

## Alexa Pius

- Affiliate, Department Funds
- Resident in Orthopaedic Surgery

### Publications

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#### PUBLICATIONS

- **Immune profiling in orthopaedic diseases using mass cytometry : a narrative review of applications and future directions.** *Bone & joint research*  
Susuki, Y., Thukkaram, M., Shinohara, I., Murayama, M., Morita, M., Igei, T., Ma, C., Pius, A. K., Gao, Q., Chow, S. K., Goodman, S. B.  
2026; 15 (5): 497-507
- **Unsupervised Machine Learning Drives Dynamic Alignment Classification In Navigated Total Knee Arthroplasty.** *The Journal of arthroplasty*  
Pius, A. K., Chinimilli, P. T., Angibaud, L. D., Jung, A., Jackson, C. A., Huddleston, J. I.  
2026
- **Widening Gaps in Episode of Care Markers between Medicare Managed Care and Medicare Fee-for-Service in Spinal Fusion.** *The spine journal : official journal of the North American Spine Society*  
Pius, A. K., Wong, H., Koltsov, J. C., Hu, S. S., Schoenfeld, A. J., Xiong, G. X.  
2026
- **Substantial Clinical Benefit After Total Knee Arthroplasty Has Been Set Too High: An Analysis of the American Joint Replacement Registry.** *The Journal of bone and joint surgery. American volume*  
Zalikhha, L., Chen, K. L., Pius, A. K., Sanchez, M., Zaniletti, I., Huddleston, J. I.  
2026
- **Understanding the radiographic anatomy of the patella to avoid placement of intra-articular implants.** *European journal of orthopaedic surgery & traumatology : orthopedie traumatologie*  
Pius, A., Cruz, J., Tedesco, C., Skaggs, K., Hunt, A., Goodnough, H., Gardner, M., Bishop, J.  
2025; 35 (1): 411
- **Metformin Modulates Oxidative Stress in Murine Mesenchymal Stem Cells In Vitro and Alleviates Corticosteroid-Induced Inflammation and Impairment of Bone Formation** *HSS JOURNAL*  
Shinohara, I., Susuki, Y., Murayama, M., Gao, Q., Cekuc, M., Ergul, Y., Morita, M., Pius, A. K., Ma, C., Chow, S., Goodman, S. B.  
2025
- **Metformin Modulates Oxidative Stress in Murine Mesenchymal Stem Cells In Vitro and Alleviates Corticosteroid-Induced Inflammation and Impairment of Bone Formation.** *HSS journal : the musculoskeletal journal of Hospital for Special Surgery*  
Shinohara, I., Susuki, Y., Murayama, M., Gao, Q., Cekuc, M. S., Ergul, Y. S., Morita, M., Pius, A. K., Ma, C., Chow, S. K., Goodman, S. B.  
2025: 15563316251351031
- **Short-term outcomes of locking mini-fragment plate fixation for treatment of Vancouver B2 periprosthetic femur fractures.** *European journal of orthopaedic surgery & traumatology : orthopedie traumatologie*  
Lee, M. L., Pius, A. K., Goodnough, L. H.  
2025; 35 (1): 288
- **Optimization of Cytometry by Time-of-Flight Staining for Peripheral Blood and Bone Marrow Samples.** *Tissue engineering. Part C, Methods*  
Susuki, Y., Shinohara, I., Murayama, M., Morita, M., Ma, C., Pius, A. K., Gao, Q., Chow, S. K., Goodman, S. B.  
2025; 31 (7): 261-270
- **Navigated and Robotic Total Knee Arthroplasty Do Not Confer Improved 5-Year Survivorship Compared to Conventional TKA: An Analysis from the American Joint Replacement Registry.** *The Journal of arthroplasty*

- Pius, A. K., Sporer, S. M., Sterling, O., De, M., Jahan, M., Browne, J. A., Springer, B. D., Huddleston, J. I.  
2025
- **Metformin Modulates Cell Oxidative Stress to Mitigate Corticosteroid-Induced Suppression of Osteogenesis in a 3D Model.** *Journal of inflammation research*  
Cekuc, M. S., Ergul, Y. S., Pius, A. K., Meagan, M., Shinohara, I., Murayama, M., Susuki, Y., Ma, C., Morita, M., Chow, S. K., Bunnell, B. A., Lin, H., Gao, et al  
2024; 17: 10383-10396
  - **3D Culture of MSCs for Clinical Application** *BIOENGINEERING-BASEL*  
Gao, Q., Cekuc, M., Ergul, Y., Pius, A. K., Shinohara, I., Murayama, M., Susuki, Y., Ma, C., Morita, M., Chow, S., Goodman, S. B.  
2024; 11 (12)
  - **3D Culture of MSCs for Clinical Application.** *Bioengineering (Basel, Switzerland)*  
Gao, Q., Cekuc, M. S., Ergul, Y. S., Pius, A. K., Shinohara, I., Murayama, M., Susuki, Y., Ma, C., Morita, M., Chow, S. K., Goodman, S. B.  
2024; 11 (12)
  - **The Advantages and Shortcomings of Stem Cell Therapy for Enhanced Bone Healing** *TISSUE ENGINEERING PART C-METHODS*  
Chow, S., Gao, Q., Pius, A., Morita, M., Ergul, Y., Murayama, M., Shinohara, I., Cekuc, M., Ma, C., Susuki, Y., Goodman, S. B.  
2024; 30 (10): 415-430
  - **The advantages and shortcomings of stem cell therapy for enhanced bone healing.** *Tissue engineering. Part C, Methods*  
Chow, S. K., Gao, Q., Pius, A., Morita, M., Ergul, Y. S., Murayama, M., Shinohara, I., Cekuc, M. S., Ma, C., Susuki, Y., Goodman, S. B.  
2024
  - **Patient Acceptance of Reoperation Risk for Lumbar Decompression Versus Fusion.** *The spine journal : official journal of the North American Spine Society*  
Pius, A. K., Joseph, Y. D., Mullis, D. M., Koduri, J., Levin, J., Alamin, T. F.  
2024
  - **Correction: Pius et al. Effects of Aging on Osteosynthesis at Bone-Implant Interfaces.** *Biomolecules* 2024, 14, 52. *Biomolecules*  
Pius, A. K., Toya, M., Gao, Q., Lee, M. L., Ergul, Y. S., Chow, S. K., Goodman, S. B.  
2024; 14 (3)
  - **Effects of Aging on Osteosynthesis at Bone-Implant Interfaces.** *Biomolecules*  
Pius, A. K., Toya, M., Gao, Q., Ergul, Y. S., Chow, S. K., Goodman, S. B.  
2023; 14 (1)
  - **Applying Deep Learning to Quantify Empty Lacunae in Histologic Sections of Osteonecrosis of the Femoral Head.** *Journal of orthopaedic research : official publication of the Orthopaedic Research Society*  
Lui, E., Maruyama, M., Guzman, R. A., Moeinzadeh, S., Pan, C., Pius, A. K., Quig, M. S., Wong, L. E., Goodman, S. B., Yang, Y. P.  
2021