Dr. Wlla E. Al-Hammad

Position: Assistant Professor

Affiliation: Department of Oral Medicine and Oral Surgery, Jordan University of Science & Technology, Jordan.

Phone: +819064168642

E-mail: wealhammad@just.edu.jo

pbm51ygk@s.okayama-u.ac.jp

Personal information

Birth date: November 30th, 1993.

Gender: Female.

Nationality: Jordan.

Residence location: Okayama city, Japan.

Marital status: Single.

Languages: English, Japanese and Arabic.

Education

- ➢ April 2020 – March 2024: **Ph.D. in Oral and Maxillofacial Radiology** (Biopathological Science), Okayama University, Japan.
- ➢ September 2011 – June 2016: **Bachelor's Degree in Dental Surgery**, Jordan University of Science and Technology, Jordan.
- ➢ July 2011: **High school**, Al Zahraa High School, Jordan.

Professional experience

- ➢ April 2024 – Present: **Assistant Professor**, Department of Oral Medicine and Oral Surgery, Jordan University of Science & Technology, Jordan.
- ➢ April 2024 – Present: **Postdoctoral Researcher**, Department of Oral and Maxillofacial Radiology, Okayama University, Japan.
- ➢ March 2023 – March 2024: **Teaching and Research Assistant**, Department of

Oral and Maxillofacial Radiology, Okayama University, Japan.

➢ April 2023 – July 2023: **Research Assistant**, Masahiro Kuroda Lab, Okayama University, Japan.

➢ January 2018 – March 2020: **Teaching and Research Assistant**, Department of Oral Medicine and Oral Surgery, Jordan University of Science & Technology, Jordan.

➢ August 2017 – October 2020: **General Dental Practitioner**, "HAYTHAM Dental Centre", Private sector, Jordan.

➢ July 2016 – July 2017: **Internship Dentist**, Al Ramtha Governmental Hospital, Jordan Ministry of Health, Jordan.

Teaching experience

➢ Clinical instructor and supervisor for the following courses:
   ✦ Preclinical Oral Diagnosis and Oral Radiology (Dent 352)
   ✦ Oral Radiology II (Dent 425)
   ✦ Oral Radiology III (Dent 523)
   ✦ Comprehensive Dentistry (Dent420)
   ✦ Introduction to clinical Dentistry (Dent 320)
➢ Mentoring undergraduate students in performing simple to complex procedures in clinical dentistry and pre-clinical skills labs.
➢ Providing guidance and support to undergraduate students in their undergraduate research projects.

Research interest

Artificial Intelligence and machine learning, Radiation oncology, Breast cancer radiotherapy, MRI, CT, Dynamic-MRI, Head and neck vascular anomalies, Imaging-diagnostic approaches.

Research skills

• Coding and Programming Languages

- Python
- R
- Jupyter Notebook
- Imaging Analysis
- Statistical Analysis
- Software SPSS
- Microsoft Office Applications
- Adobe Photoshop Software
- Vincent Software

Publications

- Nakamitsu, Y.; Kuroda, M.; Shimizu, Y.; Kuroda, K.; Yoshimura, Y.; Yoshida, S.; Nakamura, Y.; Fukumura, Y.; Kamizaki, R.; **Al-Hammad, W.E.**; et al. Enhancing Diagnostic Precision: Evaluation of Preprocessing Filters in Simple Diffusion Kurtosis Imaging for Head and Neck Tumors. J. Clin. Med. 2024, 13, 1783. https://doi.org/10.3390/jcm13061783.

- Fukumura, Y.; Kuroda, M.; Yoshida, S.; Nakamura, Y.; Nakamitsu, Y.; **Al-Hammad, W.E.**; Kuroda, K.; Kamizaki, R.; Shimizu, Y.; Tanabe, Y.; et al. Characteristic Mean Kurtosis Values in Simple Diffusion Kurtosis Imaging of Dentigerous Cysts. Diagnostics 2023, 13, 3619. https://doi.org/10.3390/diagnostics13243619.

- Kamizaki, R., Kuroda, M., **Al-Hammad, W. E.**, Tekiki, N., Ishizaka, H., Kuroda, K., Sugimoto, K., Oita, M., Tanabe, Y., Barham, M., Sugianto, I., Nakamitsu, Y., Hirano, M., Muto, Y., Ihara, H., & Sugiyama, S. (2023). Evaluation of the accuracy of heart dose prediction by machine learning for selecting patients not requiring deep inspiration breath-hold radiotherapy after breast cancer surgery. Experimental and therapeutic medicine, 26(5), 53 https://doi.org/10.3892/etm.2023.12235.

- **Al-Hammad, W. E.**, Kuroda, M., Kamizaki, R., Tekiki, N., Ishizaka, H., Kuroda, K., Sugimoto, K., Oita, M., Tanabe, Y., Barham, M., Sugianto, I., Shimizu, Y., Nakamitsu, Y., & Asaumi, J. (2023). Mean Heart Dose Prediction Using Parameters of Single-Slice Computed Tomography and Body Mass Index:

Machine Learning Approach for Radiotherapy of Left-Sided Breast Cancer of Asian Patients. Current Oncology, 30(8), 7412–7424. https://doi.org/10.3390/curroncol30080537.

➢ **Al-Hammad, W.E**., Fujikura, M., Hisatomi, M., Okada, S., Munhoz, L., Kawazu, T. ... Asaumi, J. (2023). An imaging-based diagnostic approach to vascular anomalies of the oral and maxillofacial region. Oncology Letters, 26, 394. https://doi.org/10.3892/ol.2023.13980.

➢ Shimizu, Y., Kuroda, M., Nakamitsu, Y., **Al-Hammad, W. E.**, Yoshida, S., Fukumura, Y., Nakamura, Y., Kuroda, K., Kamizaki, R., Imajoh, S., Tanabe, Y., Sugimoto, K., Oita, M., Sugianto, I., Bamgbose, B. O., Yanagi, Y., & Asaumi, J. (2023). Usefulness of Simple Diffusion Kurtosis Imaging for Head and Neck Tumors: An Early Clinical Study. Acta medica Okayama, 77(3), 273–280. https://doi.org/10.18926/AMO/65492.

➢ Barham, M., Kuroda, M., Yoshimura, Y., Hamada, K., Khasawneh, A., Sugimoto, K., Konishi, K., Tekiki, N., Sugianto, I., Bamgbose, B. O., Ishizaka, H., Shimizu, Y., Nakamitsu, Y., **Al-Hammad, W. E.**, Kamizaki, R., Kurozumi, A., Matsushita, T., Ohno, S., & Asaumi, J. (2023). Evaluation of calculation processes of apparent diffusion coefficient subtraction method (ASM) imaging. PloS one, 18(2), e0282462. https://doi.org/10.1371/journal.pone.0282462.

➢ Hirano, M., Muto, Y., Kuroda, M., Fujiwara, Y., Sasaki, T., Kuroda, K., Kamizaki, R., Imajoh, S., Tanabe, Y., **Al-Hammad, W. E.**, Nakamitsu, Y., Shimizu, Y., Sugimoto, K., Oita, M., Sugianto, I., & Bamgbose, B. O. (2023). Quantitative evaluation of the reduction of distortion and metallic artifacts in magnetic resonance images using the multiacquisition variable-resonance image combination selective sequence. Experimental and therapeutic medicine, 25(3), 109. https://doi.org/10.3892/etm.2023.11808.

➢ Kuroda, M., Konishi, K., Sugimoto, K., Yoshimura, Y., Hamada, K., Khasawnehc, A., Barham, M., Tekiki, N., Sugianto, I., Bamgbose, B. O., Ishizaka, H., Shimizu, Y., Nakamitsu, Y., **Al-Hammad, W. E.**, Kamizaki, R., Kurozumi, A., Matsushita, T., Ohno, S., Kanazawa, S., & Asaumi, J. (2022). Evaluation of Fast Diffusion Kurtosis Imaging Using New Software Designed

for Widespread Clinical Use. Acta medica Okayama, 76(3), 297–305. https://doi.org/10.18926/AMO/63739.

➢ Sugimoto, K., Kuroda, M., Yoshimura, Y., Hamada, K., Khasawneh, A., Barham, M., Tekiki, N., Konishi, K., Ishizaka, H., Shimizu, Y., Nakamitsu, Y., **Al-Hammad, W. E.**, Kamizaki, R., Kanazawa, S., & Asaumi, J. (2022). Development and Evaluation of a Short-time Imaging Method for the Clinical Study of the Apparent Diffusion Coefficient Subtraction Method. Acta medica Okayama, 76(1), 25–32. https://doi.org/10.18926/AMO/63205.

Conferences and talks

➢ February 2024: delivered a comprehensive lecture titled "Introduction to Machine Learning and AI: Innovations in Oncology" to international students at the Dental School of Okayama University.
➢ January 2024: organizing and facilitating a visit for a cohort of international students from Okayama University to Morita Company in Kyoto.
➢ December 2023: **"Poster"** the 36th Annual Meeting of the Japanese Society for Radiation Oncology (JASTRO 2023), Japan. Title "Mean heart dose prediction using machine learning for radiotherapy of left-sided breast cancer".
➢ October 2023: **"Oral presentation"** 18th International Symposium on Metal Ions in Biology and Medicine, India. Title "An imaging-based diagnostic approach to vascular anomalies of the oral and maxillofacial region".
➢ May 2023: **"Oral presentation"** the 63rd Annual General Meeting and Academic Meeting of the NPO Japanese Society of Oral Radiology, Japan. Title "An imaging-based diagnostic approach to vascular anomalies of the oral and maxillofacial region".
➢ December 2022: **Co-organizer and presenter** in the meeting of the Medical Team Exercise/ Indonesian Group, Department of Radiological Technology, Okayama University, Japan.
➢ November 2022: Attending the 41st Kansai-Kyushu Joint Regional Meeting (64th Kansai-60th Kyushu Regional Meeting) of the NPO Japan Society of Dental Radiology, Japan.
➢ May 2022: Attending the 77th Annual Meeting of the NPO Japanese Stomatological Society, Japan.

- April 2022: **"Oral presentation"** the Joint Congress of the 2nd Annual Meeting of the International Society of Oral Care and the 19th Annual Meeting of the Japanese Society of Oral Care, Japan. Title "Oral care in Hashemite Kingdom of Jordan".
- April 2021: Attending the 23rd International Congress of DentoMaxilloFacial Radiology in conjunction with the 53rd Annual Scientific Meeting of KAOMFR, South Korea.
- October 2018: Attending the 3rd International conference of faculty of Dentistry at Jordan University of Science and Technology, Jordan.

Honors, awards and grants

- January 2018: Secured a full scholarship to complete PhD degree in Oral and Maxillofacial Radiology at Okayama University in Japan, financially supported by Jordan University of Science and Technology.
- August 2023: (1500 USD) was granted by the Deanship of Scientific Research at Jordan University of Science and Technology as a monetary reward for accomplishments in scientific research.

Memberships and professional affiliations

- Member at the Jordanian Dental Association (JDA).
- Member at American Academy of Oral and Maxillofacial Radiology (AAOMR).

Website

ResearchGate: https://www.researchgate.net/profile/Wlla-Al-Hammad
Google Scholar: https://scholar.google.com/citations?hl=en&user=f1gVjzkAAAAJ
ORCID: https://orcid.org/0000-0003-0019-1110

References

1. Prof. Junichi Asaumi
    Head of the department of Oral and Maxillofacial Radiology, Okayama University, Japan.
    President of the Japanese Society for Oral and Maxillofacial Radiology
    Director of Asian Academy of Oral and Maxillofacial Radiology
    asaumi@md.okayama-u.ac.jp

2. Prof. Masahiro Kuroda
    Department of Radiological Technology, Graduate School of Health Sciences, Okayama University, Japan.
    kurodamd@cc.okayama-u.ac.jp

3. Dr. Shunsuke Okada
    Department of Oral and Maxillofacial Radiology, Okayama University Hospital, Japan.
    okadashunsuke@s.okayama-u.ac.jp