

HISTORY OF RADIOLOGY IN PIERCE COUNTY

2017 UPDATE

Since the completion of “the history of radiology in Pierce County” in 2008, many changes have occurred in medicine in general and radiology in our community in particular. There have been many consolidations and mergers in our hospital systems across the country in the last 10 years. Hospitals throughout the US are the dominant driver for these health care consolidations and our hospital systems, Catholic Health Initiatives (CHI) Franciscan Health and Multicare Health Systems (MHS) are no exception.

In the last 5 years, CHI Franciscan Health has acquired Highline Hospital and Harrison Hospital in Bremerton. There are plans to build a new hospital facility in Silverdale, Washington.

Multicare Health Systems acquired Immediate Clinics which own 14 outpatient clinics in Greater Seattle Area as well as nursing facilities, 17 healthcare agencies, a spectrum of skilled nursing, assisted living services, physical, occupational and speech therapies, urgent care services, and 17 hospice agencies in 14 states. In June of 2016, MHS purchased Rockwood Health Systems in Spokane which includes Deaconess Hospital, Valley Hospital and Rockwood Clinics, a multi-specialty physician practice.

In the summer of 2017 the Multicare Covington Medical Center, with addition of 57 beds, will be completed. The new hospital will include general medicine and surgery with an emphasis on orthopedic surgery.

CHI extends over several states and continues to expand and consolidate. Multicare Health Systems has long term goals of expanding in the northwestern states: Washington, Alaska, Idaho, Montana, and Oregon.

TRA and MIN radiologist staffing has paralleled the increase of facilities that CHI Franciscan Health and MHS have added. Equally important has been the increase in new procedures offered and the increase of utilization by referring providers. There was an only modest increase of the number of radiologists in the southern Puget Sound facilities staffed by our two radiology groups in the years of 2010, 2011, 2012 and 2013, despite increasing professional demands. During 2014, 2015 and 2016 there was an acceleration of hiring with 29 new radiologists beginning their practices in our community.

During the 10 years since the last radiology history completion in 2008, there has been continued progression of new radiological applications in Pierce County.

In women's health imaging 3D tomosynthesis has become the standard mammography screening technique in Pierce County. The result has been increased diagnostic accuracy, fewer recalls, and fewer breast biopsies. Under Dr. Tran and the team at Carol Milgard Breast Center Tacoma, we have become a leader in women's imaging in the United States.

Diffusion MR imaging has become a standard part of evaluation of acute stroke. MR spectroscopy, MR perfusion, and MR diffusion tract imaging have become part of our evaluation of brain tumors. Emergent non-contrast MR of the abdomen is becoming a more common way of imaging acute appendicitis in pregnancy and in children. Non-contrast MR is commonly utilized for follow-up in children with ventriculo-peritoneal shunts. MR of the liver, pancreas, kidneys, aorta, prostate, uterus and ovaries are becoming more important parts of routine imaging.

The advent of multi-detector CT scans in the early 2000's has allowed us to perform CT scans with greater speed and greater resolution and with thinner slices allowing isometric imaging. These applications now

support spectacular multilayer reconstructions and 3D images. The faster scan times have allowed improved CT angiography, in many cases rivaling or surpassing standard angiography. The efficiency of current generation CT scanners has led to greater utilization, with ever increasing number of studies and an ever increasing number of images in each study. This has led to greater radiation exposure to our patients and limiting radiation dose has become one of our paramount concerns.

In the field of nuclear medicine and molecular imaging, the use of PET scanning has increased in the fields of oncology and specialized neuroimaging, particularly in the area of dementia. 18-F sodium fluoride PET bone scans are being developed to increase detection of metastatic prostate cancer. Florbetapir F-18 and others agents are being used to detect amyloid deposits in dementia and mild cognitive disorder.

Without question, however, the greatest change in radiology in the last decades has been the adoption of PACS (Picture Archiving and Communication System) and EMR (Electronic Medical Records).

PACS allows radiologists and all healthcare professionals to instantly access a patient's images through any internet portal. EMR similarly allows internet access to all of a patient health records. The radiologist is no longer locationally bound to the site where the images are acquired. Built into current PACS systems are multiple tools to allow scrolling, windowing and leveling, multi-planar reconstructions and many other techniques improving our analysis of imaging exams. The timely availability of patient images and reports, and the possibility of radiological subspecialty interpretation has been a boon to quality of patient care and efficiency of radiologists. Voice recognition improvement has enhanced accuracy of communication and prompt availability of the report.

As the groups grew the demands on their business support offices grew proportionally. With time the titles of manager and assistant manager participated in the name changes that society seems to favor, they became CEO, COO and/or CFO in both groups.

Nancy Turner had been the assistant business manager of TRA from 1987 until 1992 when she assumed the position of manager. She continued in the manager position for the next 10 years until 2003 when she again became the assistant manager until 2010. Steve Jacobsen became the manager until 2007. Dennis Carter became CEO of TRA in 2007 and continues to the present.



JoanneAshley
MIN
1966-2002



Nancy Turner
TRA
1987-2010



Keith Arnzen
MIN
2008-2013



Chris Archer
MIN
2014



Dennis Carter
TRA
2007-present



Sandy Benson
MIN
2015-present

In 2007, TRA finished the renovation and restoration of two adjacent buildings which are on the national historic registry. The two buildings are the Manley-Thompson Ford Agency and the Auditorium or Present Dance Hall built in 1918 and 1922 respectively. The restored historic buildings on 13th and Fawcett downtown Tacoma became the new administrative offices of TRA.



**TRA administration offices
after 2007**



Dr David Ruan was not included on the previous history and came to MIN in 2009.



Dr David Ruan
Body Imaging

Interestingly there were no new radiologists to begin their practices in 2010 or 2011 in Pierce County. Drs. Bredewig and Rice joined TRA in 2012.



Dr Ryan Bredewig
Interventional Radiology



Dr David Rice
Body Imaging

Drs. Mueller, Krause and Kim joined MIN in 2012.



Dr Elliot Mueller
Interventional Radiology



Dr Nicholas Krause
Neuroradiology



Dr John Kim
Neuroradiology

In 2013, Drs Everton, Hartz and Waters began practice with TRA.



Dr Katheryn Everton
Breast Imaging



Dr Doug Hartz
Neuroradiology



Dr Justin Waters
Neuroradiology

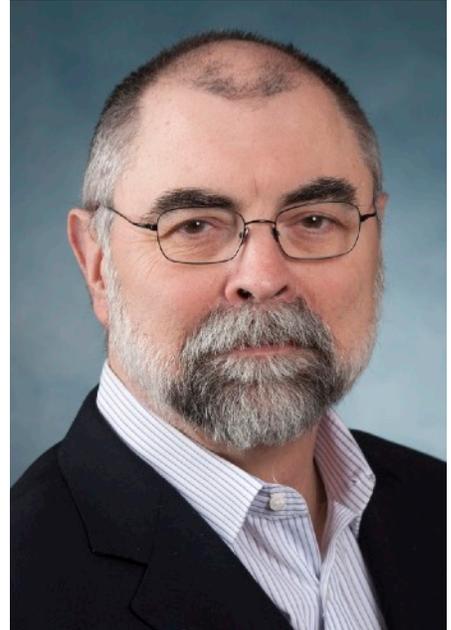
In 2014 hiring accelerated in both groups. Drs. Tibbits, Cardinal, and Sartre began their practices at TRA.



Dr Grant Tibbits
Body Imaging



Dr Jeremy Cardinal
Neuroradiology



Dr Richard Sartre
**Body and Emergency
Radiology**

Drs. Eichinger, Henneman, Hwang, Leitz, Nankin and Shah at MIN.



Dr Brian Eichinger
Neuroradiology



Dr Scott Henneman
Neuroradiology



Dr William Hwang
Body and Emergency



Dr Evan Leitz
Body Imaging



Dr Nils Nankin
Women's imaging



Dr Samir Shah
**Interventional
Radiology**

In 2014, Hilltop Regional Health Center opened on MLK Ave in Tacoma with inclusion of a TRA Imaging Center.



2015 was also a peak hiring year with 12 new radiologists beginning their practices in Pierce County. Drs Bautista, Ferris, Fehrenbach, Linville, Ory, and Martin from Highline Hospital joined TRA



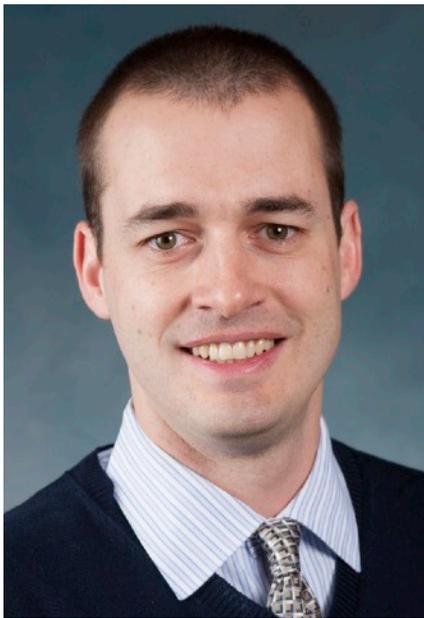
Dr Andre Bautista
Interventional Radiology



Dr Paul Ferris
Body Imaging



Dr Bradley Ferenbach
Nuclear Medicine



Dr Robert Linville
Interventional Radiology



Dr Peter Ory
Neuroradiology



Dr Chuck Martin
**Nuclear Medicine
and Body Imaging**

Drs Alijani, Grant, Jaffer, Baiju Shah, and Carla Shah affiliated with MIN.



Dr Ata Alijani
Neuroradiology



Dr Michael Grant
Body Imaging



Dr Zubeir Jaffer
Pediatric Radiology



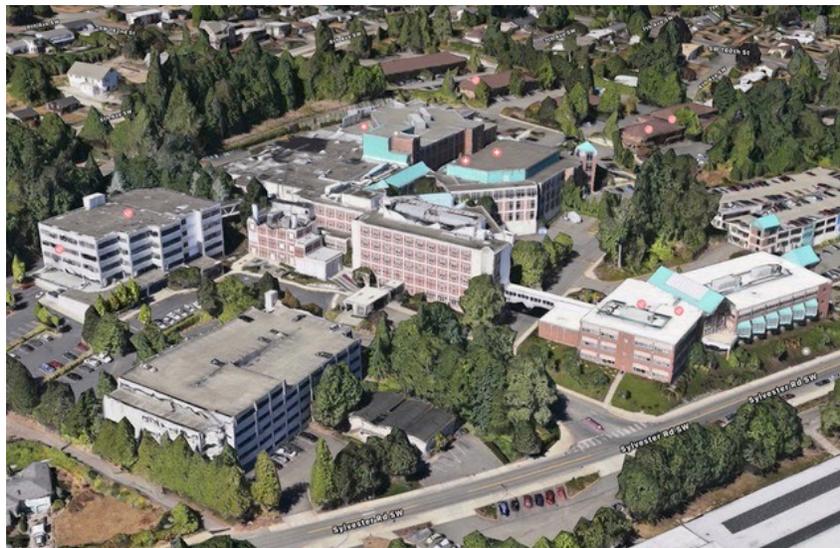
Dr Baiju Shah
Neuroradiology
Emergency Radiology



Dr Carla Shah
Women's Imaging

CHI Franciscan Health assumed ownership of Highline Regional Hospital and Medical Center in 2012. The facility was first established in 1957 and was multi-centric in its development, becoming a 269 bed hospital with emergency room and multi-specialty services. TRA began providing imaging interpretive services to Highline August, 2015.

Drs Peter Ory and Chuck Martin, who had been involved in the development of imaging at Highline, continued in the service of the community as associates of TRA.



Highline Medical Campus



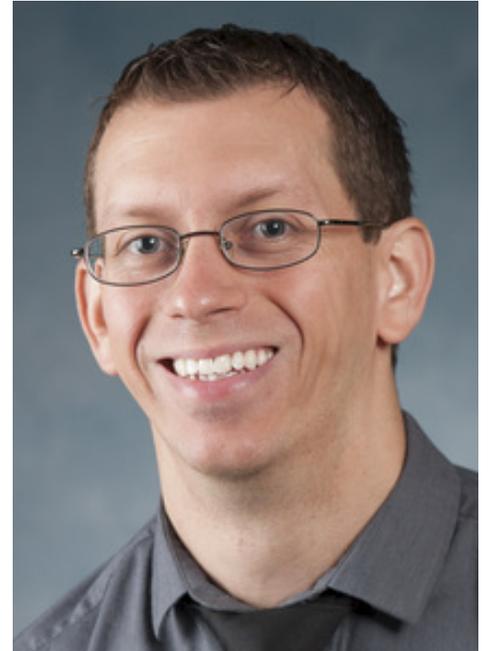
In 2016 ten new radiologists began practice in Pierce County: 7 for TRA (Drs. Flanagan, Lehnert, Mollard, Ellermeir, Brittin, Wang, and Farley) and 3 for MIN (Drs. Bacon, Liu, and Kim).



Dr Patrick Flanagan
Interventional Radiology



Dr Bruce Lehnert
Body Imaging



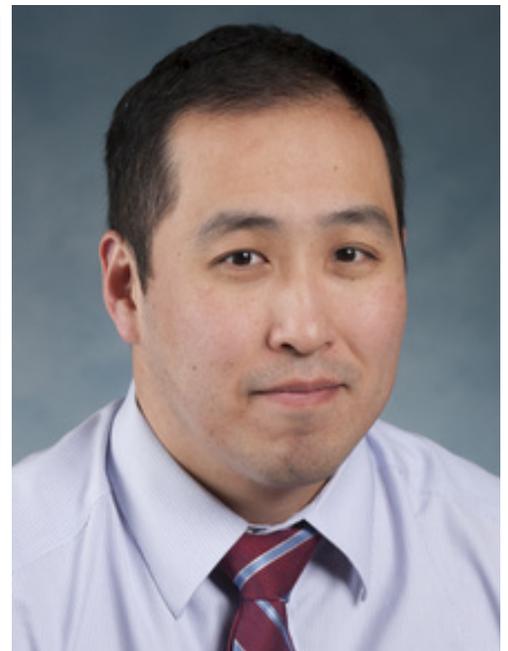
Dr Brett Mollard
Body Imaging



Dr Anna Ellermeier
Body Imaging



Dr James Brittin
Body Imaging



Dr Wei-Shin Wang
Breast Imaging



Dr Sarah Farley
Pediatric Radiology



Dr Patrick Bacon
Pediatric Radiology



Dr Roger Liu
Neuroradiology



Dr Marianne Kim
Women's Imaging

In the early 1990's, Multicare opened the Covington Multicare Clinic which provided primary care, emergency services, urgent care and limited subspecialty providers.



Multicare is expanding the Covington campus to include a four story building with a 58 bed hospital providing three operating rooms, associated pre and post-op rooms, recovery rooms and waiting room. The facility will also have an inpatient pharmacy and lab. Other services will include orthopedic, general and adult short-stay surgery, ENT, Urology, and Pediatric surgery. The hospital will provide an ED level III Stroke Center and Pulmonary/Critical Care services. Completion is anticipated in the summer of 2017. Complete imaging services including CT, MRI, Ultrasound, breast imaging and digital radiology.



The early partners of TRA and MIN were one group until the late 1950s when disagreements led to splitting of the group. The two groups provided radiological services to the multiple hospitals of the community consisting of Tacoma General Hospital, St Joseph Hospital, Doctors Hospital, Good Samaritan Hospital, Allenmore Hospital, and Lakewood Hospital. The hospitals were acquired by FHI and Multicare over the years and they built St Anthony Hospital, St Francis Hospital, St Elizabeth Hospital, Covington Hospital, Highline Hospital and recently extending into Bremerton, Silverdale and Spokane. In addition a multitude of clinics have become incorporated into these two medical systems.

Our two radiology groups provided imaging services to the Franciscan and Multicare hospital systems and surrounding communities for many years, logically discussed have discussed reaffiliation over the years. Discussions accelerated in 2016 which led to a merger of MIN and TRA Jan 1, 2017. The merger will provide a remarkable depth of imaging subspecializations to our patients and hospital systems. Our merged group will approximate 90 radiological partners, and employ 10 Physician assistants, which primarily assist interventional radiologists, and a very large number of skilled and trained imaging technologists and other support employees.

Staffing needs are accelerating and 8 additional radiologist joined the partnership track during the early months of 2017.



Dr Nicholas Leslie
Body Imaging



Dr Daniel Verdini
Body and Cardiac
Imaging



Dr Irika Nealy
Musculoskeletal



Dr Jeffery Wesolowski
Neuroradiology



Dr Keith Chan
Interventional
Radiology



Dr Jitesh Ahuja
Body Imaging



Dr Geoffrey Rutledge
Musculoskeletal
Imaging



Dr Jaron Zitrin
Musculoskeletal
Imaging

Our radiology groups have been very fortunate over the last 100 years by focus, hard work, and a bit of good luck. Both groups have succeeded by being “committed to professional and service excellence”, always making service to our patients our primary focus, treating our staff with respect, and never compromising our professional relationship with our community and hospitals.

Our consolidated groups have a very promising and exciting future. The depth of sub-specialization we will bring to our patients and community will enhance of our radiological services. The key to our success will be a continuation of what facilitated our development during our first 100 years, continued “commitment to professional and service excellence”.

As the oldest extant radiologist in our community and having reached the age of 80 years, future updates will have to be provided by other partners. I have provided and structured the history document and Dr Robert Livingston, who has been the one radiologist partner of TRA with an expertise in Mac computers and programming, placed the original and updated histories online. Thanks to Dr Livingston for making this history available online.

For any future additions the original history was written with Keynote in 2008 and the update was written using Pages 6.1 in 2017.