



A CRITICAL ANALYSIS ON THE INTERDISCIPLINARY PERSPECTIVES ON THE INTERSECTION OF DEVICES IN RADIOLOGY AND PHYSICAL THERAPY

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Abstract.

This article analyzes the crossing point and overlapping shapes of radiology gear in physical therapy. By investigating existing archives and methods, the study gives knowledge into the results, challenges, and openings that emerge from the integration of these exercises. Investigate how progress within the utilization of radiation therapy is affecting healthcare and article clarifies the integration of radiology and physical therapy, the joint utilization of progressed



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innovation, and its potential to move patients forward. The advancement of innovation in healthcare touches on vital subjects such as examination, conclusion, therapy, and innovation. From a basic viewpoint, this consideration points to pick up a more profound understanding of the integration of radiology gadgets and physical therapy by proposing earlier inquiries about headings, consequent, and clinical techniques to progress persistent results and advance well-being.

Keywords:

Devices, radiology, physical therapy, interdisciplinary collaboration, healthcare delivery, personalized care, clinical outcomes, technological advancements, patient-centered approach, integration, barriers, synergy, innovation, quality of life, paradigm shift.

Introduction

The integration of cutting-edge innovation into radiology has introduced an unused period of diagnostics that has revolutionized physical therapy and physical therapy. It is seen and analyzed. This alter gives specialists phenomenal access to the human body, making it simpler to analyze and arrange personalized medications (Dal Mas et.al.2023). At the same time, the field of physical therapy has advanced to prioritize evidence-based intercessions outlined to advance healing and progress in understanding results. This article investigates the relationship between gadgets and physical therapy, highlighting the potential for joint innovation and collaborative collaboration to mend patients (Jensen et.al.2021).

Transformative Impact of Advanced Devices in Radiology

The development of progressed innovation in radiology has changed demonstrative hones. Advances such as Magnetic Resonance Imaging (MRI), computed tomography (CT) filters, and ultrasound have ended up as crucial apparatuses for doctors, giving a one-of-a-kind and extended see of anatomical structures and neurotic forms (McClure et.al.2023). This innovation permits specialists to identify more anomalies, permitting for prior determination and more compelling therapy procedures. Developments in estimation methods proceed to thrust the boundaries of therapeutic science, giving knowledge into the workings of the body and disease (Abbas & Costa,2023).

Evidence-based intercessions in physical therapy.

At the same time, physical therapy has been proven as the premise for clinical hone. Physical specialists utilize an assortment of intercessions, counting medicines, therapeutic methods, and strategies such as ultrasound and radiology incitement to reestablish work and progress the well-being of patients. At the heart of the hone of physical therapy is the significance of individualized therapy plans to fit each patient's special needs and objectives. Through

comprehensive assessment and customary assessment, specialists work to progress results and advance the greatest independence (Sankaran & Holmes, 2023).

Synergistic Collaboration and Optimized Patient Care

In this setting, the crossing point of radiology vitality and physical therapy hardware makes a valuable premise for joint wander. By leveraging the control of these disciplines, doctors can take a more compelling approach to persistent care and coordinate symptomatic data with clinical enhancement to progress results. For illustration, investigating discoveries can educate the improvement of workout programs or direct the determination of fitting medicines. Then again, useful and clinical evaluation amid physical therapy can assist the radiologist in deciphering things more clearly by giving recommendations (Spiegel et.al.2024).

The integration of radiology gadgets and physical therapy could be an insurgency in pharmaceuticals, with a gigantic effect on patients and therapy techniques. By recognizing the relationship between these exercises and collaborating, specialists can utilize the complete potential of innovation to make strides in results and move forward in understanding lives (Falowski et.al.2020). In the future, further development and ventures in the inquiry will be vital to advance the integration of radiation and physical therapy, eventually progressing the proficiency and working of therapy.

Literature Review

The integration of advanced radiology equipment has changed the world of healthcare. Magnetic Resonance Imaging (MRI), computed tomography (CT), and ultrasound have become imperative devices in the conclusion and therapy of numerous conditions. These estimation models give a special understanding of human life systems and physiology, permitting specialists to form accurate and educated therapy decisions (Ayo-Farai et.al.2023).

Adequacy of Indication Methods in Deciding Musculoskeletal Framework Disorders

Investigators have found that visual strategies such as MRI and CT are critical in the diagnosis of musculoskeletal illnesses. MRI is known for its amazing tissue division capabilities and is valuable in diagnosing conditions such as tendon tears, wounds, and cartilage. The capacity to see plans in detail permits specialists to see plans that other procedures cannot distinguish. a CT check can give pictures of complex bones and offer assistance in distinguishing bone diseases, changes, and tumours within the musculoskeletal framework. These models give a comprehensive view of survival information and illnesses, permitting experts to make exact analyses and treatment plans for each circumstance. Their part within the musculoskeletal framework reflects their bolster for treatment, giving intercession bolster and keeping the comes about quiet (Khan, 2023).

Guides for compelling restorative decision-making and monitoring

Diagnosis has remained critical from decision-making to decision-making to re-initiating repair. For case, MRI can give amazing data about tissue harm and enduring conditions such as osteoarthritis and rheumatoid joint pain. By giving point-by-point data on tissue designs, MRI can help specialists make treatment plans that meet each patient's one-of-a-kind needs, expanding the advantage of about and lessening time (Filippi et al., 2020). Furthermore, restorative tests such as ultrasound give precision and security by providing fast imaging of the body during the examination. This capability permits experts to identify and regulate drugs such as mixtures or immunizations precisely. By planning radiography with treatment choices, specialists can personalize medications to realize what comes about while minimizing dangers and complications. (Eigentler et al., 2022). This proposes that radiography is a vital portion of upgrading calm care, moving forward clinical results, and expanding calm fulfilment.

Role of Technological Advancements in Physical Therapy

At the same time, physical therapy inquiries about the significance of decision-making and pee innovation bolster the therapy of patients. Physical specialists utilize an assortment of strategies to reestablish work and development in patients with musculoskeletal and neurological clutters, counting physical therapy, therapeutic methods, and complementary medications such as ultrasound and radiology stimulation (Iannone & Giansanti, 2023).

Tailored Interventions to Enhance Patient Rehabilitation

Advances towards the integration of physical therapy with individual care through the utilization of capability. By incorporating imaging discoveries into therapy plans, physical advisors can create workout plans and therapy conventions to address execution issues. Brokenness and biomechanical lopsided characteristics have been distinguished in imaging study. For illustration, MRI may uncover muscle decay or greasy invasion and incite the specialist to incorporate advanced reinforcing and neuromuscular therapy within the therapy handle. Radiological proof of joint precariousness or cartilage degeneration can direct the choice of medications aimed at progressing joint work and function (Whig et.al.2023).

Propels in innovation give extra openings to make strides in understanding engagement and progressing clinical results. For example, wearable gadgets give instant input on development designs and muscle enactment, permitting specialists to screen advances and alter interventions accordingly. Virtual reality stages give a great environment for therapy and exercises, empowering cooperation and inspiration within the healing handle. Utilizing this unused innovation, physical specialists can create effective and intuitive therapy programs that meet each patient's interesting needs and goals (Hudson,2023).

Interconnectedness Between Radiology and Physical Therapy

Synthesis of existing literature showing the association between radiology and physical therapy, appearing distinctive regions of integration and interaction. Whereas radiographs play a critical

part in diagnosing and observing musculoskeletal clutters, the objective of physical therapy is to utilize evidence-based medications to upgrade the patient's recovery. But in spite of these contrasts in centre and work, both disciplines have a common objective: to progress patient outcomes and cultivate a distant better, a much better, a higher, a stronger, an improved, a stronger life (Mathias, 2023).

Leveraging Imaging Findings in Physical Therapy

A vital perspective of the integration of radiology and physical therapy is the utilization of imaging discoveries to educate therapy. As already said, MRI discoveries showing muscle decay or greasy penetration may lead the physical advisor to alter the workout program to address the shortage. Radiological proof of joint precariousness or cartilage degeneration may direct therapy choices to make strides in coordination and mobility (Cecchi & Lutz, 2020).

Integration of comes found in physical therapy permits specialists to screen therapy and alter intercessions as required. For illustration, imaging studies can assess changes in tissue integrity and function over time and give valuable data during the execution of therapy. The perfect way ideal way to progress therapy is to exemplify the collaboration between the utilization of power and physical therapy in accomplishing the most excellent outcomes for the patient (giansanti, 2023).

Emphasis on Different Aspects of Patient Care

Although radiation therapy and physical therapy are related, they, too, show up to contrast in their nature, values, and hones. Whereas radiology centers essentially on the determination and characterization of pathology, physical therapy centers on useful healing and restoration. In any case, these contrasts are distinct but complementary since they reflect each discipline's diverse aptitudes and commitments to nursing (Aminizadeh et.al.2023).

Towards Integrated Patient Care

The literature illustrates the interaction between the utilization of power and physical therapy with respect to their relationship, joining the utilization of imaging and individual intercessions to move forward with quiet quality. By combining this information, this article highlights the relationship between radiation and physical therapy and illustrates the potential for collaboration to progress clinical results and improve patients' lives. In the future, a coordinated approach that leverages the qualities of both disciplines will be required to meet the desires of patients with musculoskeletal clutters and neurological conditions, eventually driving them to therapy (Sinha et.al.2022).

Methods

Literature Review

Peer-reviewed writing, clinical considerations, and hone rules were surveyed to determine the interaction between radiation therapy and physical therapy. This included a subjective look at different databases, including PubMed, MEDLINE, and Google Researcher, utilizing catchphrases such as radiology, physiotherapy, tools, imaging models, and key focuses. The look was restricted to articles distributed within the final ten a long time to guarantee comes about and relevance.

Identification and Selection of Relevant Literature

The introductory look yielded a wide run of items, counting all sorts of radiology and physical therapy items. To encourage the determination, preparation, incorporation, and prohibition criteria were set up based on significance to the study targets. Things that centre on the utilization of radiology and physical therapy hardware, examine the crossing point of these specialties, and give knowledge into collaboration or effect on patients will be included in CARES (Filippi et.al.2020). Things that cantered on a single teacher or were irrelevant to the inquiry about the subject were excluded.

Data Extraction and Synthesis

After analyzing the important information, perform information extraction to extricate key information counting plan, members, important topic impacts, and comes about. This information was made to recognize similarities, differences, and irregularities within the information. The point is to reveal proof with respect to the adequacy, challenges, and openings related to the integration of radiology gadgets and therapy of the body and its effect on therapy and persistent care.

Case Studies and Expert Interviews

In addition to the writing audit, case studies and master interviews were conducted to supply a real-life view and proposals on collaboration between radiologists and physiotherapists. Case thinks were chosen to represent the collaborative nature of collaboration and illustrate the positive results accomplished through the integration of innovation into patient care. Master interviews were conducted with radiology and physical specialists to supply knowledge into current hones, challenges, and hand care sharing opportunities (Borah & Nath, 2023).

Data Analysis and Interpretation

Information is obtained from writing audits, case studies, and master interviews and analysed through subjective investigation strategies to recognize diverse concepts, designs, and patterns. These discoveries are outlined to advise analyses and basic discourses that highlight the impacts, challenges, and openings displayed by the crossing point of hardware and therapeutic gadgets. The objective is to distinguish common and diverse regions between these specialties and create proposals to move forward coordination and quiet care (Zahlan et.al.2023).

Ethical Considerations

Decision-making is critical throughout the investigation. All data obtained from narrative proof, inquiries about articles, and master interviews have been kept private to understand moral rules. Educated assent was gotten from members in case study and master interviews, and steps were taken to guarantee secrecy and privacy. Precise and acknowledged data is kept up to guarantee scholarly judgment and regard for mental property rights (Doria, 2023).

This thinks about utilizing a strategy to explore the interaction between radiology radiation and physical therapy. Through writing surveys, case considers, and master interviews, distant better, a much better, a higher, a stronger, an improved, and a stronger understanding of collaboration, challenges, and openings for the integration of particular items are recognized. The results of this think-about give a more profound understanding of the integration of radiology and physical therapy and give suggestions for moving forward facilitated care and progressing quiet results (Dal Mas et.al.2023).

Results and Findings

The analysis conducted in this study uncovered that there's a critical cover between radiology gadgets and physical therapy, particularly within the ranges of determination, therapy, and therapeutic hardware. Progressed imaging procedures such as practical MRI (fMRI) and dissemination tensor imaging (DTI) direct therapy plans by giving way better data regarding neuroplasticity and tissue recovery. Essentially, wearable gadgets, robots, and virtual reality stages are moving forward in clinical administrations, expanding understanding engagement and efficiency.

Diagnostic Imaging Devices in Radiology and Physical Therapy

Diagnostic imaging devices play a crucial role in both radiology and physical therapy, facilitating accurate diagnosis and therapy planning. Diagnostic imaging equipment is an important tool in radiology and physical therapy and is important for accurate diagnosis and therapy strategies. These tools allow doctors to see internal patterns and identify abnormalities, guiding the development of effective intervention plans tailored to each patient's needs. In radiology, they provide detailed images for diagnosis and evaluation of disease progression, while in physical therapy, they help evaluate musculoskeletal system injuries and monitor therapy. Diagnostic tools that bridge the gaps between diagnosis and therapy improve interdisciplinary patient care, improve outcomes, and heal good people (Kigin, 2022).

Table 1 compares the charts utilized within the two ventures, highlighting their preferences and applications.

Table 1: Comparison of Imaging Modalities in Radiology and Physical Therapy

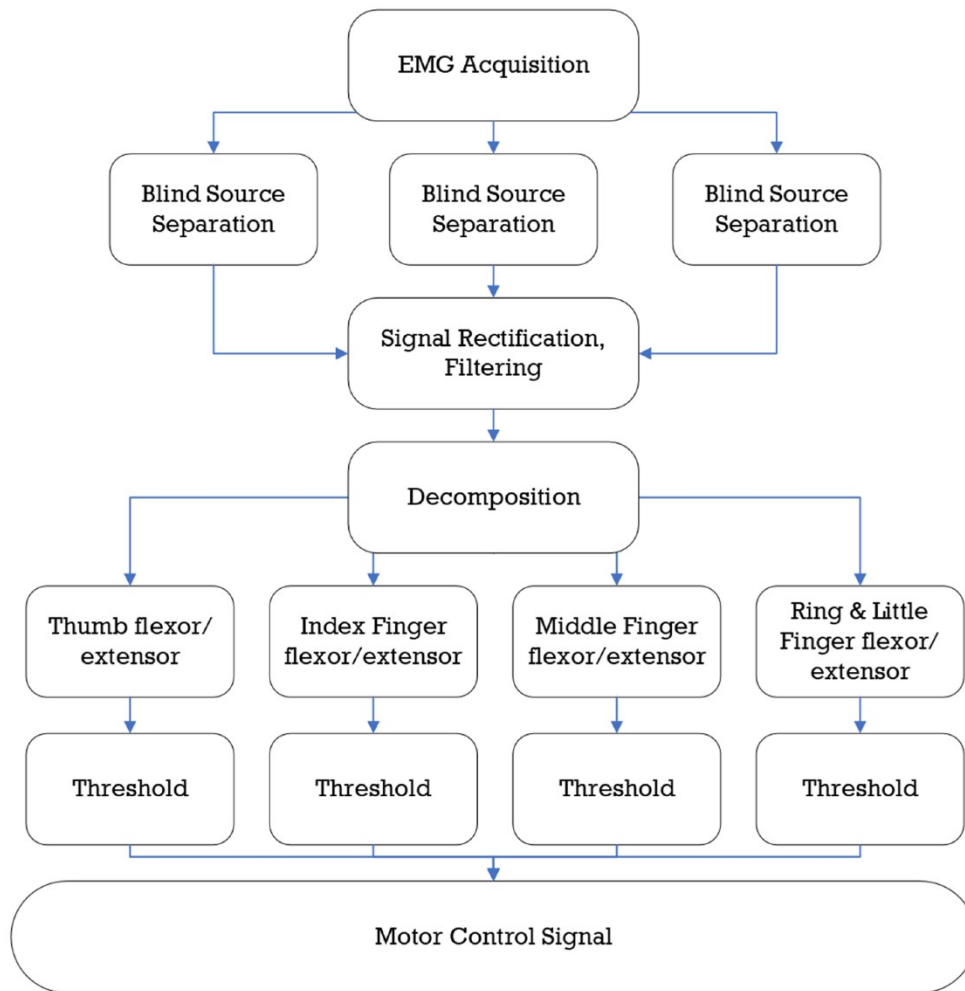
Imaging	Radiology Applications	Physical	Therapy
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Modality	Applications	
MRI	<ul style="list-style-type: none"> - Identification of ligament tears, tendon injuries, and cartilage defects - Assessment of soft tissue structures 	<ul style="list-style-type: none"> - Evaluation of muscle atrophy and fatty infiltration - Guidance for targeted exercise programs
CT scan	<ul style="list-style-type: none"> - Detailed visualization of bone structures - Diagnosis of fractures and tumours within the musculoskeletal system 	<ul style="list-style-type: none"> - Identification of fractures and bony abnormalities - Assessment of bone healing and alignment
Ultrasound	<ul style="list-style-type: none"> - Real-time visualization during interventional procedures - Assessment of soft tissue injuries and inflammation 	<ul style="list-style-type: none"> - Guidance for joint injections and aspirations - Assessment of muscle and tendon integrity

Therapeutic Modalities and Rehabilitation Tools

In radiation therapy and physical therapy, medications and therapeutic hardware, as well as demonstrative hardware, play an imperative part. It, too, plays an imperative part in quiet results. Figure 1 shows the different apparatuses utilized in therapy and rehabilitation (Falowski et.al.2020).

Figure 1: Devices Utilized in Therapeutic Interventions and Rehabilitation



Wege's EMG control algorithm recreated; The device begins by reading the sensed values from three sources before filtering and deciphering the data to control the actuation (Falowski et.al.2020).

Figure 1 shows an instrument for the therapy and recovery of Wege's electromyographic control calculation. This complex framework works by collecting data values from three diverse sources. After this, to begin with, the step is to calculate the channel carefully and translate the collected information to better control the driver. Utilizing the control of progressed calculations and sensor innovation, these gadgets can give exact and nitty-gritty therapeutic administrations (Falowski et.al.2020). This level of control will offer assistance tailor the recovery program to the patient's particular needs, hence expanding the viability of the therapy. Joining Wege's electromyographic control calculations, this gadget speaks to a critical forward step in clinical hone with the potential to progress in understanding results and move forward with recuperation forms.

Challenges and Opportunities in Collaborative Care Delivery

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When items are combined in radiology and physical therapy, there are still numerous challenges to making strides in persistent care, and numerous challenges stay.

Table 2: Challenges and Opportunities in Collaborative Care Delivery

Challenges	Opportunities
Interdisciplinary communication	Enhance collaboration through shared decision-making processes
Data integration	Implement interoperable systems for seamless data sharing
Resource allocation	Optimize resource utilization through coordinated care delivery

The examinations in this study uncover critical covers between radiology and physical medications. Progressed imaging advances, therapy strategies, and restoration gear play an imperative part in supporting the exact determination focused on mediation and recovery. Be that as it may, challenges such as communication holes and asset assignment stay and require collaborative procedures to make strides in understanding quality. In the future, proceeded development and collaboration between radiologists and physical advisors will be key to overcoming these challenges and progressing quiet outcomes (McClure et.al.2023).

Discussion

Leveraging Interdisciplinary Collaboration to Enhance Clinical Outcomes

The integration of radiology gadgets and physical therapy offers a phenomenal opportunity to make strides in clinical results and understanding encounters. By utilizing the combination of these specialties, specialists can utilize a viable strategy for conclusion, therapy, and restoration (Sinha et.al.2022). But systemic boundaries such as repayment approaches, administrative systems, and proficient silos ruin consistent collaboration. Understanding these challenges requires collaborative working, administrative systems, and proceeding instruction to back development and best hones in healthcare.

Opportunities for Enhancing Clinical Outcomes

The integration of radiology gadgets and physical therapy holds an awesome guarantee for making strides in therapy results over a wide extend of patients and disorders. Progressed imaging innovations such as MRI and CT look to give nitty gritty data about life structures and neurotic forms, permitting precise determination and therapy arranging. Additionally, medications such as ultrasound and radiology incitement offer non-invasive alternatives for torment administration and tissue repair. By utilizing this innovation collaboratively, specialists can create therapy methodologies and progress persistent outcomes (Borah & Nath, 2023).

Joining wearable innovations, mechanical technology, and virtual reality stages into healthcare programs can increment quiet engagement and efficiency. These advances give a lock-in and intelligent encounter that empowers patients to take part in the recuperating handle, driving them to superior therapy adherence and superior results. In expansion, the real-time checking capabilities given by the gadget permit specialists to screen patients remotely and alter intercessions as essential, sparing individual care and time(Zahlan et.al.2023).

Barriers to Seamless Collaboration

Despite the benefits of the integration of radiology gadgets and physical therapy, numerous issues anticipate concordant collaboration between these specialties. Repayment approaches regularly decide the accessibility and utilization of therapeutic administrations, driving aberrations in getting to imaging and recovery. Moreover, strategies for utilizing therapeutic gadgets may vary between specialties, driving to destitute hones, and benchmarks of care (Kigin, 2022).

Private silos compound these challenges since specialists may not have time to collaborate and collaborate. Radiologists and physical advisors frequently work in completely different divisions or areas, which limits communication and coordination. This proportioning of care can lead to impoverished, quiet results and underutilization of resources (Doria, 2023).

Strategies for Overcoming Challenges

Overcoming collaborative challenges will require collaboration among policymakers, healthcare directors, and healthcare suppliers, including cutting-edge doctors. Group collaboration ought to be energized and upheld through measures such as multidisciplinary groups and collaborative learning. By developing a culture of collaboration and collaboration, healthcare organizations can dispense with worker silos and energize collaboration for quiet care (Doria, 2023).

Policies and rules for the integration of radiology and physical therapy can assist in advancing consistency in care and honing. These assertions clearly define providers' parts and obligations, set up a communication system for sharing quiet data, and give direction on the best ways to utilize the apparatuses. Moreover, proceeding with instruction and preparation can offer assistance to specialists to remain current on technology and evidence-based guidelines, allowing them to supply patients with the best possible care.

Conclusion

The integration of radiology and physical therapy has driven changes in therapy in terms of identity and instructing with respect to persistent care in common. Through collaborative collaboration, specialists can utilize the total potential of innovation to progress clinical results and make strides in patients' quality of life. In the future, associations ought to be facilitated to overcome obstructions and advance the integration of these specialties, with a commitment that there will continuously be limits to the way to go. Canter on development, collaboration, and

persistent care, the integration of radiology innovation and physical therapy holds a guarantee for healthcare change and progressing persistent well-being worldwide.

Recommendations

- Make an organization of intelligent and instructive pioneers to advance communication and data exchange.
- Build up formal strategies for data sharing, integration, and collaborative decision-making (Kigin, 2022).
- Advocate for arrangement change and repayment models that back care and innovation.
- Contributing to inquiries about and advancement exercises to find modern applications for radiology gadgets and physical therapy devices.
- On the significance of intrigue instruction and proceeding instruction to make strides in the social, mental, and proficient abilities of specialists.

Reference

- Jensen, L. D., Oliva, D., Andersson, B. Å., & Lewin, F. (2021). A multidisciplinary perspective on the complex interactions between sleep, circadian, and metabolic disruption in cancer patients. *Cancer and Metastasis Reviews*, 40(4), 1055-1071. <https://link.springer.com/article/10.1007/s10555-021-10010-6>
- Abbas, S., & Costa, L. (2023). Biomedical Engineering: Bridging The Gap Between Technology and Medicine. *The Research of Medical Science Review*, 1(02), 128-136. <http://thermsr.com/index.php/Journal/article/view/15>
- Sankaran, K., & Holmes, S. P. (2023). Generative models: An interdisciplinary perspective. *Annual Review of Statistics and Its Application*, 10, 325-352. <https://www.annualreviews.org/doi/abs/10.1146/annurev-statistics-033121-110134>
- Spiegel, B. M., Rizzo, A., Persky, S., Liran, O., Wiederhold, B., Woods, S., ... & Zhang, H. (2024). What Is Medical Extended Reality? A Taxonomy Defining the Current Breadth and Depth of an Evolving Field. *Journal of Medical Extended Reality*, 1(1), 4-12. <https://www.liebertpub.com/doi/abs/10.1089/jmxr.2023.0012>
- Ayo-Farai, O., Olaide, B. A., Maduka, C. P., & Okongwu, C. C. (2023). Engineering innovations in healthcare: a review of developments in the USA. *Engineering Science & Technology Journal*, 4(6), 381-400. <https://link.springer.com/article/10.1007/s10816-022-09566-6>
- Khan, I. (2023). Radiology in Emergency Situations: Diagnosing and Managing Critical Cases. <https://osf.io/8j93d/download>
- Eigentler, L., Davidson, F. A., & Stanley-Wall, N. R. (2022). Mechanisms driving spatial distribution of residents in colony biofilms: an interdisciplinary perspective. *Open Chelonian Conservation and Biology* <https://www.acgpublishing.com/>

- Biology*, 12(12),
220194. <https://www.sciencedirect.com/science/article/pii/S0959652623046875>
- Iannone, A., & Giansanti, D. (2023). Breaking Barriers—The Intersection of AI and Assistive Technology in Autism Care: A Narrative Review. *Journal of Personalized Medicine*, 14(1), 41. <https://www.mdpi.com/2075-4426/14/1/41>
- Whig, P., Velu, A., Nadikattu, R. R., & Alkali, Y. J. (2023). Computational Science Role in Medical and Healthcare-Related Approach. *Handbook of Computational Sciences: A Multi and Interdisciplinary Approach*, 245-272. <https://onlinelibrary.wiley.com/doi/abs/10.1002/9781119763468.ch12>
- Hudson, J. (2023). Navigating Critical Care: A Comprehensive Guide for Emergency Medicine Physicians. *Indus Journal of Medical and Health Sciences*, 1(2), 14-28. <https://induspublishers.com/IJMHS/article/view/33>
- Mathias, A. (2023). Navigating Critical Care: A Comprehensive Guide for Emergency Medicine Physicians. <https://osf.io/njdzf/download>
- Cecchi, A., & Lutz, M. (2020). Interdisciplinary perspectives on musical performance: Historical and recent research. *MUSICAL CULTURES OF THE TWENTIETH CENTURY*. <https://arpi.unipi.it/handle/11568/1047430>
- Aminizadeh, S., Heidari, A., Toumaj, S., Darbandi, M., Navimipour, N. J., Rezaei, M., ... & Unal, M. (2023). The applications of machine learning techniques in medical data processing based on distributed computing and the Internet of Things. *Computer methods and programs in biomedicine*, 107745. <https://www.sciencedirect.com/science/article/pii/S016926072300411X>
- Giansanti, D. (2023). An Umbrella Review of the Fusion of fMRI and AI in Autism. *Diagnostics*, 13(23), 3552. <https://www.mdpi.com/2075-4418/13/23/3552>
- Sinha, S. S., Bohula, E. A., Van Diepen, S., Leonardi, S., Mebazaa, A., Proudfoot, A. G., ... & Katz, J. N. (2022). The intersection between heart failure and critical care cardiology: an international perspective on structure, staffing, and design considerations. *Journal of Cardiac Failure*. <https://www.mdpi.com/2075-4418/13/23/3552>
- Filippi, L., Chiaravalloti, A., Schillaci, O., Cianni, R., & Bagni, O. (2020). Theranostic approaches in nuclear medicine: Current status and future prospects. *Expert review of medical devices*, 17(4), 331-343. <https://induspublishers.com/IJMHS/article/view/34>
- Borah, G., & Nath, A. C. (2023). MERGING TECH AND MEDICINE: BIOMEDICAL ENGINEERING AT THE CUTTING EDGE. *Mr. Subharun*

Pal, 114. <https://www.bhumipublishing.com/wp-content/uploads/2023/12/Research-Trends-in-Science-and-Technology-Volume-IV.pdf#page=120>

- Zahlan, A., Ranjan, R. P., & Hayes, D. (2023). Artificial intelligence innovation in healthcare: Literature review, exploratory analysis, and future research. *Technology in society*, 102321. <https://www.sciencedirect.com/science/article/pii/S0160791X23001264>
- Doria, A. S. (2023). Applications of artificial intelligence in clinical management, research, and health administration: imaging perspectives with a focus on hemophilia. *Expert Review of Hematology*, 16(6), 391-405. <https://www.tandfonline.com/doi/abs/10.1080/17474086.2023.2192474>
- Dal Mas, F., Massaro, M., Ripa, P., & Secundo, G. (2023). The challenges of digital transformation in healthcare: An interdisciplinary literature review, framework, and future research agenda. *Technovation*, 123, 102716. <https://www.sciencedirect.com/science/article/pii/S0166497223000275>
- Kigin, C. M. (2022). Innovation: It's in Our DNA. *Physical Therapy*, 102(9), pzac100. <https://academic.oup.com/ptj/article-abstract/102/9/pzac100/6730976>
- Falowski, S., Sayed, D., Pope, J., Patterson, D., Fishman, M., Gupta, M., & Mehta, P. (2020). A review and algorithm in the diagnosis and treatment of sacroiliac joint pain. *Journal of pain research*, 3337-3348. <https://www.tandfonline.com/doi/abs/10.2147/JPR.S279390>
- McClure, R. S., Lindsay, T. F., Keir, M., Bayne, J. P., Berry, R. F., Chu, M. W., ... & Rommens, K. L. (2023). The Aortic Team Model and Collaborative Decision Pathways for the Management of Complex Aortic Disease: Clinical Practice Update from the Canadian Cardiovascular Society/Canadian Society of Cardiac Surgeons/Canadian Society for Vascular Surgery/Canadian Association for Interventional Radiology. *Canadian Journal of Cardiology*, 39(11), 1484-1498. <https://www.sciencedirect.com/science/article/pii/S0828282X2301574X>