducted analysis provided insights into the strategies to protect human rights in the context of international organ transplantation. One of the recommended strategies is to adapt the existing legal frameworks and regulations while taking into

account the lessons learned from Uzbekistan, Lithuania, and Ukraine. Based on our analysis, we concluded that in the 2020s, Uzbekistan has recently introduced stricter regulations to combat illegal organ trafficking, focusing on legal clarity and transparency. Similar to Lithuania, Ukraine has modernized its legal framework to enhance traceability and consent process, incorporating electronic registries to prevent illicit activities. Lithuania operates under the European Union directives, ensuring strict legal controls, rigid compliance with ethical standards, and clear consent policies. Lithuania's legal framework emphasizes the need for explicit consent and oversight by independent medical boards. In view of these findings, we recommend that the amended legal frameworks and regulations set rigid standards for consent procedures and organ trafficking, which would further protect the human right to fair and equitable treatment.

The consent systems in all three countries require to ensure that an individual's decision to become a donor is well-informed and voluntary (Ayupova & Seraliyeva, 2015). The analysis revealed that all the countries in the sample have adopted an opt-in system implying the need for a consent from a donor or their family, which in principle safeguards personal autonomy. Uzbekistan and Ukraine have adopted an approach that requires an explicit consent from the donor or the donor's family; however, in practice the decision is frequently mediated by relatives, public awareness remains limited, and consent procedures are inconsistently applied. These countries, however, still opt for a more structured approach that, in particular, involves creating a national donor registry for greater transparency, yet these registries are either incomplete or insufficiently integrated into clinical practice and therefore do not consistently guarantee clear recording and verification of consent. Compared to Uzbekistan and Ukraine, the opt-in system adopted in Lithuania is considered more effective as it implies that the donors' or family's consent is documented and verifiable. The analysis also confirmed that the opt-in system requires further improvement so that the parties can better capitalize on its benefits. The key advantages of the opt-in system include ethical clarity, stronger trust in the medical system, prevention of misuse and illegal organ trade, public awareness and engagement, as well as greater alignment with human rights and standards (Okhrimenko et al., 2023). The latter benefit means that the opt-in model emphasizes individual choice and protection from coercion. This model also supports the human right to bodily autonomy and informed decision-making. The amended opt-in system will guarantee that donors and their families are provided

with comprehensive and truthful information about the procedure, while their consent is documented. The reviewed opt-in system will also imply a repertoire of tools to track the donated organs and to promptly detect and prevent any violations in this sector.

The comparative analysis further provided insights into strategies to improve oversight and transparency mechanisms in organ donation. The Uzbek experience, for instance, pointed to the significance of the governmental oversight mechanisms used in that country to monitor medical institutions involved in organ transplantation. Lithuania has adopted a similar strategy. There, monitoring that includes regular audits and inspections is performed through national health authorities. The described oversight has become an effective protective mechanism, helping to reduce the black-market activities. Ukraine has also achieved considerable progress in providing oversight mechanisms that protect human rights in the context of organ transplantation. The country also enhances its oversight through collaboration with international organizations and public awareness initiatives (Sasko et al., 2026). The latter help to debunk common myths about organ donation and increase public involvement in organ donation. For example, the National Auto Rally held by the International Organization for Migration (IOM) Ukraine draws public attention to the benefits and challenges of organ donation and helps to increase public trust in the procedure that differs considerably depending on geographical, political, economic, and socio-cultural factors (Berney et al., 2025). The mentioned oversight and public awareness efforts might be used as the bases for an enhanced system of protecting human rights in the context of international organ donation.

In addition to the mentioned strategies, other researchers have recommended that human rights in connection with organ donation can be further protected through international cooperation and adoption of best practices (Chalova et al., 2024; 2025). The comparative analysis revealed that the countries that were studied have achieved considerable progress in the area of international cooperation by integrating the lessons learned from such cooperation into their own country's organ donation practices. Uzbekistan, for example, interacts with the World Health Organization (WHO) to better align its internal organ donation practices with global best practices. Lithuania, in turn, actively participates in European transplant networks, such as Balttransplant, European Committee on Organ Transplantation, and

Facilitating Exchange of Organs Donated in EU member States (FOEDUS). The country's involvement in these networks helps to ensure that its own practices adhere to the highest transplantation standards. Ukraine engages in international cooperation to reform its existing organ donation system and to help prevent illegal trade (Dziuba, 2022). The country has already signed bilateral agreements and international partnerships with Sweden, Germany, and Latvia. It has also signed 50 international medical partnership agreements with institutions from countries including the United Kingdom, France, Israel, and Lithuania. The cited cases prove that international cooperation helps member states to better protect human rights in the context of organ transplantation.

The recommendations that have been introduced to protect human rights in organ donation are more likely to be successful when utilized with the help of Kurt Lewin's change framework, implying that each transformation starts with unfreezing. The unfreezing phase aims to identify weaknesses and prepare the existing system for further transformation (Lokshin et al., 2025). At this stage, the suggested changes are promoted through a variety of strategies including awareness campaigns, legal review, and stakeholder engagement. In Uzbekistan, Lithuania, and Ukraine, the unfreezing phase takes the form of public consultations and workshops held with an intention to gather community input on perceived risks and ethical concerns in organ transplantation practices. Efforts undertaken at the unfreezing stage aim to convince stakeholders that changes are necessary to enhance protective human rights in the context of organ transplantation.

The change stage involves introducing and institutionalizing new standards and protections to secure human rights in organ donation. This stage implies strengthening legal frameworks, enhancing digital transparency, conducting ethical training, and improving the monitoring and reporting systems. An example of such an action during the change phase is Lithuania's integration into Balttransplant and FOEDUS networks for cross-border organ sharing. Similar actions could be adopted by Uzbekistan and Ukraine, whose oversight systems contain several loopholes and require further improvement.

The aim of the refreezing stage is to ensure that the new practices, such as safeguarding of donors' and recipients' rights, are integrated into societal norms. The refreezing phase involves institutionalizing best practices, continuous education,

providing feedback loops, and building public trust. One example of refreezing action is celebrating European Donation Day in Lithuania to maintain awareness and trust in organ donation systems.

By using Kurt Lewin's framework across the mentioned phases, countries ensure that the transition process is structured and sustainable. This structured approach facilitates stakeholder engagement in securing human rights in the context of organ donation.

#### **4 Discussion**

The main theme of the present study is that efforts to protect human rights in organ donation require further refinement in order to enhance public trust and engagement. The fact that in Ukraine only 20% of respondents express trust in the national organ transplantation system underscores the urgent need to further revise strategies to protect human rights in this field. The study indicates that a fair and transparent organ transplantation system can help to overcome the existing deficit of public confidence. Our analysis of previously conducted research in this field supports the relevance of the proposed recommendations. These findings confirm that effective regulation of organ donation is inseparable from the protection of fundamental human rights, including the rights to dignity, bodily autonomy, and equitable access to healthcare.

For example, the descriptive before-and-after study conducted by d'Aranda et al. (2024) confirmed that applying the amended protocols improved communication between hospital staff and families, which in turn resulted in enhanced organ donation rates: from 323 in 2009-2012 to 485 in 2013-2016. The cited experts attributed the 50% increase to positive changes in the procedures enhancing patients' autonomy. A cross-sectional survey conducted by Naibauer et al. (2025) revealed that respondents' willingness to become organ donors was preconditioned by the amount of provided information. Potential donors wanted to know more not only about the transplantation procedure, but also about the potential recipients. The cited finding is consistent with this study's core premise that enhancing the involved parties' right to autonomous decision-making preconditions their involvement in organ transplantation.

The research further underscored the fact that improving the opt-in system is an effective approach to promoting human rights in the context of organ donation. The comparative analysis of Uzbekistan, Lithuania, and Ukraine revealed major benefits of the opt-in system: the system's transparency, greater public trust, and potential for sustainable development. According to Miglinas et al. (Miglinas et al., 2019), in Lithuania "all data on transplants, donors, and recipients are recorded in the Register of Donors and Recipients of Human Tissues and Organs. Organs are allocated according to a strictly regulated system based on blood group, human leukocyte antigen (HLA) compatibility, waiting time, sensitization and age (for kidneys and pancreas), and disease severity (for heart, lung, and liver)".

Previously published studies, including that of Cotrau et al. (Cotrau et al., 2024), confirmed the validity of arguments supporting the opt-in system. These researchers conducted a retrospective analysis of Romania's transition to the opt-in system, which established a national donor registration system. The researchers concluded that transition to the opt-in system with rigid eligibility standards resulted in a 15.28% increase in the number of registered donors from 2014 to 2023. Cehaja (Cehaja, 2025) comprehensively examined the organ transplantation systems of Iceland, England, Scotland, Canada, and Netherlands and concluded that the opt-out approach does not guarantee higher levels of successful transplantation operations. By surveying a group of 1,397 Saudi Arabia residents, Alobaidi (Alobaidi, 2024) concluded that the opt-in approach was still supported by a greater number of individuals than the opt-out approach. The growing preference for the opt-in approach can be attributed to several factors, including socio-cultural beliefs and values. Potential donors and recipients desire a more autonomous decision-making process regarding organ transplantation; the opt-in system facilitates this desire better than the opt-out system. The cited finding is consistent with the recommendation to better-refine an opt-in approach as a part of the comprehensive reforms to secure human rights in the context of organ transplantation in Uzbekistan, Lithuania, and Ukraine. Despite some differences, the three countries have adopted the opt-in approach to organ transplantation, which facilitates their integration into the European medical network.

This work also emphasized the significance of international cooperation to safeguard human rights in the context of organ donation. The comparative analysis revealed that Lithuania was the most actively engaged in international networks supporting

safe, legal, and ethical organ donation. The country entered the Balttransplant in 1997 and joined additional international alliances since then. Uzbekistan mainly interacts with the WHO to maintain rigid legal and ethical standards in the field of organ transplantation. Ukraine has adopted a mixed approach by entering into cooperation agreements at the state level with some countries and by signing memorandums with individual medical institutions in others.

The recommendation to facilitate international cooperation in organ transplantation is consistent with the findings of previously conducted studies, including that of Wan & Hu (Wan & Hu, 2024). They emphasized the significance of international cooperation in order to establish a complete regulatory framework that might, in particular, lead to a more robust legal guarantee for organ transplant information security. The data collected by the researchers contributed to the current research by providing an in-depth understanding of the strategies to enhance public confidence in organ transplantation institutions in Ukraine and other countries. Symeou et al. (Symeou et al., 2025) argued that international cooperation might help stakeholders comprehend trends, allocation approaches, and cross-cultural differences in organ donation. An awareness of existing differences is crucial to support human rights in the cross-cultural space where socio-cultural beliefs and values might hinder the transplantation process and precondition the emergence of the black market. Insights obtained from the researchers explain why protecting human rights in the context of organ donation remains a daunting task, causing a range of technical, legal, ethical, and other concerns.

In the study of Toews et al. (Toews et al., 2023), those concerns were grouped into five categories, namely: legal definitions of organ donation and legislative scope; consent requirements for donation; allocation of organ and tissues; operation of organ and tissue donation and transplantation system; and travel for transplant and organ trafficking. These researchers also introduced an extended classification system confirming the need for international cooperation as the source of knowledge, expertise, and other tangible and intangible resources needed to promote human rights in organ donation. The introduced research further added to the existing discourse by articulating the ways in which international cooperation might be carried out for specific countries, namely Uzbekistan, Lithuania, and Ukraine.

Therefore, this study has contributed to the existing body of knowledge by providing the comparative analysis of approaches to secure human rights in organ donation for certain eastern and western countries. The study also provided a set of specific recommendations to make organ donation a safe, ethical, and legal procedure, regardless of the political, economic, or socio-cultural context.

## 5 Conclusion

The comparative analysis was carried out between Uzbekistan, Lithuania, and Ukraine, since major political, economic, and socio-cultural differences between these countries preconditioned their varied approaches to protecting human rights in the context of organ donation. Our study revealed that Lithuania has the longest history of legal regulation of organ donation, as its Republic of Lithuania Law No I-1626 “On Donation and Transplantation of Human Tissues, Cells and Organs”<sup>8</sup> was enacted in 1996. In 1997, Lithuania entered Balttransplant, and has joined a number of international organ transplantation networks since then. In 2018, Ukraine enacted the Law of Ukraine No. 2427-VIII “On the Implementation of Transplantation of Human Anatomical Materials”<sup>9</sup>, and in contrast to Lithuania and Uzbekistan, it has opted to expand the concept of objects of transplantation by referring to them as “anatomical materials”. Law of the Republic of Uzbekistan No. ZRU-768 “On Transplantation of Human Organs and Tissues”<sup>10</sup> was adopted in 2022, and the country now actively cooperates with the WHO to enforce rigid legal and ethical standards of transplantation so to avoid the emergence of the black market of organs and human trafficking.

Despite some differences in their legislations, all the countries in the sample have adopted the opt-in approach to organ donation, which means that individuals must explicitly declare their consent to become organ donors. In Lithuania, consent is primarily formalised through written registration, although in certain cases relatives may confirm the donor’s decision in the absence of a registered refusal. All the

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<sup>8</sup> Republic of Lithuania Law No I-1626 “On Donation and Transplantation of Human Tissues, Cells and Organs”. (1996). Retrieved from:

<https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/0c7d80622aca11e58a4198cd62929b7a?jfwid=46jpeqd4v>

<sup>9</sup> Law of Ukraine No. 2427-VIII “On the Implementation of Transplantation of Human Anatomical Materials”. (2018). Retrieved from: <https://zakon.rada.gov.ua/laws/show/en/2427-19?lang=en#Text>

<sup>10</sup> Law of the Republic of Uzbekistan No. ZRU-768 “On Transplantation of Human Organs and Tissues”. (2022). Retrieved from: <https://www.lex.uz/ru/docs/6906782>

countries in the sample strive to improve their consent systems, for example, by implementing blockchain technologies to track organs. The use of AI-based mechanisms helps to secure the human right to equity by ensuring the fair and transparent allocation of scarce resources.

The comparative analysis also detected three broader areas where legislative amendments will ensure that human rights are better protected in the context of international organ donation. We recommend revising the existing consent system so that the parties, including potential donors and recipients, gain access to complete and truthful information about transplantation to facilitate more informed, autonomous decisions. We also suggest introducing changes to improve oversight and transparency in existing mechanisms of organ donation in order to minimize the risk of organ trafficking. The enhanced oversight should occur at both national and cross-national levels through a country's involvement in international medical alliances and networks. Furthermore, we suggest that the countries make continued efforts to facilitate international cooperation to protect human rights in the context of organ donation. Such cooperation helps foster and promote additional sources of expertise, insights, and tools that in turn will lead to developing rigid standards in the organ transplantation domain.

While assessing the findings, it is worth stressing that the research sample was limited to three countries, which makes it impossible to generalize insights to other nations and areas. Further expansion of the research sample would be required to reach unambiguous conclusions regarding broader strategies for safeguarding human rights in the context of international organ donation.

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### **Povzetek v slovenskem jeziku**

Študija preučuje pristope k varovanju človekovih pravic v okviru mednarodne transplantacije organov. Izvedena je bila analiza PESTEL (politični, gospodarski, socialni, tehnološki, okoljski in pravni dejavniki), da bi se identificirale zunanje sile, ki oblikujejo prakse darovanja organov. Primerjalna analiza se osredotoča na zakonodaje Uzbekistana, Litve in Ukrajine ter preučuje ključne vidike, kot so predmeti presaditve, upravičenost darovalcev in pogoji za odvzem organov, soglasje darovalcev in prejemnikov, odgovornost vpletenih strani, starostne omejitve darovalcev, mednarodno sodelovanje, etični standardi in varstvo človekovih pravic, registri darovalcev, mehanizmi spremljanja in posebni zaščitni ukrepi za ranljive skupine. Med analiziranimi državami ima Litva najdaljšo tradicijo zakonodajne ureditve, saj je leta 1996 sprejela Zakon o darovanju in presaditvi človeških tkiv, celic in organov. Uzbekistan je podoben zakon sprejel leta 2022, kar je štiri leta po tem, ko je Ukrajina sprejela svojo zakonodajo, ki je uvedla širši pojem „anatomskega materiala“. Kljub manjšim razlikam vse tri države uporabljajo model soglasja z izrecno privolitvijo oziroma "opt-in" model, ki spodbuja preglednost postopka darovanja organov in podpira enako obravnavanje darovalcev in prejemnikov. Analiza opredeljuje tri ključna področja za izboljšanje: postopki soglasja, mehanizmi nadzora in mednarodno sodelovanje.