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Reconsidering dependence on life-sustaining treatment as a criterion for assisted suicide: the Italian legal unicum in comparative perspective

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The legalization of Medical Assisted Voluntary Death, including assisted suicide is spreading worldwide, alongside the recognition of the centrality of the patient's right to self-determination even in case of therapeutic desistance. In Italy Law-no. 219/2017 has granted patients the option of refusing therapy including life-sustaining treatments even without justification. The present paper offers a critical analysis of the legal-normative aspects and ethical-clinical implications of constraining assisted suicide to dependence on life-sustaining treatments. Reviewing some of the key bioethical-legal pronouncements, we discuss the current Italian system on assisted suicide in which dependence on life-sustaining treatment, even after the recent Constitutional sentences, is still one of the mandatory requirements, despite several critical profiles. Through a literature overview on medical life-sustaining treatments notion, the dependence on them is analyzed and assessed in clinical, bioethical and validity terms as a requirement for access to assisted suicide. From this it appears how dependence on life-sustaining treatment constraint shows overly ambiguous definitional boundaries, with the risk of inhomogeneous interpretations especially in the Italian framework. Interestingly, our comparative analysis reveals that Italy is a global legal unicum among the main international systems regulating Medical Assisted Voluntary Death; which, conversely, tend to target the issue on terminally or irreversibly suffering patients, independently of dependence on life-sustaining treatment.

KEYWORDS

assisted suicide, end-of-life, life-sustaining treatments, health legislation, comparative analysis

Introduction

The global discussion around Medical Assisted Voluntary Death (MAVD), including assisted suicide (AS), is intensifying, with growing calls for legalization driven by the patient's fundamental right to self-determination. The Italian Law No. 219 of 2017 was made to give patients the right to decide for their care, including the interruption of active therapies and life-sustaining treatments (LST)—even planned in advance—in order to be left with only pain

management (up to continuous deep sedation if needed) and progressively lead through the end; and it establishes that such a choice does not conflict with constitutionally protected goods or values (1, 2).

In addition to this, the Constitutional Court's (CC) Order No. 207/2018 and Sentence No. 242/2019 have fundamentally reshaped the conversation around MAVD and AS in Italy. These key pronouncements signal a major shift across legal, bioethical, and clinical domains, pushing for a new approach to the caregiving relationship (3).

However, these jurisprudential remain cautious, considering the persistence of regulatory vacuum in end-life care in Italy (4). On the other hand, they reveal certain critical aspects. A key contentious point is the requirement of dependence on life-sustaining treatment (DLST) for AS access, which is a *unicum* in the World. This condition stands out as the most problematic aspect.

The Assize Court of Massa (judg. 27.7.2020) first challenged this by suggesting a broader interpretation of LST, a sentiment echoed recently by the GIP of Florence (order n.32/2024), who referred the DLST's constitutionality to the CC. The lack of a clear definition for DLST has led to several interpretive challenges regarding constitutional mandates, resulting in differing judicial stances over the years. In its recent Sentence No. 135/2024, the Constitutional Court (CC) rejected the proposal to eliminate the DLST requirement. However, it simultaneously endorsed a broader definition of LST, now including procedures that, regardless of their technical complexity or invasiveness, are deemed vital for a patient's survival, and whose interruption would lead to the patient's death within a short period. This contrasts sharply with the National Bioethics Committee's (CNB) recent opinion advocating for a stricter DLST definition (5).

The underlying reason for the court's judgment is essentially driven by the field of application of L.219/2017 identified by judg. 242/2019, which, '*in the absence of legislative intervention*' (7.1 Considered in law), represents an ineliminable reference in the assessment of legitimacy to the AS. The court also took into account the recent pronouncements on Hungarian case law of the ECHR, which, leaving a wide decision-making autonomy to the member countries, did not neglect the role that legal safeguards (such as the DLST) can play in contrasting risk of abuse (6).

Nevertheless, despite these important declarations, a climate of ambiguity still persists on the subject of the end of life, both at international and national level.

Recently, in this absence of specific national Italian legislation, the Tuscany Region passed a law (Regional Law No. 16 of March 14, 2025) to regulate the organizational procedures for accessing Medical Assisted Suicide (MAS). This law, however, faithfully incorporates the four stringent requirements for MAS access set forth by the Constitutional Court (in Sentences 242/2019 and 135/2024), including the dependence on life-sustaining treatments (7).

It is crucial to stress that the CC has consistently maintained its role is not to usurp the legislature's power in balancing the right to self-determination against the right to life. Instead, it merely sets the minimum constitutionally required guarantee given the current legal landscape, leaving ample room for future legislation to devise solutions offering stronger protections for either right.

The unique italian *vulnus*: comparative literature review

Clinical declinations of life-sustaining treatments

The term LST boasts international use as interventions mostly aim to support major organ functions and prolonging life without reversing underlying medical conditions (8–11): mechanical ventilation, cardiopulmonary resuscitation, vasopressor drugs, dialysis, artificial hydration-nutrition (12–15). Other measures that can be considered LST: antibiotics, hemotransfusions, NPPV, pacemakers (16–18).

The demarcation line between LST and curative-treatments is not always sharp, but mostly it is fairly noticeable. However, definition of LST can be extended to other therapies, which strictly speaking cannot be termed 'vital' as not directly necessary to vital functions but nevertheless essential for survival and enabling a life quality otherwise felt unsustainable: bladder-catheterization, bowel-evacuations, bronchial-aspirations, chemo-radio-therapies; sedation massive analgesia (19–24).

Thus, depending on the individual case's interpretation, it is a constraint capable of greatly limiting the AS casuistry or, conversely, demolishing its boundaries so much that it is almost all-encompassing.

In the Italian system, LSTs are mentioned in the art.1 par.5 Law 219/2017, where rationale is different: even for diseases in the presence of which that type of treatment is (or should be) in place, in patients destined to live, its interruption, abstention or withdrawal, with explicit lethal effects, are permitted. Indeed, to renounce LSTs ex L.219/2017, the severity and irreversibility indicated by the CC are not required since patient's judgment of therapeutic disproportionality is broader and non-questionable.

Law 219/2017 and informed consent

L.219/2017, which regulates informed consent (IC) and advance treatment directives (ATD), represents a milestone in the Italian legal system regarding patient rights. It has introduced a clearer and more articulated regulatory framework than previous legislation, focused on respect for the autonomy and dignity of the patient. A particularly delicate aspect of the law concerns the possibility to interrupt LST in situations of serious and irreversible illness, connected to the patient's ability to make an informed and voluntary decision. In this context, the assessment of psychological requirements is essential to ensure that the consent given is actually valid.

L.219/2017 establishes that any treatment, including refusal of LST, must be preceded by the patient's IC. IC implies that the patient is adequately informed about the characteristics and effects of treatments as well risks, alternatives, and consequences of any refusal.

A fundamental requirement for IC, both in the case of refusal and acceptance of treatments, is the patient's psychic ability to make decisions independently, consciously and voluntarily. In other words, the patient must be able to understand the information provided to him and to evaluate the implications of his choices. Psychic capacity is a broad concept that includes several aspects:

- Understanding: ability to understand informations received about his condition, the treatment options and the consequences

of his choices. This implies an adequate cognitive function to perceive, memorize and reprocess information relating to one's health situation.

- Assessment skills: capability to evaluate the available options in a thoughtful way, understanding the implications of his decisions. For example, when deciding to discontinue LST, the patient must be able to consider alternatives, such as continued treatment and its consequences, and make a choice that reflects his or her values, desires and beliefs.
- Ability to express will: capacity to express decisions freely and not influenced by external factors, pressure or manipulation.

The law does not provide specific criteria for the assessment of psychic capacity, leaving room for interpretation and medico-legal practice. The doctor is responsible for verifying that the patient meets the necessary requirements for an IC. This evaluation includes several phases:

1. Interview, information: the doctor is required to provide the patient with all the necessary information in a clear, understandable and appropriate way to the situation, taking into account any linguistic or cognitive difficulties. In the case of serious illness, such as in situations where a decision is required to stop LST, the doctor will also have to consider the emotional state of the patient, which could affect his or her ability to understand.
2. Mental condition check: If the patient seems unable to understand or evaluate information due to a psychic, cognitive, or emotional disorder (e.g., severe depression, confusion, unconsciousness), the physician should consider the need for psychological or psychiatric support to help him make an informed choice. In some cases, it may be necessary to involve a psychologist or psychiatrist for specialist advice.
3. Autonomy, freedom of choice: patient must be free from external or coercive influences at the time of decision. In some situations, such as in older adults with neurodegenerative diseases or in vulnerable people, it may be necessary to ensure that there are no social pressures. If the decision is suspected to be influenced by external factors, the doctor may decide to have a further psychological evaluation.
4. Possibility of reviewing the decision: The person must have the opportunity to review their decision, especially if the psychological or physical condition changes. If there are doubts about the stability of the decision, it is useful to have a review process that allows you to monitor the evolution of the patient's thinking

In the case of mental incapacity-incapacitation, the role of the family and legal representatives is crucial. L.219/2017 allows patients to designate a trustee to express his wishes in situations where he is no longer able to do so independently. This trustee, freely chosen, must be a trusted person who reflects his values and preferences, and is called upon to respect the patient's decisions, even when these concern LST refusal.

If a person is unable to give IC due to a severe mental-cognitive infirmity (e.g., dementia, vegetative-state), the law provides that the decision must be made by a guardian or trusted person, but always taking into account the patient's previously expressed wishes, where

possible. In the absence of ATD or designated trustee, the doctor is required to consult family and legal representatives, trying to respect the patient's wishes, even in the presence of cognitive limitations.

From a medico-legal perspective, LST interruption is a complex issue that raises several ethical-juridical questions:

1. Relevance of IC: In a medico-legal context, IC represents a fundamental pillar. It is essential that the person has been adequately informed about risks, implications and alternatives.
2. Written documentation and witnesses: Any decision to stop treatment must be properly documented, with all relevant details being collected. This includes recording medical consultations, discussions with family members, and documenting patient consent. In some cases, the presence of witnesses is necessary, as in the case of people unable to express themselves independently.
3. Mental integrity check: In the event of litigation or legal uncertainty, the psychiatric evaluation of the patient becomes crucial. Legal and medical professionals must be able to prove that the person was psychologically fit to make an IC, without any distortion of judgment due altered mental conditions.
4. Physician Responsibilities: Physicians must act in compliance with applicable regulations and ethical guidelines. They must ensure that the interruption of treatments only takes place when all legal and psychological conditions are met, minimizing the risk of legal action for negligence or abuse.

Hence, it is clear from the above that leading subject of L. 219/2017 is care relationship and not MAD, which is only touched on tangentially. In this context, the concept of the DLST underlies the defense of patient-self-determination.

Even in cases where LSTs are (or should be) applied to patients who are expected to live, their discontinuation, non-initiation, or withdrawal, leading to explicit lethal effects, is allowed. Crucially, under Law No. 219 of 2017, the patient's decision to forgo LSTs does not require the severity and irreversibility criteria specified by the Constitutional Court, because the patient's determination of therapeutic disproportionality is final.

In the current Italian framework, however, DLST also represents a prerequisite for a positive request for aid-to-die by one's own hand: now we are on the frontiers of right-to-die, far beyond autonomy in health choices.

The mandatory requirements of DLST and comparative analysis with international systems

The need to maintain DLST requirement, albeit in its extended definition approved by Sentence No.135/2024, seems to remain crucial for CC for protecting vulnerable and fragile situations, which could otherwise be exposed to risks of abuse or direct-indirect persuasive pressures from third parties or social factors. This position is particularly significant when considering the clear difference from other Countries, such as German, Austrian, and Spanish CCs. The Italian CC diverges by arriving at a different evaluative outcome, given the different national context within which the current Italian landscape operates.

Nevertheless, it is unclear how DLST can be a regulatory criterion proportionate to the purpose of protecting frailty (presided by Art.580 Italian Criminal Code). DTSV appears to be completely irrelevant with respect to the coexistence of the other requirements: it does not imply the irreversibility of a disease and related suffering, nor viceversa. At most, it admits the opposite: a patient with a poor prognosis in DLST, but not necessarily determined to die, may be induced to this decision by exogenous influences. It is therefore conceivable to equate patients with all 4 requirements set out by the CC and those—such as terminally ill, neoplastic, neurodegenerative patients—who at a certain point in their medical history do not “benefit” from the LST, often for incidental reasons. The legitimate intention of these patients to die, even if irreversible and forced to endure intolerable suffering, forces them into longer but avoidable periods of agony. This renders the DLST an unsuitable filter in assessing the legitimacy of the AS, completely disproportionate and superfluous to the purpose of protecting the vulnerabilities assigned to it.

These are probably the reasons why DLST is not included globally in any of the many national regulations on AD, such as Netherlands (25–27), Germany (28, 29), Switzerland (30), Belgium (31, 32), Australia (33, 34), USA (35–37), Canada (38, 39), Spain (40, 41), Colombia (42). Conversely, the presence of an incurable and irreversible illness, and unbearable and incurable suffering, represent requirements that, despite some differences, are almost consistently present, both in Italy and in other countries (25, 28, 29, 43–47).

Unlike in Italy, some countries—such as France (48, 49) many US country [Oregon (36), Washington (50), Vermont (51), Montana (52), California (53), Colorado (54), Hawaii (55), Maine and New Jersey (44), Colombia (73), Australia (33, 34), and the recent English Bill (56, 57)]—require the individual to suffer from a terminal illness with a poor and time-limited prognosis. In some cases, this is estimated within a well-defined timeframe, such as at 8 or 6 months, or extended for a longer period in case of neurodegenerative diseases.

In many other countries, such as Belgium (32), the Netherlands (43), and Spain (40), including Italy's current AS system, access to AS is permitted even without a terminal illness. Instead, it requires the suffering to be unbearable and incurable, stemming from a severe and irreversible medical condition for which there is not a precise time-limited prognosis at the time of the request.

In Switzerland, aid-in-dying is even permitted in all cases where there are no selfish reasons. And since access is allowed even for non-residents (as in few other places, like Oregon), unlike most states where access is limited to residents, this has led to the phenomenon of “suicide tourism” (30).

One of the main Italian paradoxes lies precisely in the absurdity that many terminal patients (oncological) are denied the right AS because they are not (yet) kept alive by LST, although in an extreme physical decline that leads to an inevitable prelude to death. All this occurs despite these patients, regardless of the DLST, are the main protected subjects in foreign AS systems (58–64) and the vast majority of applicants (46, 65–69).

irreversibly ill, suffering patients from AS if they are not on LST. This unique DLST requirement paradoxically excludes many terminally ill individuals (e.g., cancer, neurodegenerative patients) who are covered by assisted dying laws elsewhere, regardless of LST.

The definition of LST is inconsistent in literature, and DLST itself appears neither necessary to prevent abuse nor effective in its protective role; instead, it unreasonably stifles valid requests for aid in unbearable situations. The insistence on the DLST appears disproportionate and potentially superfluous in assessing the legitimacy of AS, especially when other stringent criteria (irreversible illness, intolerable suffering, sound mind) are already met.

The realm of AS is based on altruistic-compassionate aims, respecting the wishes and dignity of patients who are in an extreme and irreversibly near-death conditions (28, 46, 70–72). Prolonging the wait for death entails a greater burden of suffering and prejudice to the person's values, linked not only to the illness, but also to the contemplation of the inevitable final decline that their loved ones may witness. Likewise, it is a possibility that a patient who is now devoid of concrete possibilities for improvement will lean toward requesting AS, specifically in cases where the natural course is perceived as too slow. Besides, it is possible that anti-conservative ideas may be encouraged in those who incongruously are not entitled to be helped-in-dying. These extreme complications outline a frankly macabre scenario, especially if it depends on a legal constraint lacking additional elements of protection or greater functionality of the system, requiring patients to cruelly sacrifice pushing themselves beyond their physiological limits.

While safeguarding vulnerable individuals is crucial, the legitimate defense of life should not disproportionately override the right to individual liberty, especially through ambiguous legal constraints. Therefore, it is time for Italy to move beyond current interpretations of DLST. We need new, relevant solutions that address modern circumstances and reconsider whether this additional—and possibly superfluous—legal constraint truly serves its purpose when all other conditions for AS are met.

In conclusion, it is appropriate to respond to the stimuli from recent jurisprudence by urging new solutions that are historically fitting, contemporary, and aligned with emerging modern legal directives. The question then becomes whether it is reasonable to maintain the DLST requirement for accessing AS, even when all other criteria are fully met.

In light of the bioethical-doctrinal considerations and all the critical issues highlighted so far, we believe it is appropriate that Italy align with international standards through a definitive political directive that can finally protect the legitimate right to a dignified death, free from the unreasonable legal quibble of DLST constraint, based instead on the truly essential aspects of such dramatic personal situations (irreversible illness, intolerable suffering, voluntary decision).

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Medico-legal and ethical discussions

Italy's end-of-life framework, marked by fragmented jurisprudence and inadequate national law, unacceptably bars

Ethics statement

Ethical approval was not required for the study involving humans in accordance with the local legislation and institutional requirements. Written informed consent to participate in this study was not required from the participants or the participants' legal guardians/next of kin in accordance with the national legislation and the institutional requirements.

Author contributions

MA: Writing – review & editing, Writing – original draft, Methodology, Conceptualization. LS: Writing – original draft, Writing – review & editing, Investigation. SP: Writing – review & editing, Writing – original draft, Investigation. RR: Writing – review & editing, Validation, Visualization, Data curation. GV: Investigation, Writing – original draft. PF: Supervision, Writing – review & editing, Conceptualization, Validation. GB: Validation, Supervision, Methodology, Writing – review & editing, Conceptualization.

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References

- Di Fazio N, Romano S, Del Fante Z, Santoro P, Fineschi V, Frati P. European countries' different legal orientation about end-of-life issues in patients affected with neurological/psychiatric diseases: does Italian law n. 219/2017 provide adequate options for this fragile category of patients? *Front Psychol.* (2021) 12:675706. doi: 10.3389/fpsy.2021.675706
- Ciliberti R, Gorini I, Gazzaniga V, De Stefano F, Gulino M. The Italian law on informed consent and advance directives: new rules of conduct for the autonomy of doctors and patients in end-of-life care. *J Crit Care.* (2018) 48:178–82. doi: 10.1016/j.jcrc.2018.08.039
- Delbon P, Maghin F, Conti A. Medically assisted suicide in Italy: the recent judgment of the constitutional court. *Clin Ter.* (2021) 172:193–6. doi: 10.7417/CT.2021.2312
- Marrone M, Berardi P, Solarino B, Ferorelli D, Corradi S, Silvestre M, et al. Italian legal euthanasia: unconstitutionality of the referendum and analysis of the "Italian" problem. *Front Sociol.* (2022) 7:898783. doi: 10.3389/fsoc.2022.898783
- National Bioethics Committee (CNB). (2024). Response of 20.6.2024 to the Question of the Territorial Ethics Committee of the Umbria Region of 3.11.2023.
- European Court of Human Rights, First Section. (2024). Case of Dániel Karsai v. Hungary. 32312/23. Judgment 13/06/2024
- Legge regionale n° 16/25, Modalità organizzative per l'attuazione delle sentenze della Corte costituzionale 242/2019 e 135/2024. Regione Toscana. (2025).
- Mehta RS, Anderson WG, Hunt S, Chaitin EK, Arnold RM. Withholding and withdrawing life-sustaining therapies. *Palliative Care.* (2011):300–18. doi: 10.1016/B978-1-4377-1619-1.00022-6
- Mark NM, Rayner SG, Lee NJ, Curtis JR. Global variability in withholding and withdrawal of life-sustaining treatment in the intensive care unit: a systematic review. *Intensive Care Med.* (2015) 41:1572–85. doi: 10.1007/s00134-015-3810-5
- Pasman HRW, Kaspers PJ, Deeg DJH, Onwuteaka-Philipsen BD. Preferences and actual treatment of older adults at the end of life. A mortality follow-back study. *J Am Geriatr Soc.* (2013) 61:1722–9. doi: 10.1111/jgs.12450
- Youn H, Lee SY, Jung HY, Kim SG, Kim SH, Jeong HG. Preferences for life-sustaining treatment in Korean adults: a cross-sectional study. *BMJ Open.* (2021) 11:e039470. doi: 10.1136/bmjopen-2020-039470
- Cohen LM, Germain MJ, Poppel DM. Practical considerations in dialysis withdrawal: "to have that option is a blessing." *JAMA.* (2003) 289:2113–39. doi: 10.1001/jama.289.16.2113

Conflict of interest

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- Shin SJ, Lee JH. Hemodialysis as a life-sustaining treatment at the end of life. *Kidney Res Clin Pract.* (2018) 37:112–8. doi: 10.23876/j.krcp.2018.37.2.112
- Good B, Cavenagh J, Mather M, Ravenscroft P. Medically assisted hydration for palliative care patients. *Cochrane Database Syst Rev.* (2008) 2:CD006273. doi: 10.1002/14651858.CD006273.pub2
- Finucane TE, Christmas C, Travis K. Tube feeding in patients with advance dementia: a review of the evidence. *JAMA.* (1999) 282:1365–70.
- Biola H, Sloane PD, Williams CS, Daaleman TP, Zimmerman S. Preferences versus practice: life-sustaining treatments in last months of life in long-term care. *J Am Med Dir Assoc.* (2010) 11:42–51. doi: 10.1016/j.jamda.2009.07.005
- Curtis JR, Cook DJ, Sinuff T, White DB, Hill N, Keenan SP, et al. Noninvasive positive pressure ventilation in critical and palliative care settings: understanding the goals of therapy. *Crit Care Med.* (2007) 35:932–9. doi: 10.1097/01.CCM.0000256725.73993.74
- Huddle TS, Bailey AF. Pacemaker deactivation: withdrawal of support or active ending of life? *Theor Med Bioeth.* (2012) 33:421–33. doi: 10.1007/s11017-012-9213-5
- Schubart JR, Green MJ, Van Scoy LJ, Lehman E, Farace E, Gusani NJ, et al. Advanced Cancer and end-of-life preferences: curative intent surgery versus noncurative intent treatment. *J Palliat Med.* (2015) 18:1015–8. doi: 10.1089/jpm.2015.0021
- Hillman K, Athari F, Forero R. States worse than death. *Curr Opin Crit Care.* (2018) 24:415–20. doi: 10.1097/MCC.0000000000000529
- González-González AI, Schmucker C, Nothacker J, Nury E, Dinh TS, Brueckle MS, et al. End-of-life care preferences of older patients with multimorbidity: a mixed methods systematic review. *J Clin Med.* (2020) 10:91. doi: 10.3390/jcm10010091
- Plate JDJ, Leenen LPH, Houwert M, Hietbrink F. Utilisation of intermediate care units: a systematic review. *Crit Care Res Pract.* (2017) 2017:1–10. doi: 10.1155/2017/8038460
- Guidet B, Vallet H, Flaatten H, Joynt G, Bagshaw SM, Leaver SK, et al. The trajectory of very old critically ill patients. *Intensive Care Med.* (2024) 50:181–94. doi: 10.1007/s00134-023-07298-z
- Cardona-Morrell M, Kim JCH, Turner RM. Nonbeneficial treatments at the end of life: a systematic review on extent of the problem. *Int J Qual Healthcare.* (2016) 28:456–69. doi: 10.1093/intqhc/mzw060
- Lewis P, Black I. Adherence to the request criterion in jurisdictions where assisted dying is lawful? A review of the criteria and evidence in the Netherlands, Belgium, Oregon, and Switzerland. *J Law Med Ethics.* (2013) 41:885–98. doi: 10.1111/jlme.12098

26. Sibbald B. MAiD in the Netherlands led by physicians. *CMAJ*. (2016) 188:1214–5. doi: 10.1503/cmaj.109-5342
27. Nys H. Euthanasia in the low countries: a comparative analysis of the law regarding euthanasia in Belgium and the Netherlands. *Ethical Perspect.* (2002) 9:73–85. doi: 10.2143/ep.9.2.503847
28. Möller H-J. The ongoing discussion on termination of life on request. a review from a German/European perspective. *Int J Psychiatry Clin Pract.* (2020) 25:2–18. doi: 10.1080/13651501.2020.1797097
29. Hyde R. Germany overturns ban on assisted suicide. *Lancet.* (2020) 395:774. doi: 10.1016/S0140-6736(20)30533-X
30. Bartsch C, Landolt K, Ristic A, Reisch T, Ajdacic-Gross V. Assisted suicide in Switzerland: an analysis of death records from Swiss Institutes of Forensic Medicine. *Dtsch Arztebl Int.* (2019) 116:545–52. doi: 10.3238/arztebl.2019.0545
31. Chambaere K, Vander Stichele R, Mortier F, Cohen J, Deliens L. Recent trends in euthanasia and other end-of-life practices in Belgium. *N Engl J Med.* (2015) 372:1179–81. doi: 10.1056/NEJMc1414527
32. The Belgian act on euthanasia of may, 28th 2002. *Ethical Perspect.* (2002) 9:182–8. doi: 10.2143/ep.9.2.503856
33. Onwuteaka-Philipsen B, Willmott L, White BP. Regulating voluntary assisted dying in Australia: some insights from the Netherlands. *Med J Aust.* (2019) 211:438–439.e1. doi: 10.5694/mja2.50310
34. Brennan F. The Victorian voluntary assisted dying act comes into operation. *Intern Med J.* (2019) 49:689–93. doi: 10.1111/imj.14314
35. Pullman D. Slowing the slide down the slippery slope of medical assistance in dying: mutual learnings for Canada and the US. *Am J Bioeth.* (2023) 23:64–72. doi: 10.1080/15265161.2023.2201190
36. Oregon Health Authority Oregon's Death with Dignity Act State of Oregon. (1997). Available online at: <https://www.oregon.gov/oha/PH/ProviderPartnerResources/Evaluationresearch/deathwithdignityact/Pages/index.aspx> (Accessed October 27, 1997).
37. Chapter 70.245 RCW: The Washington Death With Dignity Act. Available online at: <https://app.leg.wa.gov/rcw/default.aspx?cite=70.245> (Accessed July 23, 2023).
38. Robinson G. Assisted dying in Canada. *CMAJ.* (2013) 185:418.1–418.41418. doi: 10.1503/cmaj.113-2107
39. Canada, Health Canada. (2018). Third interim report on medical assistance in dying in Canada. Available online at: <https://www.deslibris.ca/ID/10097256> (Accessed June 06, 2018).
40. Velasco Bernal C, Trejo-Gabriel-Galan JM. Leyes de eutanasia en España y en el mundo: aspectos médicos [euthanasia laws in Spain and in the world: medical aspects]. *Aten Primaria.* (2022) 54:102170. Spanish. doi: 10.1016/j.aprim.2021.102170
41. Ley Orgánica 3/2021 de 24 de marzo, de regulación de la eutanasia, «BOE» núm. 72, pp: 34037 a 34049 (25 de marzo de 2021). Available online at: <https://www.boe.es/eli/es/lo/2021/03/24/3> (Accessed March 25, 2021).
42. Ministerio de Salud y Protección Social [Ministry of Health and Social Protection]. Resolución número 1216 de 2015 (en relación con las directrices para la organización y funcionamiento de los Comités para hacer efectivo el derecho a morir con dignidad). [Resolution no 1216 of 2015 (in relation to the guidelines for the organization and functioning of the Committees to implement the right to die with dignity).] (2015). Available online at: www.minsalud.gov.co/Normatividad_Nuevo/Resoluci%C3%B3n%201216%20de%202015.pdf. (In Spanish.)
43. Dyer O, White C, García Rada A. Assisted dying: law and practice around the world. *BMJ.* (2015) 351:h4481. doi: 10.1136/bmj.h4481
44. Mroz S, Dierickx S, Deliens L, Cohen J, Chambaere K. Assisted dying around the world: a status quaestionis. *Ann Palliat Med.* (2021) 10:3540–53. doi: 10.21037/apm-20-637
45. Jox RJ. Of slopes and ropes: learning from the diversity of European regulations of assisted dying. *Am J Bioeth.* (2023) 23:84–7. doi: 10.1080/15265161.2023.2256281
46. Emanuel EJ, Onwuteaka-Philipsen BD, Urwin JW, Cohen J. Attitudes and practices of euthanasia and physician-assisted suicide in the United States, Canada, and Europe. *JAMA.* (2016) 316:79–90. doi: 10.1001/jama.2016.8499
47. Death with Dignity. (2024). Death Dign. Available online at: <https://deathwithdignity.org/resources/state-statute-navigator>
48. Journal officiel de la République française. 23 rd April. Paris; (2005). Loi n° 2005–370 du 22 avril 2005 relative aux droits des malades et à la fin de vie; p. 7089. Available online at: <https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000000446240/>
49. Baumann A, Audibert G, Claudot F, Puybasset L. Ethics review: end of life legislation--the French model. *Crit Care.* (2009) 13:204. doi: 10.1186/cc7148
50. Washington State Legislature. The Washington Death with Dignity Act, Chapter 70.245RCW. Available online at: <http://apps.leg.wa.gov/rcw/default.aspx?cite=70.245.2009>.
51. Vermont State Legislature No. 39: An Act Relating to Patient Choice and Control at the End of Life, (Bill S.77) Available online at: <http://www.leg.state.vt.us/docs/2014/bills/intro/S-077.pdf> (2013) (Accessed May 20, 2013).
52. Breitbart W. Physician-assisted suicide ruling in Montana: struggling with care of the dying, responsibility, and freedom in big sky country. *Palliat Support Care.* (2010) 8:1–6. doi: 10.1017/S1478951509990642
53. California State Legislature. End of Life Option Act, SB-128. Available online at: https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=20150160SB128. (2015).
54. Colorado Revised Statutes. Colorado End-of-life Options Act. 25–48-103. Available online at: <https://leg.colorado.gov/sites/default/files/initiatives/2015-2016%2520%2523124.pdf>. (2016).
55. State of Hawaii, Department of Health Our Care, Our Choice Act (2019) Available online at: <https://health.hawaii.gov/opppd/ococ/> (Accessed January 01, 2019).
56. House of Lords (2016) Assisted Dying Bill (HL Bill 42; 56/2) 2016–17.
57. Mullock A. The assisted dying bill and the role of the physician. *J Med Ethics.* (2015) 41:621–4. doi: 10.1136/medethics-2014-102418
58. Oregon Health Authority, Public Health Division, Center for Health Statistics. Oregon Death with Dignity Act Annual Reports. 1998–2023. Available online at: <https://www.oregon.gov/oha/PH/ProviderPartnerResources/Evaluationresearch/Deathwithdignityact/Pages/ar-index.aspx> (Accessed March 20, 2024).
59. Washington State Department of Health. Death With Dignity Data. Annual Reports. 2010–2022. Available online at: <https://doh.wa.gov/data-and-statistical-reports/health-statistics/death-dignity-act/death-dignity-data>.
60. Health Canada. Fourth annual report on Medical Assistance in Dying in Canada 2022. Date published: October 2023, Ottawa. Cat.: H22-1/6E-PDF. ISBN: 2563–3643. Pub.: 230212.
61. Smets T, Bilsen J, Cohen J, Rurup ML, Deliens L. Legal euthanasia in Belgium: characteristics of all reported euthanasia cases. *Med Care.* (2010) 48:187–92. doi: 10.1097/MLR.0b013e3181bd4dde
62. Onwuteaka-Philipsen BD, Brinkman-Stoppelenburg A, Penning C. Trends in end-of-life practices before and after the enactment of the euthanasia law in the Netherlands from 1990 to 2010: a repeated cross-sectional survey. *Lancet.* (2012) 380:908–15. doi: 10.1016/S0140-6736(12)61034-4
63. Regional Euthanasia Review Committees. (2022). Annual Report 2022. Available online at: https://english.euthanasiecommissie.nl/binaries/euthanasiecommissieen/documenten/publications/annual-reports/2002/annual-reports/annualreports/RTE_JV2022_ENGELS.pdf
64. Federal Statistical Office. Cause of Death Statistics 2014. Assisted Suicide and Suicide in Switzerland. Published on 11.10.2016. 1260–1400. Available online at: <https://www.bfs.admin.ch/bfs/en/home/statistics/catalogues-databases/publications.assetdetail.3902308.html>
65. Rahimian Z, Rahimian L, Lopez-Castroman J, Ostovarfar J, Fallahi MJ, Nayeri MA, et al. What medical conditions lead to a request for euthanasia? A rapid scoping review. *Health Sci Rep.* (2024) 7:e1978. doi: 10.1002/hsr2.1978
66. Wu JSY, Pinilla J, Watson M, Verma S, Olivotto IA. Medical assistance in dying for cancer patients one year after legalization: a collaborative approach at a comprehensive cancer Centre. *Curr Oncol.* (2018) 25:e486–9. doi: 10.3747/co.25.4118
67. Downar J, MacDonald S, Buchman S. What drives requests for MAiD? *CMAJ.* (2023) 195:E1385–7. doi: 10.1503/cmaj.230259
68. Loggers ET, Starks H, Shannon-Dudley M, Back AL, Appelbaum FR, Stewart FM. Implementing a death with dignity program at a comprehensive cancer center. *N Engl J Med.* (2013) 368:1417–24. doi: 10.1056/NEJMsa1213398
69. Steck N, Egger M, Maessen M, Reisch T, Zwahlen M. Euthanasia and assisted suicide in selected European countries and US states: systematic literature review. *Med Care.* (2013) 51:938–44. doi: 10.1097/MLR.0b013e3182a0f427
70. Campbell CS. Mortal responsibilities: bioethics and medical-assisted dying. *Yale J Biol Med.* (2019) 92:733–9.
71. Picón-Jaimes YA, Lozada-Martínez ID, Orozco-Chinome JE, Montaña-Gómez LM, Bolaño-Romero MP, Moscote-Salazar LR, et al. Euthanasia and assisted suicide: an in-depth review of relevant historical aspects. *Ann Med Surg (Lond).* (2022) 75:103380. doi: 10.1016/j.amsu.2022.103380
72. Emanuel EJ, Fairclough DL, Emanuel LL. Attitudes and desires related to euthanasia and physician-assisted suicide among terminally ill patients and their caregivers. *JAMA.* (2000) 284:2460–8. doi: 10.1001/jama.284.19.2460
73. Gaviria Uribe A., Ruiz Gómez F., Dávila Guerrero C.E., Burgos Berna G., Escobar Morales G.O.S.E. (2015) Protocolo para la aplicación del procedimiento de eutanasia en Colombia Available online at: <https://www.minsalud.gov.co/sites/rid/Lists/BibliotecaDigital/RIDE/DE/CA/Protocolo-aplicacion-procedimiento-eutanasia-colombia.pdf>