Journal Pre-proof

It is the climb that matters most: The personal and professional journey of Dr. Katarzyna Macura

Priya Dave, Kristin Porter, Kirti Magudia

PII: S0899-7071(22)00211-X
DOI: https://doi.org/10.1016/j.clinimag.2022.08.012
Reference: JCT 9777

To appear in: Clinical Imaging

Received date: 14 July 2022
Accepted date: 9 August 2022

Please cite this article as: P. Dave, K. Porter and K. Magudia, It is the climb that matters most: The personal and professional journey of Dr. Katarzyna Macura, Clinical Imaging (2022), https://doi.org/10.1016/j.clinimag.2022.08.012

This is a PDF file of an article that has undergone enhancements after acceptance, such as the addition of a cover page and metadata, and formatting for readability, but it is not yet the definitive version of record. This version will undergo additional copyediting, typesetting and review before it is published in its final form, but we are providing this version to give early visibility of the article. Please note that, during the production process, errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

© 2022 Published by Elsevier Inc.
Title:

It is the Climb that Matters Most
*The Personal and Professional Journey of Dr. Katarzyna Macura*

Authors:

Priya Dave, M.B.E
Icahn School of Medicine at Mount Sinai
Class of 2023

Kristin Porter, M.D., Ph.D.
University of Alabama
Associate Professor of Radiology

Kirti Magudia, M.D., Ph.D.
Duke University
Assistant Professor of Radiology

Keywords:
ACR Gold Medal; Women in Radiology

Key Figures:

*Figure 1 Dr. Katarzyna Macura*
**Figure 2** Dr. Macura enjoying her time sailing.

**Figure 3**
Dr. Macura (1st from left) as president of the American Association for Women in Radiology, pictured with mentors and colleagues Drs. J. Strife, C. Rumack, and R. Komaki during the 2005 annual meeting.
Figure 4
Dr. Macura working as a resident at the Medical College of Georgia.
It is the Climb that Matters Most: The Personal and Professional Journey of Dr. Katarzyna Macura

Figure 1 Dr. Katarzyna J. Macura

Introduction:
The American College of Radiology’s (ACR) Gold Medal is the highest honor the ACR’s Board of Chancellors bestows annually. It recognizes radiologists who have made distinguished contributions to the field. Since the award’s inception in 1927, there have been thirteen female recipients. In 2022, Dr. Katarzyna J. Macura and Dr. Anne C. Roberts were inducted into this small elite group, joining previous female honorees Priscilla F. Butler, Dr. Carol Rumack, and Dr. Valerie Jackson, among others1-3. Herein we highlight Dr. Macura’s “climb” and journey to becoming the 12th female recipient of the ACR Gold Medal. Sharing this honor with her Polish idol, Dr. Marie Sklodowska-Curie, was the “highlight of her professional career.”

Early Life:
Dr. Katarzyna Macura grew up in Poland as the only child of an engineer and microbiologist. Growing up during the Cold War, she bore witness to her community and country struggle with limited access to resources for personal and professional growth. Still, she had no shortage of enthusiasm to learn and explore. Spending hours flipping
through the pages of her mother’s microbiology textbooks lit the initial spark for her career in medicine.

She chose to attend high school at III Liceum Wincentego Styczyńskiego in the city of Gliwice in preparation for a career in medicine. There, she served as a two-term president of her high school student body. With a spirit for exploration, she joined the high school-affiliated Sailing Club, Asterias, and led as Vice-Commodore. Sailing became a lifelong hobby and her outlet to escape from stress.

After graduating high school, Dr. Macura fulfilled her childhood dreams of earning a medical degree at the University of Lodz, where she graduated with an M.D. in 1989 and a Ph.D. in 1991. During her medical school years, she met and married fellow medical student Robert T. Macura, M.D., Ph.D. They bonded over a fascination with the emerging fields of informatics and artificial intelligence (AI) and through attending lectures and reading literature together on these topics. During her final years of medical school, Dr. Macura’s research focused on designing and implementing a decision support system to diagnose brain tumors. This project formed the foundation of her Ph.D. in medical informatics.

*Figure 2 Dr. Macura enjoying her time sailing.*

**Training and Academic Career:**
After graduation, Dr. Macura and her husband were drawn to the prospect of continuing their research in AI in the United States and fulfilling the American Dream. The couple immigrated in 1991 with their two young sons, Tomasz and Wiktor. With scarce resources, the couple was relieved to secure Visiting Research Scientist positions at the University of Georgia’s Artificial Intelligence (AI) Center under the leadership of Dr. Donald Nute. After completing their research fellowships, they pursued academic appointments as assistant professors of Informatics at the Medical College of Georgia (MCG)’s radiology department. The MCG’s department chair, Dr. Eugene Binet, was highly impressed by her multimedia decision support system for brain tumors. He involved her in developing an electronic textbook correlating radiological images and clinical scenarios. This work resulted in the publication of the textbook *Radiology Resource and Review*[^1], a first-of-its-kind e-book widely distributed by the American Roentgen Ray Society.

While Dr. Macura found informatics fulfilling, she desired to return to clinical practice. She chose radiology, realizing that the specialty would allow her to blend her passions for informatics and clinical medicine. She graduated from the MCG residency program in 2000 and subsequently completed a body imaging fellowship at Johns Hopkins, where she decided to continue her academic career. Dr. Macura went on to build the Prostate Cancer Magnetic Resonance Imaging program, helping to establish the utility of prostate MRI in the active surveillance of patients with prostate cancer. Her leadership led to this program’s eventual integration into the Precision Medicine Center of Excellence for Prostate Cancer.

Pursuing cross-specialty collaboration led to Dr. Macura’s tenure and professorships in the departments of Radiology, Urology, Oncology, and Radiation Oncology & Molecular Radiation Sciences at Johns Hopkins. She continues to make her mark as a national leader in uroradiology, serving as a member of the Prostate Imaging Reporting and Data System (PI-RADS) Steering Committee and director for the Prostate MRI Course at the ACR Educational Center.

While her early career was marked by success, Dr. Macura also recalls setbacks. “You know how many grants I have written. Some scored, and some did not even score. Some reviewers said the proposed projects were not feasible.” However, a few years
later, and with persistence, she proved them wrong. She proceeded with the attitude that she could accomplish anything with passion and perseverance. Dr. Macura credits carrying out her career with this mindset as a significant contributor to her success.

![Figure 3](image_url)

**Figure 3**
**Dr. Macura working as a resident at the Medical College of Georgia.**

**Society Involvement:**
Dr. Macura discovered an exceptionally supportive and uplifting community in the American Association for Women in Radiology (AAWR). She first learned about AAWR at an RSNA conference in 1996, where she attended her first AAWR event but felt out of place due to “her Polish accent and as an international medical graduate.” However, at the next AAWR event, she sat at a table with established leaders who recognized and applauded her enthusiasm and unique informatics skill set. Shortly after officially becoming an AAWR member, Dr. Macura volunteered to increase the organization’s visibility by creating the first AAWR website. Her hard work was recognized, and just a few years later, in 2005, she was nominated and became the youngest president of the AAWR. Dr. Macura also became embedded within the ACR early in her career. She sought to contribute her skillset by joining the abdominal/genitourinary section of the ACR Imaging Network (ACRIN) and Digital Imaging and Communication (DICOM) Standards committees. Through the ACR, she also created outlets to uplift young voices and
encourage them to join the society. As President of the Maryland chapter of the ACR, she established a Resident and Fellow’s Section (RFS), drawing in members from across the state of Maryland and fostering cross-university collaboration.

In 2010, she became the link between the ACR and AAWR as the “AAWR Councilor to the ACR.” At the time, the importance of uplifting radiologists from diverse backgrounds was gaining momentum at a societal level. Dr. Paul Ellenbogen, Chair of the ACR Board of Chancellors (2012-2014), recognized her enthusiasm to diversify the field. He invited Dr. Macura to establish the ACR's Commission for Women and Diversity in 2012, the first of its kind amongst radiological societies. She built the Commission from scratch over the next six years. Eventually, it drew in over 80 active members.

Among the many initiatives undertaken by the Commission, from advocacy to research, she is most proud of pioneering the Pipeline Initiative for the Enrichment of Radiology (PIER) mentoring program in 2016, which awards underrepresented medical students the support to engage in radiology research and gain early exposure to the field.

Figure 4
Dr. Macura (1st from left) as president of the American Association for Women in Radiology, pictured with mentors and colleagues Drs. J. Strife, C. Rumack, and R. Komaki during the 2005 annual meeting.

Reflections:
Dr. Macura’s career is defined by seeking out opportunities in which she can actively contribute her skill set. She hopes to inspire this attitude in her mentees by embracing young voices and encouraging them to find unique niches “where their talents can truly make a difference.” For Dr. Macura, “strong leadership is one that lifts others.” In the future, she hopes the field continues to embrace a diversity of thought and attract and support trainees from all backgrounds and experiences.

Dr. Macura reflects, “Challenges and change are core to life,” and the field of radiology is no exception. She believes radiology will continue to be central to medicine, persisting and growing alongside artificial intelligence and patient-centered models. She hopes to continue embracing the unique talents and creativity of the radiology community, expanding the realm of what is possible.

**Testimonials:**

Dr. Macura has touched many individuals throughout her career, both as a mentor and mentee.

Dr. Carol Rumack reflects, “Dr. Macura has been a very inspiring and energetic leader through 18 successful years of service to the AAWR. As ACR Chair of the Commission for Women and Diversity, she has created Diversity Forums to stimulate solutions to improve the culture of diversity in radiology and continue to recruit the best and brightest women and men to our great scientific field.”

Dr. Johnson Lightfoote has worked closely with Dr. Macura for the past ten years as a part of the ACR’s Commission for Women and Diversity. He writes, “She has insight and is savvy in the management of professional and political relationships in our profession, always prioritizing our mission of improving diversity and inclusion in service to our patients and populations. She has been my source of wise counsel, and she supports and informs my efforts to continue the success of her beloved Commission.”

Dr. Teresita Angtuaco reflects, “My friendship with Dr. Kasia Macura started when she was assigned to be my resident guide while lecturing at the Medical College of Georgia
as a visiting professor, and I was greatly impressed by her accomplishments at that early stage of her career. As past president of the American Association for Women in Radiology (AAWR), I have sought her expertise and admired her vision for the organization, that led to the national recognition of AAWR as a premier society promoting the careers of many women in diagnostic radiology and radiation oncology. Her meteoric rise among the ranks of elite women radiologists and her unselfish contributions both to the science and purpose of our specialists are among the many reasons why the ACR is looked upon with respect and gratitude as it guides the future of our profession.”

Dr. Melissa Rosado De Christenson reflects, “I first met Dr. Macura when she was a radiology resident during her participation in the Radiologic Pathology Course at the Armed Forces Institute of Pathology. Diane Babcock, M.D. was our distinguished scientist for pediatric radiology, and together we held a focus session for women radiologists-in-training on behalf of the American Association for Women Radiologists (AAWR). Kasia rapidly emerged as a future leader of organized radiology and became the youngest person ever to serve as AAWR president. She enthusiastically responded to our request to become involved in the society, offered to build the AAWR website, and completed the task in record time. Since then, I have followed her illustrious career with great interest and have seen her blossom as an expert imager, educator, researcher, and leader. She is a most deserving recipient of this honor and an outstanding role model for all the members of our profession.”

Dr. Kristin Porter speaks of the uplifting mentorship provided by Dr. Macura, writing, “Whenever I think of Dr. Kasia Macura, I am reminded of the quote by Benjamin Franklin, ‘Tell me and I forget. Teach me and I remember. Involve me and I learn.’ Dr. Macura introduced me to the AAWR and involved me in the ACR. Her mentorship was a gift with lasting impact; the AAWR and ACR career support and friendships have brought joy and meaning to my career.”

Closing:
In her ACR Gold Medal acceptance speech, Dr. Macura proclaimed, “It is the climb itself that matters most, and the people with whom we climb along. While climbing, we are able to lift others.” As a leader, Dr. Macura has done just this. She continues to pave the way for underrepresented radiologists through advocacy and sponsorship.

Looking forward to what lies ahead, Dr. Macura is excited to continue championing diversity and representation as well as engaging new generations of radiologists in clinical research and informatics. She aspires to continue searching for areas where she can make the greatest difference and inspire others to join alongside in this pursuit.

**Acknowledgments:**
The authors thank Dr. Katarzyna Macura, Dr. Johnson Lightfoote, Dr. Teresita Angtuaco, Dr. Kristin Porter, Dr. Melissa Rosado De Christenson, and Dr. Carol Rumack for agreeing to be interviewed for this piece.

**Sources:**

1. Spalluto LB, Arleo EK. Carol Rumack—It’s OK to be different! *Clinical Imaging*. 2021;70:97-100.