EDITORIAL

Closing 2025: Celebrating Knowledge, Spotlighting Key Advances, and Inviting the Next Wave

Amir R. Kachooei[1,2], Mohammd H. Ebrahimzadeh[1]

1. Orthopedic Research Center, Department of Orthopedic Surgery, Mashhad University of Medical Sciences, Mashhad, Iran

2. Rothman Orthopaedics Florida at AdventHealth, Orlando, FL, USA

As we release the final issue of 2025 for Archives of Bone and Joint Surgery (ABJS), I am honored to reflect on a year that has produced rich, diverse, and, in several instances, high-impact contributions to orthopedic science and clinical practice. Beyond the steady stream of case reports and original clinical studies, 2025 has delivered a number of important systematic reviews and meta-analyses, and hypothesis-driven research, that hold promise to shape both thought and practice in our field.

Notable Contributions of 2025

Among the standout works this year are:

1. Can Artificial Intelligence Reliably and Accurately Measure Lower Limb Alignment: A Systematic Review and Meta-Analysis (Vol 13, Issue 7): This meta-analysis aggregated data from 28 observational studies, covering more than 47,000 patients and over 61,000 imaging studies, and demonstrated that artificial intelligence (AI)-driven measurement of lower limb alignment angles (such as hip-knee alignment (HKA) and mechanical tibiofemoral angle) can achieve near-perfect reliability compared to manual measurements. Such findings highlight a strong potential for AI tools to enhance consistency and efficiency in preoperative planning and alignment assessment.[1]

2. Complications Rate and Hip Function after Revision of Infected Hip Arthroplasty with Bone Defects using Bone Allografts: A Systematic Review and Meta-Analysis (Vol 13, Issue 9): This meta-analysis synthesizes existing data on revision of infected hip arthroplasties complicated by bone defects, a challenging clinical scenario. By consolidating evidence on complication rates and functional outcomes, it provides valuable guidance for surgeons and helps inform both patient counselling and surgical decision-making.[2]

3. Practice Trends in Primary Total Knee Arthroplasty among Members of the Iranian Society of Knee Surgery, Arthroscopy, and Sports Traumatology (Vol 13, Issue 6): This original research offers a detailed analysis of real-world practice patterns among knee surgeons, an important barometer of how guidelines and evidence translate into everyday surgical decision-making. Its findings illuminate variations in indications, implant choices, and surgical approaches, thus providing a snapshot of contemporary practice.[3]

4-Predictors of Lower Limb Coronal Malalignment After Conventional Total Knee Arthroplasty Using a Mechanical Alignment Strategy (Vol 13, Issue 11): This stands out because it tackles one of the most important determinants of TKA success: achieving proper postoperative alignment. Unlike many studies that simply report alignment outcomes, this paper focuses on predictive factors, offering surgeons practical insight into which patients are most at risk for malalignment before they even enter the operating room. This makes it highly valuable for preoperative planning, patient selection, and intraoperative technique adjustment, especially in the era of evolving alignment philosophies. [4]

These few examples illustrate the breadth and depth of ABJS's 2025 output, from advanced technology (AI in limb alignment), to evidence synthesis (arthroplasty revision, alignment measurement), to real-world practice data (total knee arthroplasty (TKA) trends).

Corresponding Author: Mohammd H. Ebrahimzadeh, Orthopedic Research Center, Department of Orthopedic Surgery, Mashhad University of Medical Sciences, Mashhad, Iran

Email: Ebrahimzadehmh@mums.ac.ir

THE ONLINE VERSION OF THIS ARTICLE
ABJS.MUMS.AC.IR

Why These Matter

1. Bridging research and clinical practice: The AI-LLA meta-analysis underscores how modern computational tools, when validated, can integrate into routine orthopedic workflows, improving reproducibility and reducing observer-dependence.

2. Guiding complex clinical decisions: The revision-arthroplasty meta-analysis addresses a challenging and clinically significant problem, infected arthroplasty with bone loss, offering consolidated evidence at a time when surgeons need clarity.

3. Reflecting on real-world variability: The survey of practice patterns in TKA reveals how surgical practice can diverge from guidelines or standardized protocols; such insight is essential if we aim to align practice with best evidence and identify gaps for future research.

Looking Forward: Inviting the Next Wave of Impact

Building on these successes, in 2026 I hope ABJS will continue to seek and promote:

1. Rigorous meta-analyses and systematic reviews, especially in emerging or controversial areas (e.g., AI applications, personalized orthopedics, revision arthroplasty strategies).

2. Translational and real-world research, studies that help bridge the gap between cutting-edge research and everyday orthopedic practice across diverse settings.

3. Innovative, tech-driven work, from imaging and AI to biomaterials and surgical navigation — always paired with robust validation and critical evaluation.

4. Global inclusiveness and diversity of contributors, both in geography and in clinical setting (e.g., high-volume centers, community hospitals, low-resource settings), to ensure the generalizability and applicability of findings.

In Appreciation

I extend my deepest gratitude:

1. To our authors, those who dared to ask bold questions and pursue meticulous analyses;

2. To our reviewers, whose insightful critiques and unwavering commitment uphold the integrity of our publication;

3. To our readers, whose trust and engagement drive our mission.

To prospective authors: we encourage you to contribute your best work. Let's make 2026 a year of even greater collaboration, deeper insight, and meaningful impact.

With warm regards,
Mohammad H. Ebrahimzadeh, MD
Editor-in-Chief, The Archives of Bone and Joint Surgery

Amir R. Kachooei[1,2]
Mohammd H. Ebrahimzadeh*[1]
1. Orthopedic Research Center, Department of Orthopedic Surgery, Mashhad University of Medical Sciences, Mashhad, Iran
2. Rothman Orthopaedics Florida at AdventHealth, Orlando, FL, USA

References

1. Khani Y, Bisadi A, Salmani A, et al. Can Artificial Intelligence Reliably and Accurately Measure Lower Limb Alignment: A Systematic Review and Meta-Analysis. Arch Bone Jt Surg. 2025;13(7):383-394. doi:10.22038/ABJS.2025.84846.3864

2. Samei M, Mortazavi SJ, Sahebi M, et al. Complications Rate and Hip Function After Revision of Infected Hip Arthroplasty with Bone Defects using Bone Allografts: A Systematic Review and Meta-Analysis. Arch Bone Jt Surg. 2025;13(9):537-549. doi:10.22038/ABJS.2025.90232.4092

3. Sherafatvaziri A, Salkhori O, Razi M, et al. Practice Trends in Primary Total Knee Arthroplasty among Members of the Iranian Society of Knee Surgery, Arthroscopy, and Sports Traumatology. Arch Bone Jt Surg. 2025;13(6):359-366. doi:10.22038/ABJS.2025.85348.3889

4. Hasani Satehi S, Razzaghof M, Rahimnia A, Tamehri Zadeh SS, Salehi M, Mortazavi SM. Predictors of Lower Limb Coronal Malalignment after Conventional Total Knee Arthroplasty Using a Mechanical Alignment Strategy. The Archives of Bone and Joint Surgery. 2025;;13(11):726-37. Doi: 10.22038/ABJS.2024.81663.3719