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Practicing equitable principles in cancer clinical research: Has the EU got it right?

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ABSTRACT

Clinical trials are a fundamental part of cancer research as they establish the efficacy and safety of new cancer treatments for everyone. The lack of sociodemographic diversity among cancer clinical trial participants leaves a vacuum in scientific knowledge, which can distort credible evidence from being accessible and represents a major barrier to advancing cancer care for the entire patient population. It can also cause avoidable harm to the public, undermine patients trust and result in wasteful allocation of healthcare resources. It is therefore imperative that there is representation of all population groups who may use these new cancer treatments in clinical trial settings. Europeans are disproportionately affected by cancer with cancer mortality rates being substantially affected by inequities in socioeconomic education status. General and political recognition of cancer injustices in the EU have further increased given the contemptuously unequal impacts of the legal and policy responses to it. While innovative advances in cancer research have bridged much of these critical gaps particularly in the last few decades more work needs to be done to circumvent implications of cancer health disparities. To reduce cancer health disparities, systemic and individual-level barriers to cancer clinical trial participation must be addressed through effective and ethically rigorous EU health laws and policies.

1. Introduction

Cancer clinical trials have contributed a major role in improving patient cancer care and outcomes without which remarkable advances against cancers would not have been realized. In recent years, it has undoubtedly mounted unprecedented progress through transformative research and technological innovation thus allowing more people than ever witnessed before to achieve longer and fuller lives following a cancer diagnosis. Novel treatment approaches of cancers including adopting the concept of precision medicine have redefined standards of cancer care following the impressive successes in improving disease outcomes and patient survival. Randomized controlled trials (RCTs) are widely regarded by the medical community and alike as the epitome of evidence-based medicine when determining safety and efficacy of investigational therapies. They are integral for high-quality cancer care. Historically, results generated from RCTs were largely deemed generalizable. However, long-standing structural and geographical inequalities in the European Union (EU), despite progress in civil rights and reductions in poverty, prohibited the benefits of such advances to everyone equally [1]. They remain a major public health challenge across the EU. Fair and equitable access to cancer treatment in clinical research is imperative as lack thereof referred to as cancer injustice potentially risks scientific certainty, transparency, and availability. In fact, progress in cancer therapy cannot be fully realized unless innovations are accessible to all patients. Disparities in accessing the benefits of progress from cancer research have been increasingly recognized and are far from disappearing, such inequities have persisted over time, albeit changing in nature and extent [2]. Understanding cancer injustice is paramount in informing high-quality evidence required to find effective solutions to prevailing inequities. As Polite et al. succinctly articulated, cancer injustice is a policy problem and not a scientific or technological one [3]. But despite regulatory directives and public expectations, there remains profound under-representation/arbitrary unjustified exclusion across a myriad of populations in cancer clinical trials, such as women, diverse ethnic and racial groups, people living with disabilities, children, the elderly, person who identify as Lesbian, Gay, Bisexual, Transgender, Queer or Questioning, Intersex, and Asexual (LGBTQIA+) [4] and those with HIV and chronic viral infections [5] with each presenting with their unique challenges in equity. Such failure to achieve meaningful and appropriate representation limits both generalizable and sub-group specific information about drug response and measures of safety and efficacy.

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In this paper and given the recent expansive developments in cancer research I have attempted to conduct a narrative scoping review of legal and ethical provisions of cancer clinical research conduct in the EU aimed to identify germane literature, describe initiatives EU state members thus far delved into to tackle equitable and fair research studies, critically analyse the legal and ethical challenges, summarize available data and expert opinions.

2. Scope of the cancer injustice problem

Understanding the scope of cancer injustice requires an in-depth knowledge of the burden of cancer and cancer drug development. Cancer is a major public health concern in the continent for a number of reasons. In the EU member states alone, cancer is one of the major causes of deaths amongst individuals aged under 65 years [6]. Almost 25% of all cancers globally are recorded in Europe, even though Europeans account for only 5.7% of the world's population; only third to India and China [7]. This perhaps owes itself to several EU-related factors including and not limited to Europeans living longer [8], healthier lives with significant advances in medical treatments and social conditions [9] and not just better health data recording. From an economic perspective, cancer cost the EU almost €199 billion in 2018 [10]. The impact this will have will not only be on the patient and their families and friends but will also pose a significant problem to healthcare systems and the economic status of the EU. European member states witness disparities in cancer survivals regardless of tumour types. This was found to be primarily driven by levels and trends of cancer mortality rates in lower-education groups for nearly all cancer types [11] thus highlighting inequities in socioeconomic education status as a key factor in driving such disparity with unequal distribution across the EU. A study by Bertuccio et al. noted a 2–3 fold higher age-adjusted mortality rates in Eastern European countries from breast, cervical and colorectal cancer than in Western European countries owing to differences in diagnostic and treatment modalities but also robustness of screening programmes [12]. This was further substantiated by a cross-sectional study by the investigators of the EU-TOPIA consortium [13]. These differences in cancer mortality rates are caused by differences in treatment and in the effectiveness of screening programmes. These disparities across the cancer care continuum in the EU have led to adverse differences in outcome determinants of health for the under-represented minorities and other medically underserved populations with a resultant disproportionate burden of cancer and highlight the challenges to the delivery of effective cancer healthcare in Europe.

Cancer researchers are constantly engineering translation of new scientific discoveries into advances in technologies and cancer treatments that consequently improve survival and quality of life. Clinical trial settings for such work play a vital role in determining whether a new technology or treatment is safe and effective for patients. Considering the significant advances in drug development in the cancer field, only some have effectively changed the survival outcomes and treatment paradigms. For instance, the chimeric antigen receptor T-cell therapy has revolutionized the treatment of several refractory/ relapsed lymphomas, leukaemia and myeloma such that patients can now achieve longer-term survival and potentially even cure [14]. But these treatment options come with costs beyond monetary ones. The average clinical development time for innovative agents is 10 years [15]. This follows with several pivotal trials, mandatory regulatory approval by the European Medicines Agency (EMA), health technology assessments and pricing negotiations before marketing authorization and then reimbursement. The latter varies across the EU with average time it takes for reimbursement post-EMA market authorization is 289 days [16]. During this protracted process, potentially effective and even transformative therapies will only be available to patients where clinical trial access to the drug is present or compassionate use programs are open [17]. Inequitable access to cancer clinical trial therapies poses a major hurdle to patients' access to potentially life changing treatment opportunities and further accentuates disparities in cancer-related mortalities [18]. Therefore, it is imperative that trials investigating new cancer treatment include representation from all population groups in their participant cohort to permit wider patient access and allow more equal opportunities. However, the grim reality is that there is a significant lack of sociodemographic diversity amongst trial participants. This stems from severe and multilevel barriers including and not limited to delays in and/or lack of access to clinical trials, overt unjustified discrimination and/or implicit bias during care in disadvantaged populations in addition to financial costs from treatment-related toxicities [19,20].

The rapid scientific and technological advances in cancer research coupled with the recent COVID-19 pandemic and political turmoil in the EU region in recent years have raised new research ethics concerns, requiring careful considerations to identify ethically problematic areas in cancer clinical research. Residential segregation, lack of opportunity for prosperity, inequitable educational opportunities, and a contrasting criminal justice system overall lead to multiple and compacting negative social well-being [21]. Conflicts outside the EU, coupled with migration, have led to new, socially significant issues, requiring the involvement of potentially vulnerable groups of people in research, but also calling for research in crisis areas [22]. These factor into elements that broach ethics dimensions to guarantee safe conditions for research participants who risk their own well-being for society's greater good and for people who may benefit from research irrespective of their backgrounds, but also for researchers themselves.

2.1. *What is equitable cancer clinical research and why does it matter?*

Health equity is achieved when "everyone has a fair and just opportunity to be healthy" and "everyone can attain their full potential for health and well-being." [23] In cancer care, equity is when every individual is afforded an equal opportunity to prevent cancer, early detection and receive proper treatment and follow up on completing treatment. Therefore, health justice seeks to identify and eliminate health disparities and deliver fair treatment for those who have been historically or currently under-represented. In law, the word *justice* is defined as "the ethical, philosophical idea that people are to be treated impartially, fairly, properly, and reasonably by the law and by arbiters of the law, that laws are to ensure that no harm befalls another, and that, where harm is alleged, a remedial action is taken - both the accuser and the accused receive a morally right consequence merited by their actions" [24]. This highlights the role of law and policy in driving health disparities but also creates the potential for promoting equity. In fact, 80–90% of our health is contingent on geographic, environmental, socioeconomic, and political determinants with medical care only contributing to 10–20% [25,26]. Health justice initiatives can leverage law and policy reforms to eradicate structural racism and other barriers that impact under-represented groups and advance health equity [27]. Therefore, it is imperative that concerted collaborative efforts from scholars, researchers, stakeholders, and policymakers in the field of cancer are implemented to explore how and why research drives pervasive health disparities and deliver actionable reforms that equalize access to and utilization of high-quality cancer care.

Equity in cancer clinical research lies at the centre of the cancer health ecosystem. Cancer clinical trials ideally should include diverse participants that reflect the individuals who are most likely affected by a cancer type and need the investigational treatment that the trial is testing. They should also match the demographics of the disease burden under study. This is principally to ensure a meaningful and appropriate representation of study participants. It needs to encompass general applicability of clinical research findings as each population group can have distinct disease characteristics and/or health circumstances and nuances [28]. This may impact how each will respond to an investigational drug or treatment and misconstrue safety and efficacy data [20]. In essence, it needs to include participants that will be affected by the application of the knowledge gained. Lack thereof may make it

challenging to understand how study findings translate into real-world application, compromise the delivery of cancer care that is not always evidence-based and consequently limit validity of clinical trial findings out with its participant cohort demographics and result in varied therapeutic response [20].

Financial toxicities are one of the most crucial factors that negatively impact cancer treatment costs and that can ultimately lead to worse outcomes [29]. This does not just impact the underrepresented patient groups but the population at large. For instance, an economic analysis from the US using the economic model developed by USC Schaeffer Center found that mitigating just 1% of health disparities through improving clinical trial participant diversity, an estimated gain exceeding $40 billion for diabetes and $60 billion for heart disease is achieved [20]. Their finding highlights how by simply improving diversity of the clinical trial participants, billions of dollars can be saved. This underscores the importance of making an economic case for investment in equity and diversification of cancer research participants.

Ensuring diversity in cancer clinical trial participants is also critical in harnessing innovation and novel discoveries. Broadening cancer study participation allows for in-depth study of variation in the overall understanding of intrinsic and extrinsic factors that may affect patient response to a particular cancer treatment intervention during the evaluation of cutting-edge precision medicine [30]. It is critical for a better understanding of potential differences in efficacy and safety across diverse populations, particularly in the underrepresented and excluded populations and for whom the risk–benefit profile may differ. Not only can it also potentially allow the discovery of a new biological processes that may, in turn, be tangible for all populations but also improve cancer clinical trial accrual. One of the leading causes of cancer clinical trial failure is poor accrual. A recent analysis GlobalData Healthcare noted that 55% of all terminated trials within the Clinical Trials Database during 2008–2017 were due to low accrual [31]. Therefore, improving enrolment of diverse populations with particular attention to the underserved groups would help address this. Supporting this, a recent scoping review addressing Black (one of the most under-represented minority groups) enrolment in cancer clinical trials identified that one of the key factors in successful enrolment was addressing the cultural and linguistic diversities across Black communities thus emphasizing the role of representation in cancer trials [32].

The lack of inclusion of under-represented populations in cancer clinical trials has additional insidious consequences. It may erode public trust in science, cancer research enterprise and the medical establishment for those wherein clinical trials are sometimes the only treatment option [33]. For instance, trials that assessed devices like the Breast Cancer Risk Assessment Tool were validated only in white women and lacked inclusion of black women which consequently significantly underestimated the risk of breast cancer in black women, who have higher rates of breast cancer at younger ages [34]. By extension and by applying data from primarily white participants, researchers inadvertently ignore the impact of cancer drug efficacy on the other 3 major race groups, which may prove detrimental to survival rates. It took 25 years before this was addressed. Lack of diversity also perpetuates health disparities in the under-represented and those excluded in clinical trials, as failure to achieve equity leaves health disparities unidentified and unaddressed and exacerbates inequities.

So in order to realize health justice, structural and social determinants of cancer health, such as the socio-economic policies that create unequal conditions in health care, employment, housing, and education and which are the root cause of health inequities need to be addressed [35]. This further underscores the imperative relationship between healthcare and public health laws. Reformers must “address the role of health care laws and policies in reinforcing — or, alternatively, dismantling — racism, economic injustice, and other forms of social subordination.” [36] To achieve this, policymakers must prioritize efforts aimed at ensuring equitable distribution of resources and legal protections of health outcomes and wellbeing where it is needed over interventions aimed at inducing or mandating individual behaviour change. For this, it would require a multi-level concerted action through collaboration of several stakeholders in the field. It also seeks the engagement and empowerment of communities that have been systematically excluded from research participation by racism, poverty, disability and other forms of subordination to reflect diversity, eliminate health inequities and realize health justice. This means that policymakers must adopt procedures created to develop, evaluate, reform and operationalize laws and policies that shape cancer health and incorporate mechanisms for mitigating existing structural biases by cantering community decision-making and control in addressing health inequalities.

2.2. Equity in cancer clinical research and the matter of distributive justice

The relevance of equity and diversity in clinical research extends beyond the simple matter of doing the right thing as, in reality, it is not possible to allocate resources purely according to clinical needs due to the significant constraints on health resources and the benefits of new interventions may be, at least initially, uncertain. Distributive justice is a phrase coined for one of the key ethical principles that concern the fair and equitable distribution of the burdens and benefits throughout society [37]. In cancer research, the burdens include the socioeconomic burdens of participation at an individual and societal level and the risks of harm from participation in research. The benefits of research are defined in broader terms by their scalable generalized applicability of the knowledge gained from research including safety and efficacy of the intervention under study and, at a more individual level, the direct benefits of such investigational intervention to the research participant. Although the broader primary benefits of research are what differentiates it from medical care, which are the intended benefits of research at an individual level, in real-life these are interchangeable. Where therapeutic and/or better access to care benefits is not feasible, then justice suggests that research should include individuals that have the condition that is being studied to at least benefit from the knowledge gained if they were to be exposed to the burdens of research. This would validate the scientific generalizability of research by ensuring no inappropriate exclusions to further knowledge of results.

But in the era where cancer clinical trials are geared around precision medicine, the concept of distributive justice becomes challenging as highlighted by Nardini [38]. This is compounded by the absence of political governance infrastructures that oversee health-related decision-making. A good example comes from targeted compounds which have become the mainstream option across several haemato-oncologic disorders and have gained ground-breaking improvements in patient outcomes [39]. The ethical dilemma however, here is centred on the allocation of resources and who determines the former. Against that background, equity and distributive justice would pose the moral question of deciding whether or not they are prioritized over saving lives. Where conflicts in the allocation of scarce resources are noted, then policies should be adapted to tackle resultant disparities and further the ethical principle of fairness through the provision of salient clinical trials. An adaptation to consider is policies that are guided by research into health equity, social determinants of health, and the effects of social and structural injustice that would inform the nuanced matter of equity for access to scarce resources.

2.3. The legal and ethical imperatives of equity in cancer research

All facets of cancer healthcare, including curbing inequalities, are human rights matters. The latter is enshrined in several international agreements, including article 25 of the 1948 Universal Declaration of Human Rights, article 12 of the 1966 International Covenant on Economic, Social and Cultural Rights and more recently the Special Rapporteur on the Right to Health created by the Human Rights Council

in 2002. The World Health Organization (WHO) "recognizes that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being" as articulated in the 1946 Constitution of the WHO International Health Conference. In the EU, this is articulated in Article 35 of the EU Charter of Fundamental Rights [40] and Articles 11 and 13 of the European Social Charter [41]. Indeed, the right to health, irrespective of being indoctrinated by international treaties or laws, is contingent on enabling such right. Law is central in addressing societal inequities, given its inherent ability to regulate and establish standards and procedures for how things should be done. It can modify the structural determinants of social inequities, but with a double-edged sword effect because of its potential to both improve and worsen overall cancer outcomes and reduce or perpetuate inequities. For instance, under intellectual property laws, data exclusivity which runs parallel to patent protection terms is designed to protect clinical trial data for a given period of time to bolster and recompense innovation. This may, in practice, be of disservice to many patients, particularly the less advantaged groups as it effectively makes cancer treatment unaffordable [42]. Further discussions on this are beyond the scope of this paper but highlight how laws can be detrimental to achieving cancer health equity but also how non-healthcare related legal and governance frameworks impact cancer research and practice.

In clinical research, fundamental ethical principles, including respect for autonomy, beneficence, non-maleficence, and justice, establish the ethical imperative for cancer researchers to work to overcome inequities in cancer care, cancer research, and the cancer workforce. Historically, these are enshrined in three ethical codes developed to protect clinical trial participants. These are the Nuremberg Code [43], the Declaration of Helsinki [44], and the Belmont Report [45]. Consequently, cancer research inequity is unethical and can distort scientific findings that are then manipulated to give a desirable outcome rather than a valid and reproducible result. Diversity and inclusivity of cancer trial participants to enhance clinical trial validity and generalizability is consequently an ethical imperative. The ethical dilemma posed by distributive justice has already been discussed.

Dubbed as 'a catalyst for change to provide every European citizen with the right to the optimum standard of care,' the European Cancer Patient's Bill of Rights challenged the systemic disparities [46]. This is through setting recommendations aimed at achieving a "70% long-term survival for patients with cancer in 2035, promoting cancer prevention and cancer control and the associated progress in ensuring good patient experience and quality of life" [46]. Its principles were transposed to the European Code of Cancer Practice [47] which incorporates 10 key overarching rights that a cancer patient should expect from healthcare institutions and is aimed at bridging the gap between professionals in the field of cancer and healthcare policymakers. The right to access clinical trials is comprehensively embedded in the Code. Complementing the European Code of Cancer Practice Europe's Beating Cancer Plan, which was set up in 2021 with the purpose of identifying trends, comparing and prioritizing action on cancer inequalities across the EU through an integrated, collaborative, health-in-all-policies, and multi-stakeholder approach. Through its flagship initiatives and qualitative assessments, it will aid Member States to address inequalities in cancer care by depicting particular areas where the strengths and weaknesses of their current care systems lie thereby guiding the appropriateness of investment and intervention at an EU national or regional level. In February 2023, it released the first country cancer profiles which serve as a tool to compare achievements, challenges and disparities for individual countries and provide insights into the causes of cancer prevention and care inequalities [48]. One of its key findings is the large societal inter-Member State and gender disparities in cancer mortalities which were driven by socio-economic inequalities. Tackling the latter, members of the European Cancer Organisation establishing a Focused Topic Network – the Inequalities Network – dedicated towards elevating these inequalities onto the EU cancer agenda through promoting the Europe's Beating Cancer Plan and the new Cancer Inequalities Register [49]. Its prime focus is to address key inequalities and provide viable solutions in the EU region related to socio-economic determinants such as age, sexual orientation/gender identity, race and ethnicity, health literacy and EU east-west divide [49]. Whilst such Network, the Code and Action Plan are endorsed by experts in the field of cancer and recognized by the European Commission (EC) as its political commitment towards addressing cancer needs, its current provisions carry minimal legal weight as it is regarded as an ethical code rather than a legislative requirement. Besides, there are no guarantees for its effective implementation despite the early positive outputs. Furthermore, the capacity to conduct research varies across the EU countries despite the ongoing harmonization of laws and adoption of common policies across a number of socioeconomic and political issues [50].

Legislation-wise, the European Union Clinical Trial Regulation 536/2014 (EU-CTR), which superseded European Union Clinical Trial Directive 2001/20/EC (EU-CTD) [51] and became effective of January 2022, aims to overcome the shortcomings of its former version through standardization and harmonization of the conduct and management of interventional clinical trials across the EU member states. Unlike the Directive, EU-CTR is legally binding in its entirety. Therefore non-compliance with the legal provisions could result in financial penalties. It places particular emphasis on inclusivity and diversity of clinical trial participants through impartial representation of sexes and age groups, as depicted; "Unless otherwise justified in the protocol, the subjects participating in a clinical trial should represent the population groups, for example gender and age groups, that are likely to use the medicinal product investigated in the clinical trial" [51]. This deliberate inclusion aimed to provide added protection for the under-represented patient groups and underscores the importance of their low enrolment in clinical trials. As part of the CTR initiation, the Clinical Trial Information System (CTIS) launched by the EMA will act as a 'one-stop shop' for Clinical Trial applications (CTA) in the EU from a regulatory and legal standpoint. The Regulation also stipulates transparency requirements in clinical trials, namely that all trials are required to be registered on an EU clinical trials register, that results must be published within one year of completion of the trial and that a lay summary for the public should accompany this. Increasing transparency in clinical trial setting helps better scientific understanding, enables the scientific community to learn from the research, avoids unnecessary and duplicative research and furthers public trust in the clinical trial and medical establishments [52]. As of 31 January 2024, all existing clinical trials need to be present in CTIS through a phased process. Building on the CTIS, the EC, EMA and the Heads of Medicines Agencies have launched an initiative called Accelerating Clinical Trials in the EU [53]. Through its 10 priorities, it seeks to improve and transform innovation in clinical trials, robust methodologies, and collaboration across stakeholders in the EU with the aim to address patients' needs whilst maintaining high-quality protection of data integrity, high standards of public transparency and safety for clinical trial participants. Specifically (and tautologically), one of its priorities for 2022/2023 includes "analyzing clinical trial data leveraging academic, non-profit, European and international initiatives, improving the impact of policymaking and funding on research outputs to support evidence-based decision making" [51]. Additionally, a key performance indicator will be established to monitor performance and measure the engagement of research centres' metrics in the EU with the aim of increasing diversity across clinical research and bolstering the European Research Network. It remains to be seen whether this will act as a deterrent for poor research practice as the new clinical trial regulations are implemented.

But more importantly, the EU-CTR has drawn a number of scientific criticisms within some of its provisions. One such criticism concerns the requirement of a single approach for the application of a clinical trial authorization which applies to either single or multiple member state trials. Although this allows promptness in decision-making that would in turn comply with the Regulation's timelines, Tusino and Furfaro argue

that as EU-CTR will allow sponsors to submit only one combined clinical trial application to the Research Ethics Committees (RECs) for all EU countries intending to participate in each trial, it risks diminishing the role of RECs and the disregard to local context [54]. RECs need to account for the concerns of diverse elements of the potential research participants and in particular vulnerable subjects through collaborative partnerships with local communities to preserve the ethical relevance of the scientific aspects of research protocols. By limiting the scope of RECs, the representation and independence of the various skills and knowledge of other Member States needed to evaluate the suitability and applicability of a clinical trial in respective States would be undermined. This is critical as this can potentially risk compromising the dignity, rights, safety and well-being of research participants. Needless to point out that this regulation requirement for timeliness of the evaluation procedure seems to override the robustness of scientific and ethical review of the clinical trial. A second criticism comes from Di Constanzo, which concerns the provision of Article 5 of the Regulation and "law shopping" [55] or forum shopping. She argues that by allowing the sponsor to choose the coordinating Member State as implied by Article 5 it empowers sponsors to choose the regulatory regime it wishes to evaluate its clinical study rather than being chosen upfront on the basis of transparent and non-discriminatory criteria principles in order to determine the most appropriate coordinating State. In doing so, it risks compromising the accurateness of scientific and ethical reviews that can consequently negatively impact the adequate provisions of protection of the rights of trial participants. But perhaps one criticism that may be viewed as counterintuitive to the EU-CTR's main objective – is the matter of eliminating bureaucracy. Scientists and researchers have long claimed that the Directive stifled scientific innovation through decelerating clinical trial with a consequent negative impact on innovative cancer therapy access [56] which the current EU-CTR aimed to eliminate. I would challenge such notions, as this would seem untenable as investigators who owe duty of care [57] towards trial participants are the ones who should advocate patient safety. I would therefore argue that without diligent and robust implementation of sound research governance policies and protocols of trial conduct, imperil future patients to unknown irreparable harm whilst undermining the investigator's professional registration as witnessed following the guilty verdict of Oncologist Anil Potti for his scientific misconduct by fabricating data sets to make cancer drug response predictors appear more accurate [58]. Only through meticulous auditing and reporting of the impact the new regulation may have on protection of patients' rights, equity and access to cancer trials will it be possible to identify and address the gaps.

All in all, realizing health equity in cancer trials needs an engaging progressive critique of the relationship between law, ethics, regulation, and expertise in cancer research. By progressive critique this means a critique of expertise that will help maximize cohort diversity, inclusion, and attention to health disparities. This allows for a broadening of input that might count as part of the design of clinical trials through ensuring fewer negative unintended consequences for trial participants, enforcing recruitment of diverse research populations by race and ethnicity as the default and interrogating scientific justification for limited or selected study population enrolment.

The Role of Critical Perspective in Health Law and Policy Initiative – Can it Address Cancer Injustice in Clinical Research?

General, legal and political recognition of injustices have further amplified the problem of cancer injustice following the recent rapid advances in cancer research, as has policy responses to it. However, despite efforts from the EC to tackle avoidable cancer inequalities, there remains critical gaps in the efficacy and ethical rigor of health laws and policies. Health justice perspective should always be open to critique to allow the broadening of our understanding of how adjudication can tackle inequality in health law, assemble evidence and expertise for political purposes with distributive goals and legitimize contested claims about cancer care. As alluded to earlier, overcoming barriers to clinical trial equity for all sectors of the population will require consorted efforts of stakeholders in cancer research to collaborate and develop multifaceted approaches that include the implementation of new, more effective policy initiatives. It requires adequate regulations for protecting the rights and interests of research participants. The salient approach to realize this would be to follow evidence-based scientific strategies regardless of pre-existing health law regulation. Following evidence-based expertise mitigates the political influence policymakers may have on healthcare where law and science are mutually constitutive and inseparable and safeguard the sanctity of matters relating to medicine and science when setting regulations. Adjudicating the concerns that may consequently arise would then afford the advancement of a separation of powers where researchers can defer to factual evidenced-based answers raised by lawmakers when designing and implementing regulation and as eloquently reflected on by Klare [59]. This will permit the evaluation of the rule of law in so much as determining what causes, drives, sustains and safeguards against health injustices. It also serves in understanding how to better remedy health disparities by recognizing the way health inequality manifests through modes of structural subordination.

A call for a progressive critique of expertise, as argued by Ahmed [60], represents one of the important steps that harness the engagement of stakeholders in the policy-making process. It helps identify solutions to change traditional patterns and address equity of access to clinical trials for all patients; a much-sought notion from social reform advocates to consult reflexively to expert medical or scientific authority. Progressive critique serves to appreciate that where justice is concerned, medical evidence and expertise are intertwined with the law to see how this interaction reproduces inequalities.

3. Conclusions

The main argument presented throughout this paper is that cancer disparities in terms of incidence and outcomes and within EU countries exist despite sharing binding agreements and laws. Cancer injustice is an ever-present concern in achieving equity within clinical research. The EU is home to one of highest standards of cancer research but systematic structural barriers such as fragmented market impede innovation in cancer care and consequently perpetuate cancer disparities. It goes without saying that cancer research has witnessed remarkable advances in the last few decades through transformative research and technological innovation enabled by both private and public sector investments at considerable expenses but is rewarded by the steady decline in overall cancer incidence, morbidity and mortality coupled with a significant increase in life expectancy of individuals who are now able fuller lives after a cancer diagnosis. Yet despite this impressive progress, systematic and often complex socio-economic and political structures within and across the EU that can perpetuate inequality from the policy decisions systems make. There are colossal differences in research capacity across Europe and between disciplines. This, together with multiple challenges to diversity and inclusivity in cancer research, greatly compromises the patient's safety, presents unnecessary financial burdens on societal and individual levels, and duplicates inferior and ineffective research, which will ultimately result in a waste of healthcare resources. Tackling these shortfalls would mitigate in part some of the cancer outcomes between EU Member States. However, research on cancer social inequalities is underfunded in Member States and across the EU [61]. Adequate support for research is crucial to generate evidence for evidence-based decision-making. Understanding the economic consequences of outcome research and health economic analyses lends itself very much to extenuating health inequalities can be extenuated given their close links. After all, to achieve equity in cancer outcomes, equity in clinical research must be achieved. Cancer prevention is in essence more cost-effective than treating, as is treating it at an early stage of the disease which also has the added benefit of being more effective.

The basic concept of precision/personalized cancer medicine is

aimed at delivering the right cancer treatment including timing and dosage for the right patient to mitigate unnecessary treatments and associated toxicities. Clinical research can foster this concept if executed with justice in mind. Whilst the theoretical benefits of the EU-CTR would lead to equitable access to cancer clinical trials, patent and market exclusivity protection remain a major hurdle to access of vital cancer therapies post drug approval. Therefore policies aimed at cancer prevention and treatment must adopt a multi-faceted approach, which should involve multi-stakeholders from both medical, pharmaceutical and legal sectors. The bottom line is that the increased incidence of cancer and disparities of outcomes cries out for improved access to cancer clinical trials.

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Declaration of Competing Interest

The author declares no conflicts of interest.

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