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Abstract: The immunotherapy drug Keytruda has transformed cancer treatment and improved survival for many patients, but its high cost raises concerns about equitable access. This paper examines affordability, policy structures, and the representation of patient experiences in clinical knowledge.

1. Introduction

For a patient diagnosed with advanced cancer, the word "hope" often arrives in the form of a drug. For many, that drug is Keytruda (pembrolizumab). But hope, in the United States, comes with a price tag. As one of the most widely used cancer immunotherapy drugs, Keytruda has transformed treatment, extending life and significantly improving cancer survival rates for numerous cancers, including non-small cell cancer and melanoma.

Owned by the pharmaceutical giant Merck, which holds at least 51 granted patents on the drug, Keytruda is priced at a staggering cost, often exceeding tens of thousands of dollars per 3 to 6 week dose, which creates hopeless financial barriers for many. Low-income patients, older adults on fixed incomes, and those treated outside well-resourced medical centers are disproportionately affected, revealing that access to this life-saving medicine is stratified by wealth, geography, and social position.

This inequity can be approached through the lens of standpoint theory, which asks whose experiences are centered in the production of knowledge and whose are systematically marginalized. Complementing this framework, Imani Perry's heteropatriarchal triad of sovereign authority, property, and personhood, which reveals how corporate patent regimes assert authority over survival, transform life-saving drugs into protected property, and implicitly shape whose personhood is valued within the healthcare system. If a life-saving drug exists, but remains financially inaccessible to the general population, can it truly be considered progress? When a single corporation holds monopoly power over a life-extending drug, patients confronting mortality are placed in a position where survival is not a choice but a transaction, exposing the moral contradiction in a healthcare system where survival is commodified rather than a human right to life. This work is in partial fulfillment of the ENGR184 course using the blueprint curriculum in Ref [1,2] and captured in a collection [3].

2. Keytruda and the Structure of Pharmaceutical Property

Inequities in access to Keytruda reveal how biomedical innovation operates within structures of power. Examining through standpoint theory and Imani Perry's framework of sovereign authority, property, and personhood, these disparities appear not as isolated gaps but as consequences of patent law, research representation, and institutional practice. Analysis of melanoma disparities, patient narratives, and pharmaceutical monopolies demonstrates how knowledge production and property regimes shape access to care.

Building on this framework, Imani Perry describes sovereignty, property, and personhood as connected legal structures through which modern systems of power organize social life and determine whose rights and protections are prioritized [4][5]. In the pharmaceutical industry, the logic of property is especially visible through patent protections that grant corporations exclusive control over life-saving drugs. The manufacturer of Keytruda, Merck & Co., holds extensive patent protections over pembrolizumab,

allowing the company to maintain monopoly control over the drug and set prices that can exceed $100,000 per year for treatment in the United States [6]. Sovereignty is reflected in the legal and regulatory systems that enforce these patent rights and permit pharmaceutical firms to maintain such pricing structures within the healthcare market. Personhood becomes visible in the consequences of these arrangements, as patients' access to life-extending treatments is often mediated by insurance coverage, financial resources, and institutional support rather than medical need alone. Through Perry's framework, disparities in access to immunotherapies appear not simply as gaps in healthcare delivery but as outcomes of a broader system in which legal authority and property rights shape whose lives are protected within the medical system.

3. Whose Lived Experiences are Included and Studied?

Philosopher Sandra Harding argues that research becomes more objective when it begins from the perspectives of marginalized groups, since dominant frameworks often overlook the social assumptions shaping knowledge production [7]. Standpoint theory similarly holds that knowledge production is shaped by whose experiences are centered and whose are marginalized. In melanoma, a skin cancer for which Keytruda is one of the most effective immunotherapies, this dynamic becomes visible in the experiences of Black patients diagnosed with acral lentiginous melanoma, a rare subtype more commonly found in people of color. In an interview published by the Society for Melanoma Research, a Black patient described navigating his diagnosis while feeling "socially ostracized" and experiencing panic attacks, explaining that "part of my feelings were fueled by how hard it was to find info on acral lentiginous melanoma, the subtype that I had" [8]. He further noted that "statistics on mortality, conflicting data, and missing or limited data for what happens to people my age and my race/ethnicity are not easily accessible" [8]. This uncertainty reflects more than individual distress; it reveals an epistemic gap in oncology research. While pharmaceutical development of drugs such as Keytruda focuses on broad clinical efficacy, rare subtypes like acral lentiginous melanoma often remain underrepresented in trials and outcome data. When survival statistics and treatment guidance are not readily available for specific racial groups, it suggests that research priorities have not been equally distributed. The absence of accessible information is itself a structural outcome.

				Racial Composition (%, N)*			
Tumor Type	**Clinical Trial and Treatment Agent**	**Trial Design and Population**	**Sample Size (N)**	**Caucasian**	**Black or African American**	**Asian**	**Other**
Melanoma	CheckMate 067[35] Nivolumab +/– ipilimumab	Global phase III, previously untreated	945	**97.5%**	**0%**	**1.1%**	**1.5%**
				921	0	10	14
	CheckMate 037[36] Nivolumab	Global phase III, previously treated	405	**98.3%**	**0.7%**	**0.5%**	**0.5%**
				398	3	2	2
Squamous cell carcinoma of the head and neck	CheckMate 141[37] Nivolumab	Global phase III, previously treated	361	**83.1%**	**3.6%**	**11.9%**	**1.4%**
				300	13	43	5
Non–small cell lung cancer	CheckMate 057[38] (non-squamous) Nivolumab	Global phase III, previously treated	582	**92%**	**3%**	**3%**	**3%**
				533	16	17	16
	KEYNOTE 010[39] Pembrolizumab	Global phase II/III, previously treated	344	**72%**	**4%**	**21%**	**1%**
				246	13	73	5
	OAK Trial[40] Atezolizumab	Global phase III previously treated	850	**70%**	**2%**	**21%**	**7%**
				598	16	180	56
Renal cell carcinoma (clear cell)	CheckMate 025[41] Nivolumab	Global phase III, previously treated	821	**88%**	**1%**	**9%**	**3%**
				720	5	74	22
Urothelial carcinoma	IMvigor211[42] Atezolizumab	Global phase III, previously treated	931	**72.1%**	**0.3%**	**12.7%**	**14.8%**
				671	3	118	138
Gastric and gastroesophageal junction cancer (PD-L1+)	KEYNOTE 059[43] Pembrolizumab	Global phase II, previously treated	259	**77.2%**	**1.9%**	**15.8%**	**5.0%**
				200	5	41	13

*General U.S. population racial composition: 76.6% white, 13.4% black or African American, 5.8% Asian, 18.1% Hispanic or Latino.

Fig. 1. Racial composition of patients enrolled in immune checkpoint inhibitor clinical trials across tumor types (Ref. [9], Fig. 1).

Clinical trial demographics further illustrate this structural gap in knowledge production. Many of the pivotal immunotherapy trials used to evaluate Keytruda (pembrolizumab), known collectively as the KEYNOTE clinical trial series, enrolled overwhelmingly white patient populations [9]. As shown in Figure 1, Black participants represented only 4 percent of patients in the KEYNOTE-010 pembrolizumab trial for non-small cell lung cancer and only 1.9 percent of patients in the KEYNOTE-059 trial for gastric and gastroesophageal cancers [9]. These proportions fall far below the racial distribution of the United States population and highlight how the clinical evidence guiding treatment decisions is generated from a limited demographic sample [9]. When marginalized groups are underrepresented in clinical trials, the resulting medical knowledge may not fully reflect those experiences, risks, or treatment responses of those populations. From the perspective of standpoint theory, this imbalance suggests that the production of biomedical knowledge continues to reflect dominant research priorities rather than the lived experiences of those most affected by disparities in care.

4. Personhood and the Politics of Survival

Access to life-extending treatments such as Keytruda also reveals how economic structures shape whose survival is prioritized within the healthcare system. During a U.S. Senate hearing on drug pricing, Senator Bernie Sanders highlighted the consequences of these costs, noting that many patients must turn to crowdfunding platforms like GoFundMe in order to afford treatment. Sanders described the case of "Rebecca, the school lunch lady from Nebraska with two kids who died of cancer after setting up a GoFundMe page because she could not afford to pay for Keytruda," explaining that a single infusion cost roughly $25,000 every three weeks [10]. Although Rebecca raised $4,000 through crowdfunding, it was far from enough to bear the cost of treatment. Stories like this illustrate how survival can become dependent on personal financial resources rather than medical need. When patients must publicly fundraise in order to access treatment, survival becomes contingent on market participation, revealing how personhood within the healthcare system can become mediated by the ability to pay.

Yet this burden does not fall equally across the population. It maps onto existing racial inequities in ways that reveal how personhood within the healthcare system is stratified by both class and race. Black and Hispanic Americans are uninsured at significantly higher rates than white Americans [11], meaning the financial barrier to immunotherapies like pembrolizumab is not a race-neutral obstacle. Access is further constrained by geography, as immunotherapy administration is largely centralized in academic medical centers and NCI-designated cancer institutions that are less present in predominantly Black and Latino communities and rural or medically underserved regions [12]. Even when financial assistance programs exist, patients in less resourced settings are more likely to experience delays and discontinuities in treatment, with navigation support remaining uneven across institutions [12]. Perry's framework of personhood asks whose lives the system is structured to protect, and when the obstacles to accessing a life-extending drug are layered across both race and class, the answer becomes difficult to avoid.

5. Sovereign Authority in Clinical Decision Making

The concept of sovereign authority extends beyond state power into the legal and economic structures that determine who holds control over life and death [4]. In the context of Keytruda, this authority is exercised most visibly through Merck & Co.'s patent monopoly and the regulatory architecture that sustains it. Together, corporate and governmental power have constructed a system in which survival from cancer is not a protected right but a purchasable commodity.

Keytruda is not merely one of Merck's successful products; it is the financial engine of the entire corporation. In 2025, Keytruda generated more than $30 billion in global revenue, accounting for nearly half of Merck's total sales, making it the best-selling drug in the world [13].

Merck and its defenders argue that high drug prices are a necessary consequence of the cost of pharmaceutical research and development, and that patent protections are what make innovation financially viable in the first place [14]. This argument carries some legitimacy, as drug development is

genuinely expensive. Yet it collapses when applied to a drug generating $25 billion in annual revenue while Merck simultaneously spends billions on stock buyback programs that inflate share prices for shareholders and executives rather than funding new research [15]. Prices charged for anticancer drugs bear little relationship to actual development costs and are instead set according to what desperate patients can be made to bear [16]. The underlying science of Keytruda was also built on decades of publicly funded academic research [17], meaning the public helped finance the discovery and is now asked to pay monopoly prices for the result.

The U.S. government has actively enabled this arrangement by granting pharmaceutical corporations up to twenty years of market exclusivity under the Hatch-Waxman Act, while declining to impose federal price negotiations or ceilings [18]. Though the Inflation Reduction Act of 2022 introduced limited Medicare price negotiation, Keytruda falls largely outside of these constraints for the foreseeable future [19]. Through Perry's framework, Merck's pricing power and the state's legislative inaction converge not to protect human life, but to protect capital.

6. Conclusions

The case of Keytruda reveals how life-saving medical innovation is shaped not only by scientific progress but also by legal, economic, and epistemic structures that determine who ultimately benefits from that progress. Through standpoint theory and the framework of sovereignty, property, and personhood developed by Imani Perry in Vexy Thing, disparities in access to immunotherapy appear as structural outcomes rather than isolated failures. Patent protections grant pharmaceutical corporations exclusive ownership over essential medicines, while clinical research representation and extreme drug pricing reinforce inequalities in whose lives are prioritized within the healthcare system. In this context, the price of Keytruda is not simply a market outcome but a consequence of a system that allows private corporations to exercise substantial control over access to life-extending treatment.

As the patent protections surrounding Keytruda approach expiration, Merck & Co. is already investing heavily in new therapies capable of replacing it as the company's next blockbuster drug. This cycle of innovation followed by extended market exclusivity allows Merck to maintain dominance over highly profitable segments of the cancer treatment market. Addressing the inequalities revealed in this case will require greater transparency in drug pricing, clearer disclosure of research and development costs and corporate profits, and stronger mechanisms for negotiating or regulating the price of essential medicines. Without structural changes to the systems that govern pharmaceutical markets, life-saving treatments risk remaining scientific breakthroughs that are technically available but financially inaccessible to many of the patients who need them most.

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