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Intellectual Property Challenges in AI-based Digital Health Diagnostics: A Comprehensive Review

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ABSTRACT

Artificial intelligence (AI) is rapidly transforming digital healthcare, particularly in diagnostic systems such as radiology and clinical decision support. However, this progress has exposed significant gaps in existing intellectual property (IP) and regulatory frameworks, which were not designed for AI-driven innovation. This paper examines key challenges including inventorship, data ownership, algorithmic transparency, and regulatory fragmentation. A comparative analysis of global legal frameworks, such as the EU AI Act (2024), Council of Europe AI Convention (2024), and US FDA Software as a Medical Device (SaMD) guidelines is presented, along with selected judicial case studies that highlight evolving approaches to accountability in AI-assisted diagnostics. In addition, statistical trends from the past six years are analysed to demonstrate the rapid growth and adoption of AI in healthcare. The paper further explores future developments, including explainable AI and autonomous diagnostic systems, and emphasizes the need for harmonized global IP policies. It concludes that adaptive regulatory frameworks are essential to ensure both innovation and equitable access in AI-driven healthcare.

General Terms

Artificial intelligence, digital health, intellectual property, patent law, algorithmic bias, data ownership, regulatory frameworks

Keywords

AI diagnostics, EU AI Act, inventorship, data governance, algorithmic transparency, compulsory licensing, explainable AI, federated learning, trade secrets, UnitedHealth nH Predict

1. INTRODUCTION

Artificial intelligence (AI) has rapidly emerged as one of the most transformative technologies in modern healthcare. Capabilities such as automated medical image interpretation, predictive risk assessment, drug discovery, and real-time patient monitoring are no longer theoretical concepts but are increasingly integrated into clinical workflows. These systems enable healthcare providers to process and interpret vast amounts of data with a speed and scale that significantly exceeds human capacity, thereby improving diagnostic efficiency and decision-making [36], [39], [42].

The global AI in healthcare market was valued at approximately $22 billion in 2023 and is projected to exceed $187 billion by 2030 . This growth is driven by advances in computational power, increased availability of medical data, and continuous improvements in machine learning algorithms. In parallel, the number of AI-enabled medical devices and the rate of clinical adoption have increased substantially [29], [30], [37].

Despite these advancements, AI-based diagnostics operate at a complex intersection of technology, medicine, and law. Existing intellectual property (IP) frameworks were originally developed for human-driven innovation and are not fully equipped to address challenges posed by AI-generated outputs. Issues such as inventorship, ownership of training data, and algorithmic transparency introduce significant legal and ethical uncertainties [1], [2], [6].

The current global landscape is characterized by fragmented regulations and inconsistent legal interpretations, which can hinder innovation, delay clinical adoption, and create gaps in accountability [14], [16]. This paper presents a structured analysis of these challenges by examining existing literature, identifying key problem areas, and evaluating emerging legal frameworks and case studies.

2. LITERATURE REVIEW

The following survey draws on twenty peer-reviewed papers and authoritative reports published between 2021 and 2026, sourced from PubMed Central, IEEE Xplore, ResearchGate, WIPO, and the US Congressional Research Service.

2.1 Inventorship, Patentability, and Patent Landscape

Rai et al. [1] examine the evolving intellectual property landscape for AI-driven biomedical innovation, highlighting the tension between traditional patent doctrines and modern AI capabilities. Minssen et al. [2] provide a comprehensive overview of how patents, copyrights, and trade secrets interact in healthcare AI. Haibe–Kains et al. [3] report over 10,000 AI/ML healthcare patents filed globally, with China and the United States leading. Boor et al. [4] focus on digital pathology and demonstrate rapid post-2017 growth in patent activity. Nagam [5] discusses patent eligibility challenges under the Alice/Mayo framework, while the Congressional Research Service [6] highlights the absence of legislative clarity on AI inventorship.

2.2 Data Privacy, Ownership, and Governance

Sharma et al. [7] analyse the intersection of GDPR, HIPAA, and India's DPDPA 2023, using the AIIMS data breach as a case study. Wang et al. [8] compare international data governance models and identify the lack of cross-border interoperability as a major limitation. Shams et al. [9] explore privacy-preserving technologies such as differential privacy and blockchain, noting the absence of standardized evaluation metrics. Verma et al. [10] highlight risks associated with AI anonymization and emerging threats from quantum computing.

2.3 Algorithmic Bias and Fairness

Cross et al. [12] demonstrate that AI diagnostic systems often underperform for minority populations, raising concerns about fairness and inclusivity. Norori et al. [13] discuss the trade-off between open scientific practices and proprietary AI models, while Ueda et al. [17] review multiple fairness definitions and highlight the lack of standardized certification mechanisms.

2.4 Regulatory Frameworks and Market Authorisation

Reddy et al. [14] identify key gaps in global AI healthcare regulation, particularly the absence of international governance standards. Mashar et al. [15] examine FDA regulatory pathways and the challenges posed by adaptive AI systems. Masood et al. [16] provide a comparative analysis of regulatory approaches across multiple jurisdictions.

3. PROBLEM STATEMENT AND RESEARCH OBJECTIVES

The rapid adoption of artificial intelligence (AI) in digital healthcare has outpaced the development of legal and regulatory frameworks. While AI-based diagnostic systems can independently generate clinically relevant insights, existing IP laws still assume human inventorship – a mismatch reinforced by Thaler v. Vidal (2022), which limits inventorship to natural persons.

In parallel, the ownership and accessibility of training data remain unclear. AI systems rely on large-scale patient data, yet the absence of consistent data governance frameworks restricts access to critical datasets, particularly those representing rare or diverse populations. This results in a "training data paradox", where the data most needed for accurate and inclusive diagnostics is often unavailable [7], [8].

A growing tension also exists between trade secrecy and the need for transparency. Limited transparency can obscure biases, leading to unequal diagnostic performance across demographic groups. These issues are further compounded by fragmented global regulations, where differing national policies create compliance challenges and increase the risk of unequal access to AI-driven healthcare technologies [5], [15], [16], [18].

3.1 Research Objectives

—To compare patent eligibility standards across jurisdictions and identify opportunities for harmonisation in AI inventorship.

—To explore data governance models that enable secure and ethical use of diverse healthcare datasets.

—To examine approaches for balancing confidentiality with regulatory transparency.

—To analyse the link between intellectual property and algorithmic bias, with a focus on fairness in AI systems.

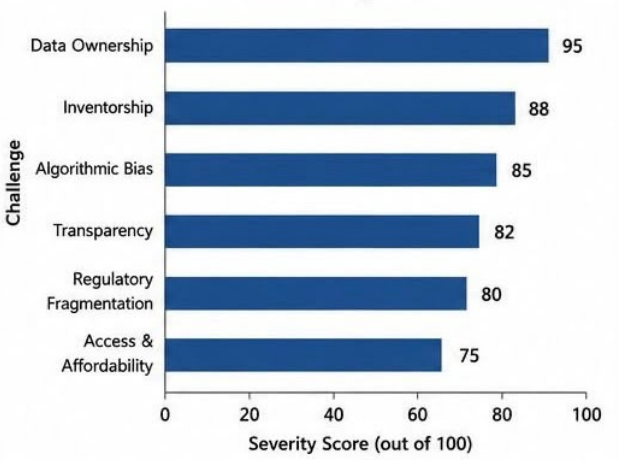

Fig. 1. Major Intellectual Property Challenges in AI-Based Diagnostics.
Source: Source: Synthesized from [1], [2], [7], [12], [14], [16], [18].

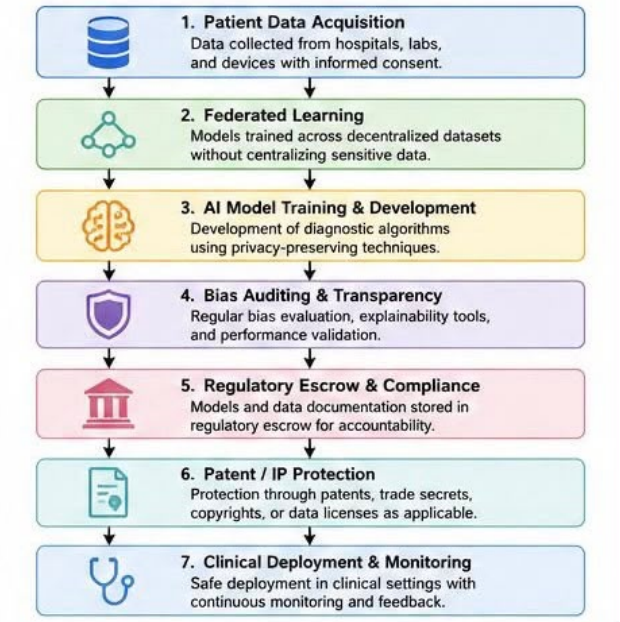

Fig. 2. Proposed Intellectual Property Governance Framework for Al Diagnostics

—To propose strategies for improving access to AI diagnostics in resource-limited settings.

4. PROPOSED SOLUTIONS AND METHODS

4.1 Adaptive Patenting Framework for AI-Generated Diagnostics

A revised patenting approach is required to reflect the role of AI in the innovation process. This paper proposes an "AIassisted invention" category that recognises not only traditional inventors but also contributors such as system designers, data curators, and model developers. Such a framework would mandate disclosure of AI involvement in the invention process. Aligning with recent USPTO

Table 1. Comparative Summary of Literature on AI Diagnostics and IP Challenges.

Author (Year)	Focus Area	Key Contribution	Identified Gap
Rai et al. [1]	AI Patent Landscape	Highlights conflict between AI innovation and patent law	Does not examine realworld patent filings or innovation incentives in clinical AI
Minssen et al. [2]	IP Frameworks	Explores patents, copyright, trade secrets in AI	Lacks discussion on generative/autonomous AI diagnostics implications for ownership and liability
Haibe–Kains et al. [3]	Patent Trends	Large-scale patent analysis across countries	Focuses on patent volume without linking filings to clinical adoption
Sharma et al. [7]	Data Privacy	Analysis of GDPR, HIPAA, DPDPA frameworks	Does not address interoperability or crossborder data restrictions on AI training scalability
Shams et al. [9]	Privacy Techniques	Evaluates differential privacy and blockchain	Lacks standardized benchmarks for privacy vs. diagnostic performance trade-offs
Cross et al. [12]	Algorithmic Bias	Identifies bias across AI lifecycle	Highlights bias issues but does not propose enforceable regulatory or IP-linked mechanisms
Reddy et al. [14]	Regulation	Identifies gaps in global AI governance	Provides high-level analysis but lacks actionable pathways for harmonizing frameworks
Masood et al. [16]	Medical AI Regulation	Comparative analysis of global regulatory bodies	Does not define how adaptive AI updates affect IP protection and regulatory classification

Source: Synthesized from primary research and systematic reviews [1], [2], [3], [7], [9], [12], [14], [16].

guidance, and potentially coordinated through WIPO, this approach can be strengthened by focusing patent claims on clinical applications, training methods, and validation strategies [1], [6].

4.2 Federated Learning and Privacy-Preserving Data Licensing

Federated learning enables collaborative model training across institutions without centralizing sensitive patient data, thereby improving access to diverse datasets while preserving privacy. To support this, contractual frameworks should clearly define ownership of model outputs based on data contribution. Integrating mechanisms such as differential privacy can further strengthen data protection and enable scalable, compliant datasharing ecosystems [7], [9].

4.3 Regulatory-Escrow Transparency Model

To balance confidentiality with regulatory transparency, a regulatory escrow model is proposed. Developers would submit detailed model information-including architecture, training procedures, and validation results-to a trusted authority. This information remains protected from public disclosure but accessible to regulators and certified auditors, similar to regulatory practices in pharmaceuticals.

4.4 Algorithmic Fairness Certification as an IP Condition

This paper proposes integrating fairness benchmarks into both patent approval and market authorization processes. These benchmarks should evaluate performance consistency across demographic groups, including age, gender, and socioeconomic status. Embedding fairness into IP and regulatory requirements would incentivize bias mitigation throughout the AI lifecycle [12], [13].

4.5 TRIPS-Aligned Compulsory Licensing for AI Diagnostics

Inspired by TRIPS Article 31, this study suggests extending compulsory licensing principles to AI diagnostic technologies. Governments could permit the use of patented AI systems under conditions such as public health necessity or limited affordability. This would help ensure broader access without significantly undermining innovation incentives [5].

4.6 Blockchain-Based Data Provenance for IP Management

Blockchain technology can enhance transparency in data usage by maintaining immutable records of data sources, consent, and access rights. This supports clearer ownership structures and accountability in AI training pipelines. Additionally, smart contracts can enable automated compensation for data contributors, fostering a more sustainable data-sharing ecosystem [9].

4.7 International Harmonisation through a WIPO Framework

This paper proposes an international framework under WIPO to establish baseline standards for AI inventorship, crossborder data governance, and dispute resolution. Such harmonisation would reduce legal uncertainty and support the responsible global deployment of AI diagnostic systems [18].

5. GLOBAL LEGAL CONVENTIONS AND LAWS

5.1 The EU AI Act (Regulation EU 2024/1689)

The EU AI Act (2024) is the first comprehensive AI-specific regulatory framework, introducing a risk-based classification system [19], [22]. Medical diagnostic systems are categorized as “high-risk” and must comply with requirements related to data governance, transparency, human oversight, and risk management. With phased implementation extending to 2027, the Act is expected to significantly influence AI development and market access in healthcare [23], [24].

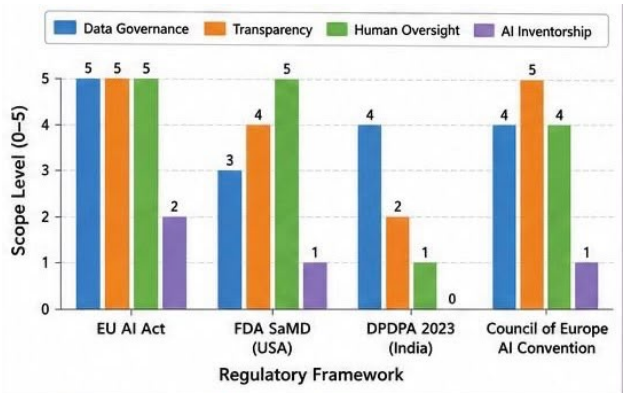

Fig. 3. Comparative Scope of Major AI Regulatory Frameworks (0 - 5 Scale, 0 = Absent, 5 = Comprehensive)

Source: Source: Based on EU AI Act (2024) [19], FDA SaMD Framework (2024) [6], DPDPA 2023 [7], and Council of Europe AI Convention (2024) [21].

5.2 Council of Europe Framework Convention on AI (2024)

Adopted in 2024, this Convention is the first legally binding international treaty on AI governance, grounded in human rights principles [21], [25]. It emphasizes transparency, accountability, and fairness, reinforcing procedural safeguards for high-stakes applications such as medical diagnostics.

5.3 United States: FDA SaMD Framework and USPTO Guidance

In the United States, AI diagnostic systems are regulated under the FDA's Software as a Medical Device (SaMD) framework, with over 600 approved devices as of 2023. USPTO guidance (2024) maintains that only human contributors can be recognized as inventors, while reinforcing the need for human oversight in AI-assisted decision-making [6].

5.4 India: DPDPA 2023 and Emerging AI Policy

India's Digital Personal Data Protection Act (2023) provides a baseline for data protection in AI systems but does not yet address AI-specific issues such as accountability or inventorship [7]. Existing precedents like Natco Pharma v. Bayer AG (2012) suggest potential pathways for improving access to AI technologies, though a dedicated regulatory framework is still evolving.

5.5 China and WIPO International Frameworks

China leads in AI-related patent filings and has introduced targeted regulations, including algorithmic and generative AI governance measures, though enforcement remains uneven [3].
At the global level, WIPO initiatives highlight emerging IP challenges, but the absence of a binding international framework for AI inventorship and data governance remains a critical gap [19].

6. CASE STUDIES: AI DIAGNOSTICS IN COURT

The following case studies illustrate how courts across jurisdictions are beginning to address legal and ethical questions arising from AI-assisted decision-making in healthcare. A common pattern emerges

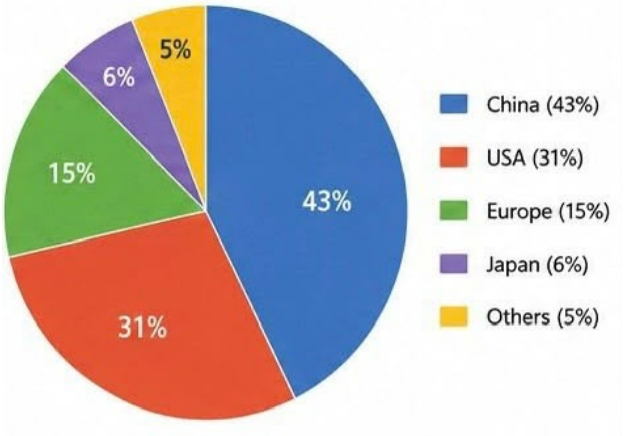

Fig. 4. Global AI Healthcare Patent Distribution by Region (2024)

Source: Compiled from Haibe–Kains et al. (2021) [3], WIPO IP Statistics Data Center (2024) and PATSTAT (2024)

from these rulings: AI systems cannot replace human judgment in high-stakes decisions, transparency is essential for accountability, and the use of proprietary algorithms does not shield organizations from legal responsibility.

6.1 Estate of Gene B. Lokken v. UnitedHealth Group (USA, 2023-ongoing)

This case involves allegations that the nH Predict AI system was used to override physician recommendations and deny post-acute care for Medicare Advantage patients. In 2025, the District Court of Minnesota dismissed certain claims under Medicare-related provisions but allowed breach of contract and good-faith claims to proceed. The ruling emphasized that automated systems cannot substitute contractual obligations requiring human clinical review [28], [47].

6.2 Humana nH Predict Class Action (USA, 2023 – 2024)

A related class action lawsuit challenged the use of a similar AI-based system in denying healthcare coverage without sufficient physician oversight. Claims involving breach of contract and misrepresentation were allowed to move forward, reflecting broader judicial concern regarding the systematic substitution of human clinical judgment with algorithmic processes [27], [48].

6.3 Overjet, Inc. v. VideaHealth, Inc. (USA, 2024)

This case involved a dispute between two companies developing AI-based dental diagnostic software, focusing on copyright infringement and false advertising related to AIgenerated outputs. The court denied a preliminary injunction, citing insufficient evidence of immediate and irreparable harm, but highlighted the growing prevalence of intellectual property disputes in competitive AI healthcare markets [49].

6.4 Haghshenas v. Canada - Chinook AI Tool (Canada, 2023)

The court held that decisions involving algorithmic tools must comply with principles of procedural fairness, including transparency,

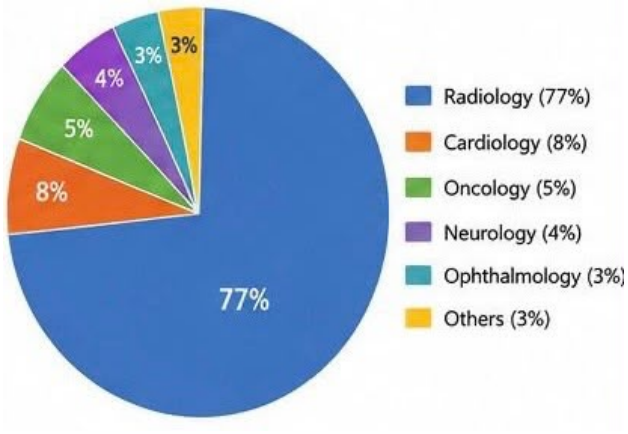

Fig. 5. Distribution of AI Diagnostic Applications Across Medical Specialties (2024)

Source: Compiled from FDA AI/ML-Enabled Medical Devices Database (2024) [27] and Stanford AI Index Report (2024) [37].

explainability, and meaningful human review. This reasoning is increasingly applicable to healthcare AI systems, where similar concerns regarding opacity and accountability arise [50].

6.5 Thaler v. Vidal / Thaler v. Perlmutter (USA, 2022 – 2024)

The courts consistently ruled that only natural persons can be recognized as inventors or authors under current law. These decisions reinforce the limitations of existing IP regimes in accommodating AI-generated outputs and underscore the need for updated legal frameworks addressing AI-assisted innovation [6], [51], [52].

7. STATISTICAL DATA: AI DIAGNOSTICS GROWTH (2019 – 2026)

The AI diagnostics market has experienced consistent and accelerated growth over the past decade, driven by advances in deep learning, increased availability of medical data, and regulatory approvals. The COVID-19 pandemic further accelerated adoption, particularly in imaging-based diagnostics [37].

7.1 Market Valuation Timeline

Table 2 presents the growth of the AI diagnostics market from 2019 to 2030, based on industry reports and market analyses [29], [30], [31]. The market expands from $0.54 billion in 2019 to a projected $5.44 billion by 2030, reflecting strong and sustained growth.

7.2 FDA AI/ML-Enabled Medical Device Authorisations

Table 3 summarizes the increase in FDA-authorized AI/ML medical devices between 2018 and 2024, highlighting rapid regulatory acceptance and diversification across medical specialties [27], [37]. The trends discussed above are further illustrated in Figure 6 and Figure 7, based on compiled data from multiple industry and regulatory sources [29], [30].

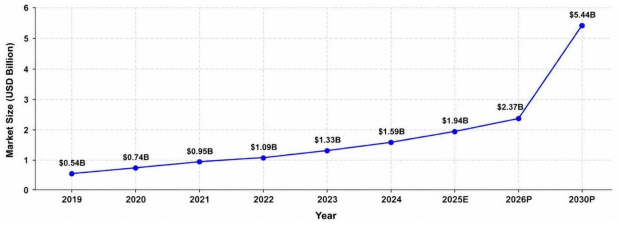

Fig. 6. AI Diagnostics Market Size (2019 – 2026).

Source: Compiled from Grand View Research, MarketsandMarkets, and Fact.MR industry reports (2024) [29] - [31].

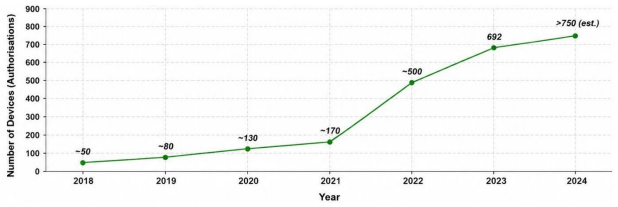

Fig. 7. FDA AI/ML Medical Device Authorisations (2018 – 2024).

Source: U.S. FDA AI/ML-Enabled Medical Devices Database (2024) and Stanford AI Index Report (2024) [27], [37].

7.3 Key Statistical Insights

The data reveals several important trends. The COVID-19 pandemic triggered a sharp increase in AI adoption, particularly in imaging applications [37]. Radiology continues to dominate AI diagnostics, accounting for the majority of approved systems [27]. Physician adoption has increased rapidly, indicating growing trust in AI-assisted tools. Additionally, investment in AI diagnostics has surged, while global patent trends indicate that AI innovation is increasingly concentrated among large technology firms, potentially limiting access for smaller developers and public healthcare institutions [3], [4].

8. COMPREHENSIVE EVALUATION:APPLYING PROPOSED FRAMEWORKS TO REAL-WORLD SCENARIOS

While Section 4 introduced seven proposed mechanisms for addressing IP challenges in AI-based diagnostics, their practical value depends on how they perform against actual deployment conditions. This section evaluates each proposal against the case studies and regulatory scenarios discussed in Sections 5 and 6, assessing legal feasibility, stakeholder impact, and implementation complexity.

8.1 Evaluation Methodology and Criteria

Given the absence of pilot implementations for most of these frameworks, a qualitative scenario-mapping methodology is adopted rather than quantitative simulation. Each proposed solution is assessed against three criteria:

—Legal Feasibility: compatibility with existing statutory and judicial precedent (e.g., Thaler v. Vidal, TRIPS Article 31).

—Stakeholder Impact: effect on patients, healthcare providers, AI developers, and regulators, particularly with respect to access and accountability.

—Implementation Complexity: technical, institutional, and cross-jurisdictional barriers to adoption.

Table 2. AI Diagnostics Market Growth (2019 – 2030)

Year	Market Size	YoY Growth	Physician Adoption	Key Milestone
2019	$0.54 B	–	≈ 12%	Early deeplearning radiology tools
2020	$0.74 B	+37%	≈ 17%	COVID–19 accelerates AI imaging adoption
2021	$0.95 B	+28%	≈ 22%	FDA clears 100+ AI-enabled devices annually
2022	$1.09 B	+15%	≈ 30%	AI pathology, genomics enter clinics
2023	$1.33 B	+22%	≈ 45%	692 FDA authorised AI devices
2024	$1.59 B	+19%	≈ 66%	Over 500 AI/ML devices cleared
2025 E	$1.94 B	+22%	≈ 72%	EU AI Act highrisk provisions
2026 P	$2.37 B	+22%	≈ 78%	Autonomous radiology pilots
2030 P	$5.44 B	+23% CAGR	> 85%	Projected $188 B healthcare AI market

Source: Compiled from Grand View Research, MarketsandMarkets, and Fact.MR industry reports (2024) [29] - [31].

Table 3. FDA AI/ML Medical Device Authorisations (2018 – 2024)

Year	FDA Authorisations	Dominant Specialties / Notes
2018	≈ 50	Radiology (CT, MRI screening)
2019	≈ 80	Radiology + Cardiovascular
2020	≈ 130	COVID-19 chest X-ray surge
2021	≈ 170	Pathology, dermatology, ophthalmology
2022	≈ 500	Neurology, oncology added
2023	692	77% radiology dominance
2024	> 750 (est.)	IVDR/MDR compliance expansion

Source: U.S. FDA AI/ML-Enabled Medical Devices Database (2024) and Stanford AI Index Report (2024) [27], [37].

Each proposal is mapped to the most relevant documented scenario from Sections 5-–6, or, where no direct precedent exists, to a representative deployment context drawn from the literature reviewed in Section 2.

8.2 Scenario Mapping and Outcomes

Table 4 summarizes how each proposed framework would apply to a corresponding real-world or representative scenario, along with an assessment of feasibility and primary limitations.

9. FUTURE SCENARIO: AI DIAGNOSTICS IN THE NEXT DECADE

AI-driven healthcare diagnostics are expected to evolve rapidly over the next decade. A key trend is the growing importance of explainable AI (XAI). With regulations such as the EU AI Act emphasizing transparency, explainability is likely to become a mandatory requirement for high-risk medical AI systems. Techniques such as SHAP-based interpretations and attention mechanisms will play a crucial role, although they introduce new challenges in balancing transparency with intellectual property protection [40], [41], [44].
Future systems will integrate imaging, electronic health records, and genomic data to improve diagnostic accuracy. Federated learning approaches will enable large-scale model training while preserving data privacy, but will also raise complex questions regarding data ownership and cross-border governance [9], [20], [42].
The emergence of semi-autonomous diagnostic systems capable of performing routine clinical tasks introduces significant liability concerns, as responsibility may be distributed across developers, healthcare providers, and regulators. Issues of access and equity will remain critical: while AI diagnostics have the potential to improve healthcare delivery in low and middle-income regions, existing IP and licensing structures may limit accessibility. Mechanisms such as compulsory licensing and adaptive policy frameworks will be essential to ensure equitable distribution [5], [18], [42].

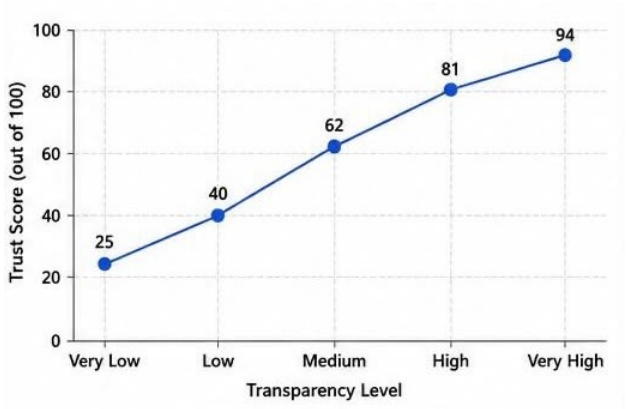

Fig. 8. Relationship Between Explainability (Transparency) and Stakeholder Trust in AI Diagnostics.

Source: Synthesized from Reddy et al. (2023) [14], Cross et al. (2021) [12], Shams et al. (2023) [9] and future studies on XAI adoption.

Table 4. Scenario Based Evaluation of Proposed Solutions

Proposed Solution	Applicable Scenario	Application Outcome	Feasibility
Sec 4.1 Adaptive Patenting Framework	Thaler v. Vidal / Thaler v. Perlmutter	Would formally recognize human contributors (designers, curators) without claiming AI inventorship, resolving the standing impasse without requiring legislative redefinition of "inventor"	Medium – requires USPTO/WIPO procedural change, not statutory amendment
Sec 4.2 Federated Learning & Privacy-Preserving Licensing	Cross-institutional training post-AIIMS breach [7]	Enables multi-hospital model training without centralizing patient data, directly addressing the governance gap that contributed to the breach	High – technically mature, but requires standardized contractual templates
Sec 4.3 Regulatory-Escrow Transparency Model	Estate of Lokken v. UnitedHealth; Humana nH Predict litigation	Escrowed model documentation would have allowed regulators/auditors to verify whether nH Predict's outputs overrode required clinical review, without forcing public disclosure of proprietary algorithms	High – closely mirrors existing pharmaceutical regulatory practice
Sec 4.4 Algorithmic Fairness Certification	Demographic under-performance findings [12]	Mandatory fairness benchmarking pre-authorization could have flagged subgroup disparities before clinical deployment	Medium – lacks standardized metrics across jurisdictions [17]
Sec 4.5 TRIPSAligned Compulsory Licensing	Low and middle-income market access (analogous to Natco v. Bayer, India)	Permits government-authorized use of patented diagnostic AI under public health necessity, paralleling pharmaceutical precedent	Low – Medium politically contentious; resisted by patent-holding firms
Sec 4.6 BlockchainBased Data Provenance	Overjet, Inc. v. VideaHealth, Inc.	Immutable provenance records would clarify training-data origin and authorship of AI-generated outputs, reducing evidentiary disputes in copyright/IP litigation	Medium technically feasible but requires industry-wide adoption to be evidentially useful
Sec 4.7 WIPO Harmonisation Framework	Regulatory fragmentation across EU AI Act, FDA SaMD, India DPDPA	A baseline international standard would reduce compliance divergence currently forcing developers to navigate inconsistent inventorship and data governance rules	Low – historically slow multilateral consensus-building (cf. absence of binding WIPO AI treaty to date)

Source: Synthesized by authors from case studies (Section 6) and proposed solutions (Section 4).

10. CONCLUSION

This paper examined key intellectual property challenges in AI driven healthcare diagnostics, including inventorship ambiguity, data ownership issues, limited transparency, algorithmic bias, regulatory fragmentation, and unequal access to AI technologies.

Recent developments such as the EU AI Act and emerging judicial decisions indicate progress toward structured governance. However, a globally consistent framework for AI related liability and intellectual property is still lacking, creating uncertainty for stakeholders [6], [22].

The rapid growth of AI diagnostics highlights the urgency of aligning technological innovation with robust regulatory mechanisms. Future efforts should focus on addressing liability in autonomous systems, managing IP in collaborative and multi-modal AI models, and ensuring equitable access across regions. Building a balanced governance ecosystem will be essential for maintaining trust, fairness, and long-term sustainability in AI-driven healthcare.

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