



The First 100 Years

THE HISTORY OF RADIOLOGY IN THE SOUTH PUGET SOUND

William B. Jackson, M.D.
TRA MEDICAL IMAGING

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This volume has been prepared in commemoration
of our “Founding Radiologist Fathers” and
TRA Medical Imaging’s 100th Anniversary
of service to patients and community in the Puget Sound.

William B. Jackson, M.D.
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DEDICATION

This book is dedicated to all the radiologists, technologists, staff, hospital partners, physicians, providers and caregivers in our community that have created a legacy of excellence in medical care to our region.

ACKNOWLEDGEMENTS

Special thanks goes to the team and leadership at TRA Medical Imaging in taking their time and effort to preserve and recreate this updated edition and making it available to their staff and community in both print and digital formats.

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Foreword

This publication is inspired by the research and writings done by Dr. William B. Jackson who started working for TRA Medical Imaging in the early 70s. Dr. Jackson joined TRA in 1972 when there were six other partners. He was president of the Washington State Radiology Society in 1984, president of the Pierce County Medical Society in their Centennial year in 1988, Chief of Staff at Tacoma General Hospital and Puget Sound Hospital, and was president of TRA for 17 years. He was fortunate to have known or practiced with many of the earlier radiologists.

Dr. Jackson developed a strong interest in the history of medicine in Pierce County and particularly radiology. A great deal of this history is recorded in the archives of the Washington State Archives, Pierce County Medical Society (PCMS) bulletins and other material.

Much of the text Dr. Jackson wrote in the *History of Radiology in Pierce County* is included and preserved in this edition. Jackson's version goes into chronological depth about the comings and goings of the many providers who served over the years, as well as, the many changes in our hospitals closing, merging and expanding. You can find his version online at TRA Medical Imaging's website where his original edition takes the reader up to 2007, and the appendix edition updates to 2018.

As TRA Medical Imaging traced its roots back to 1918, and with the merger of Medical Imaging Northwest in 2017, it was with the celebration of 100 years and Dr. Jackson's permission, to

incorporate much of his research and content along with additional local history to create this edition of *The First 100 Years, The History of Radiology in the South Puget Sound*. The following pages include historical facts and pictures that help the reader gain an appreciation for the evolution of the x-ray and how it has impacted the medical field of imaging.

To capture the essence of the Puget Sound, you'll discover tidbits of history, signs of growth, and the region's character depicted throughout the decades by various highlights of the times.

Pierce County is rich in history and many thanks goes to the people and historians that keep this history alive and available. Research includes, but not limited to, *History of Radiology in Pierce County* by Dr. William B. Jackson, and information from the archives at the Tacoma Public Library Northwest Room Collections, Tacoma Historical Society, Pierce County Medical Society, The American Roetengen Ray Society, The American College of Radiology, University of Washington Special Collections, Library of Congress and Wikimedia Commons.

Be a part of history. If you have a story or photo that is related to radiology and imaging that adds to our story, feel free to contact us at TRA Medical Imaging. This is a story that cannot be told in a limited amount of pages. We hope you enjoy the journey presented so far.

Chris Coates, CEO
TRA Medical Imaging



For 100 years, TRA Medical Imaging, has been in the forefront of medical imaging technology and patient care in the Puget Sound region.

We hope you enjoy the journey in radiology along with accents of historical highlights of our community in industry and commerce, growth and prosperity, and health and wellness, which have shaped us today and our guide to the future.

Introduction

In 1897, Tacoma's first known x-ray was used to find a bullet lodged in a policeman's neck. The x-ray was a crude experiment involving physicians, an electrician, the head operator of the Western Union and a developer. Although the experiments were unsuccessful, it was by no means a failure, according to a report in the *Tacoma Daily Register*. Thankfully, diagnostic imaging in Tacoma has come a long way since this primitive x-ray.

TRA Medical Imaging Dates Back to 1918

The pioneers of radiology to come to Pierce County arrived in 1918 at the end of World War I. Dr. Raymond MacRae provided services to St. Joseph Hospital; Dr. Elba McCarty practiced at Tacoma General Hospital; and Dr. Charles Fishel was the first radiologist at the Veteran's Hospital and Tacoma clinics.

Over the next few decades, more radiologists made their way to Pierce County and formed various partnerships that would eventually become TRA and Medical Imaging Northwest (MINW) in the 1950s. These two radiology practices provided most of the imaging services for Pierce County. Dr. Raymond MacRae, Dr. John Flynn and Dr. Frank Rigos, formed what would later be called TRA. Dr. Steven

Sanderson and Dr. Ken Gross, later adding, Dr. Vernon Larson and Dr. Robert Whitney, would be called Gross, Whitney and Larson, eventually to become Medical Imaging Northwest (MINW).

TRA Today — Cutting Edge Technology

On January 1, 2017, TRA Medical Imaging and MINW joined together to better serve the community. Today, TRA Medical Imaging has expanded its practice to include twelve outpatient imaging centers and fourteen hospitals in the South Puget Sound. In the last decade, technology has allowed TRA to provide professional teleradiology services to a number of specialists in Washington State. The ability to read radiology images remotely has allowed TRA to provide high quality and continuity of care for patients.

Since its inception, TRA Medical Imaging has continued its mission to be on the cutting edge of medical technology. In 1973, they were the first to perform ultrasound in the area. Headed up by Dr. Emory Bourdeau, these primitive ultrasound scans were mainly used to detect renal masses and limited obstetrical studies. In the late 1970s, TRA was the first in the area to perform head CTs (body CT would arrive much later). Head CTs were acquired by placing the patient's head in a rubber diaphragm that would fill with water and act as a conductor.

In 1986, TRA Medical Imaging introduced the first MRI scanner to the area. In 1997, the first Open MRI served the region, and in 2001 it was Positron Emission Tomography (PET) for outpatients in the region. This modality has fundamentally revolutionized the way providers care for their cancer patients. In 2006, TRA pioneered a new area of medical care —Neurointerventional procedures. These highly specialized physicians offer a full spectrum of treatment for stroke, aneurysm and other neurovascular diseases of the brain and spine.

The last decade continues the trend of new and evolving radiology services in our community. These include advanced imaging technologies such as 3D mammography, low dose lung cancer screening and cardiac CT/MR. Our providers also continue to develop and implement new and improved interventional radiology procedures including targeted treatments for liver cancer and other malignancies, Parkinson's disease and chronic pain conditions.

As we step into the next century, radiology will certainly see new horizons in even more advanced technologies including artificial intelligence; yet it will always be the radiologists, technologists and our staff that will stand committed to excellence in care for each and every patient.

—Dr. Douglas Seiler, President
TRA Medical Imaging

W.C. Röntgen



The X-ray is Discovered

◀ Radiologic technology plays an important role in diagnosing medical conditions and diseases.

The field originated when Wilhelm Röntgen discovered x-rays on November 8, 1895. Wilhelm's wife, Anna Bertha Röntgen's hand is forever immortalized by the first hand x-ray on December 22, 1895.

Wilhelm Conrad Röntgen — German Physicist

Wilhelm Conrad Röntgen (1845-1923) was born in Lennep, Germany but grew up in Holland. Wilhelm Röntgen worked at universities in Strasbourg, Giessen, and Würzburg, where he carried out his Nobel Prize awarded research. Wilhelm Röntgen married Anna Berta Ludwig in 1872. In 1900, Röntgen transferred to the University of Munich, where he remained for the rest of his life, despite plans to emigrate to the United States.

For the first two decades of his scientific career, Röntgen studied a fairly diverse variety of topics, including the specific heats of gases, the Faraday effect in gases, magnetic effects associated with dielectric materials, and the compressibility of water. He is most famous, however, for his discovery in 1895 of x-rays. This had a revolutionary effect not only on physics but also on a number of other areas, particularly medicine, and for this he was awarded the first Nobel Prize in physics in 1901.

The Nobel Prize was awarded to Röntgen in recognition of the extraordinary services he rendered by the discovery of the remarkable rays subsequently named after him.

How it Happened

In 1894, Röntgen began research on cathode rays, which was then one of the most popular topics in physics. Much of the fundamental research on this topic had been carried out in the 1870s by the English physicist William Crookes. Crookes had found that the discharge of an electrical current within a vacuum tube produces a beam

of negatively charged rays that causes a fluorescence on the glass walls of the tube. A number of scientists had followed up on this research, trying to discover more about the nature and characteristics of Crookes's cathode rays.

After repeating some of the earlier experiments on cathode rays, Röntgen's research took an unexpected turn on November 8, 1895. In order to observe the luminescence caused by cathode rays more clearly, Röntgen darkened his laboratory and enclosed the vacuum tube he was using in black paper. When he turned on the apparatus, he happened to notice that a screen covered with barium platinocyanide crystals about a meter from the vacuum tube began to glow. This observation was startling, because Röntgen knew that cathode rays themselves travel no more than a few centimeters in air. It was not they, therefore, that caused the screen to glow.

Over the next several weeks, Röntgen attempted to learn as much as he could about this form of energy. He discovered that its effect could be detected at great distances from the vacuum tube, suggesting that the radiation was very strong. He learned that the radiation passed easily through some materials, such as glass and wood, but was obstructed by other materials, such as metals. At one point, he even saw the bones in his hand (as well as testing on his wife's hands, see photo to left). He also discovered that the radiation was capable of exposing a photographic plate. Because of the unknown and somewhat mysterious character of this radiation, Röntgen gave it the name X strahlen, or X rays.

Landmarks and Beginnings



TACOMA, Wash: Point Defiance Park

◀ President Grover Cleveland signed a bill in 1888 to let the unused military base, Point Defiance, be used as a city park. By 1890, a streetcar line was completed to the park.

Military horsemanship show, July 4, 1918—staged in the stadium now known as Stadium High, was originally planned to be a grand hotel that never came to be. First classes opened in 1906. ▶

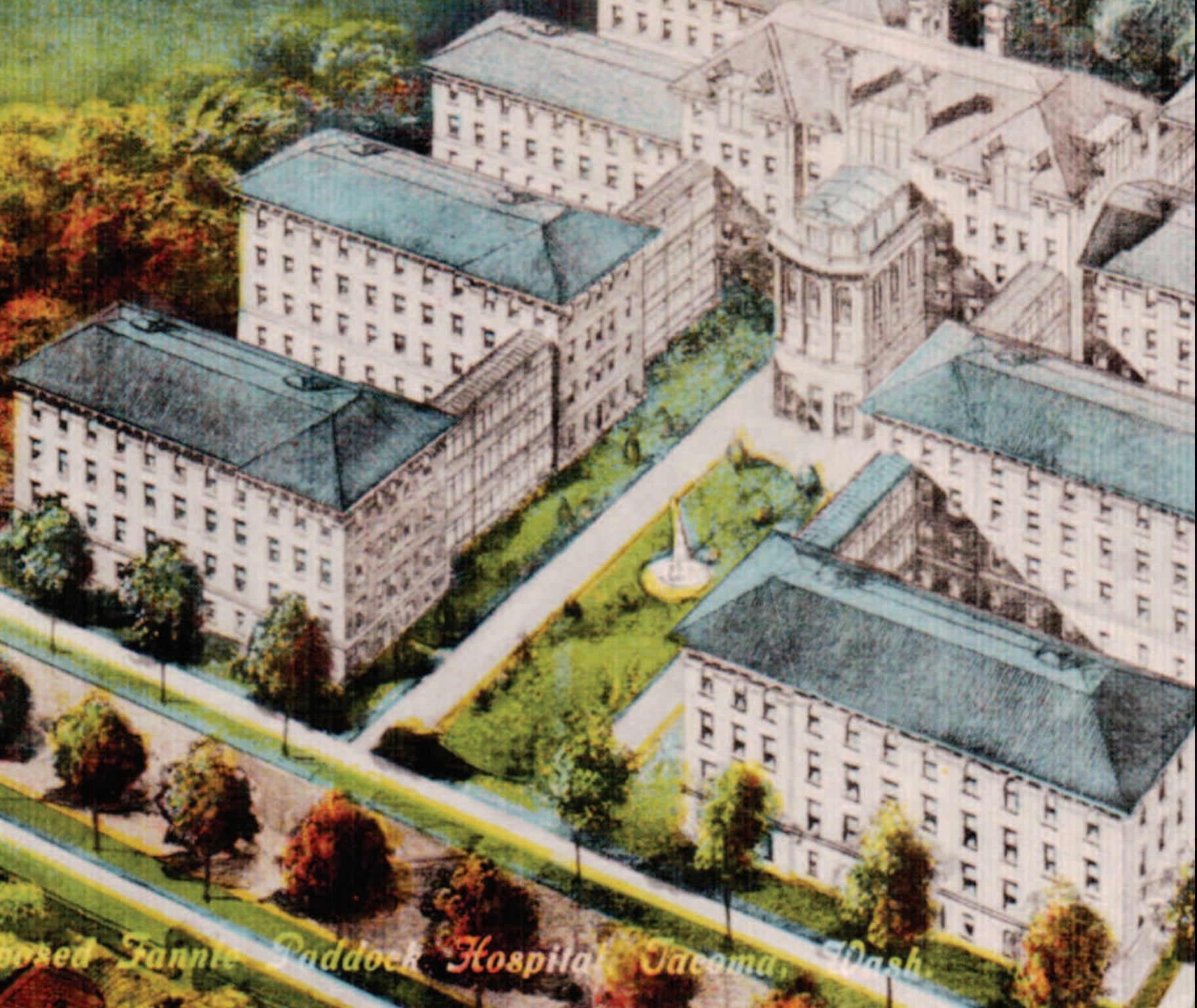
Mount Rainier National Park, circa 1918. ▶

Puyallup Indian School opened in 1860, was renamed the Cushman Indian School in 1910 and became the Cushman Hospital in 1918. ▶

W.W. Seymour Conservatory at Wright Park opened in 1908. ▶

A Stage for Growth





Fannie Paddock Hospital Tacoma, Wash.

◀ The concept art on the colorized postcard dated 1910 represents an architect's proposed hospital design for Fannie C. Paddock Hospital whose roots date to Tacoma's first hospital built in 1882 shown on the right.

It was April 29 of 1882, when Bishop John Adams Paddock solemnly intoned, "Peace be unto this home and to all that may dwell in it." With these words, he dedicated the first Fannie C. Paddock Hospital on Starr St. in Tacoma. Sadly, his wife became ill and died before its opening. ▶

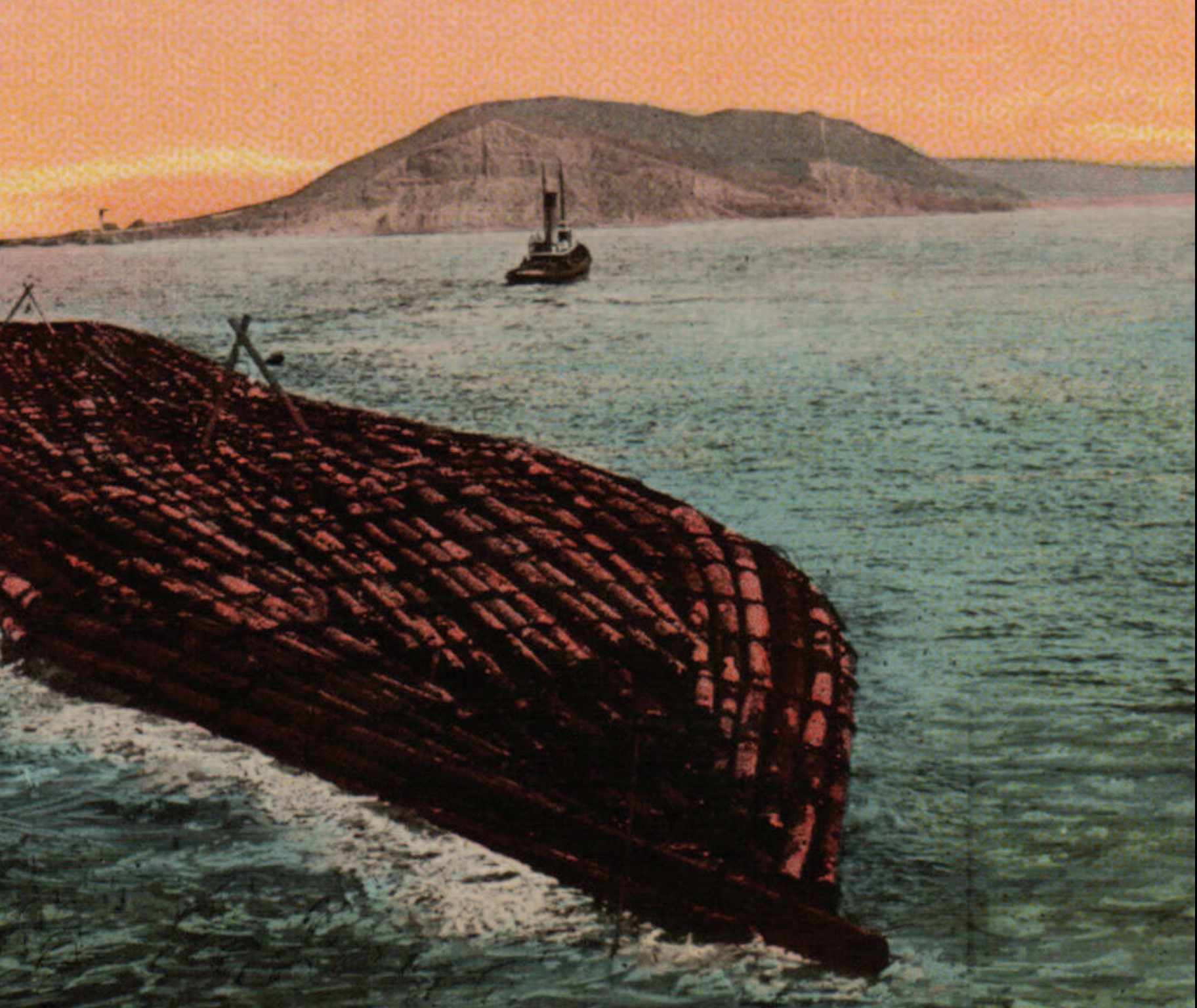
In 1888, The Fannie C. Paddock moved to 312 S. J St. and the name was changed to Tacoma General Hospital in 1912. Shown: colorized postcard dated 1908. ▶

The First Hospital is Built



Fanny Paddock Hospital.
Tacoma, Wash.





◀ A tugboat pulling logs to a mill to be processed on the waters of Puget Sound, circa 1918.

Dr. Raymond MacRae was the first dedicated radiologist to come to Tacoma. He served from 1918 to 1955 including St. Joseph Hospital in Tacoma; St. Peter Hospital, Olympia; Burlington Northern Railroad Hospital; McNeil Island Prison; and the Medical Arts Building. ▶

Dr. Elba D. McCarty was the first residency-trained radiologist in Pierce County. He served Tacoma General Hospital in 1922 and the City County Hospital Medical Arts Building in 1930. ▶

Radiology Pioneers



Pioneers and Predecessors



Dr. Raymond MacRae



Dr. Elba D. McCarty

1897 George Smith

Shown in the white lab coat (photo above) ran the "Electricity Room" (x-ray) at Tacoma General Hospital until 1930

1918 Dr. Raymond D. MacRae

Pioneer of radiology in Pierce County, and founder to TRA

1918 Dr. Elba McCarty

Pioneer, first residency-trained radiologist, and founder to TRA

1918 Dr. Charles Ross Fishel

Pioneer and founder to Medical Imaging Northwest

1941 Dr. Steven Sanderson

Founder to Medical Imaging Northwest

1942 Dr. Frank Rigos

A founding partner of TRA

1950 Dr. John Flynn

A founding partner of TRA

1950 Jack McDonald

First trained x-ray tech in Tacoma

1958 Dr. Myra Vozenolik

First woman radiologist in Pierce County



◀ January 7, 1918, the new Pantages Theatre, located at 901 Broadway in downtown Tacoma, opens its doors for the first time. Replacing the old Pantages on Pacific Avenue, the new theater has a capacity of 1,186 seats and is designed by Seattle architect B. Marcus Priteca (1889-1971), America's foremost designer of theaters.

Dr. Raymond MacRae played in the 1918 Rose Bowl known as the Tournament East-West Football Game between Mare Island Marines of California and Camp Lewis Army/91st Division, American Lake, Mare Island won 19 to 7. ▶

Three Radiologists

MacRae, McCarty and Fishel's Beginnings

In 1918, at the end of WWI, the first dedicated radiologists came to Tacoma. Dr. Raymond D. MacRae at St. Joseph Hospital, Dr. Elba D. McCarty at Tacoma General Hospital, and Dr. Charles Ross Fishel at Veterans Hospital, Western Clinic, and Bridge Clinic.

Dr. Raymond MacRae was the radiologist for St. Joseph Hospital in Tacoma, St. Peter Hospital in Olympia, Burlington Northern Railroad Hospital and McNeil Island Prison from 1918 until 1950. He played semi-pro baseball and was in the 1918 Rose Bowl game between Fort Lewis and Mare Island USMC.

He was known as an outgoing, affable, and frugal individual. Dr. MacRae opened an office in the Medical Arts Building in 1931. He practiced by himself until Dr. John Flynn joined him in the spring of 1950.



Back row: MacRae #91 (Courtesy: U.S. Army, Lewis Army Museum, Joint Base Lewis-McChord)

Dr. Elba D. McCarty was the first residency-trained radiologist in Pierce County. Following a period of training in radiology at Peter Bent Brigham, he began his career at Tacoma General Hospital and the City-County Hospital in 1922.

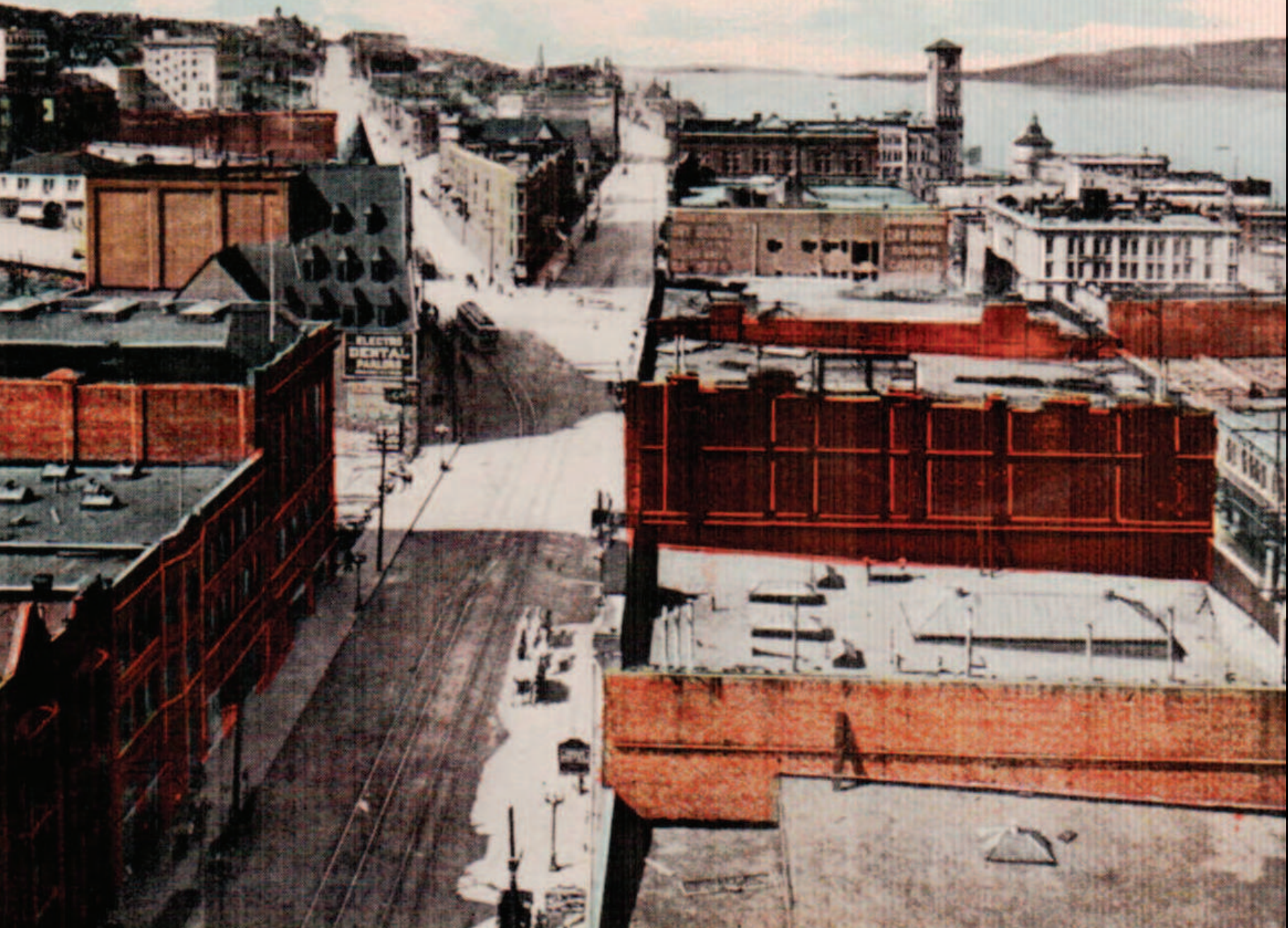
Dr. McCarty purchased a 300KE brachytherapy machine at Tacoma General Hospital for \$10,000, the first high voltage radiation therapy in Tacoma. He was responsible for the early development of both hospital's x-ray departments. He left Tacoma General Hospital in 1930 to practice at City-County Hospital and an office practice in the Medical Arts Building.

The third pioneer in radiology was Dr. Charles Ross Fishel who came to Tacoma at the end of WWI at around 1918. Dr. Fishel provided radiology for The Western Clinic and the Bridge Clinic. He was also the radiologist for the original Veterans Hospital, built on the grounds of what is now Emerald Queen Casino. He

provided coverage to the new Veterans Hospital when it moved to American Lake. The old Veterans Hospital became the Indian Hospital. Dr. Fishel also had an office at the Medical Arts Building from its opening in 1931.

After a heart attack in 1941, Dr. Fishel retired and the practice was MINW was assumed by Dr. Steven S. Sanderson.

*Sectional View of Tacoma, Wash.
Looking North from Top Fidelity Trust Co. Building.*



◀ A colorized postcard aerial view of downtown Tacoma, looking North, circa 1918.

In 1890, Tacoma becomes a stage to watch as it sits on the edge of an economic boom. Seated as a major seaport and the western hub of the transcontinental railroad, Father Peter Francis Hylebos invited the Sisters of St. Francis of Philadelphia to travel west to create a much needed hospital for the growing population.

The first Franciscan hospital is built in 1889. ▶

Putting Tacoma's population in perspective:
1890: 36,006

2018: Estimated at 207,948 making it the third largest city in Washington.

St. Joseph's Then and Now



St. Joseph Hospital 1889



St. Joseph Hospital 1915



St. Joseph Hospital 1915-1982 (demolished)



St. Joseph Medical Center 2018



A Hospital Retrospect

◀ City & County
Hospital shown
in 1896. Located
at 3564 Pacific
Avenue.

A brief retrospect of the unique development of medicine in Pierce County that led to the medical system that we see today is fitting here.

A financial crisis of 1893 resulted from too easy credit, a glut of railroad building, too many undercapitalized banks, and a multiyear drought for the farmers. The problems were made much worse by congress responding to special interests by writing the Sherman Silver Repurchase Act of 1890.

Five hundred banks closed and 15,000 companies went bankrupt, while several railroad companies failed including our own Burlington Northern Railroad. Unemployment nationally hit 18% and was the most severe in the West. There were big political dislocations as the Democrats and Populists lost heavily in the elections of 1894.

The effect of these events made it that the hospitals depended heavily upon charitable donations to survive. Many patients could not afford to be hospitalized and depended solely on charity.

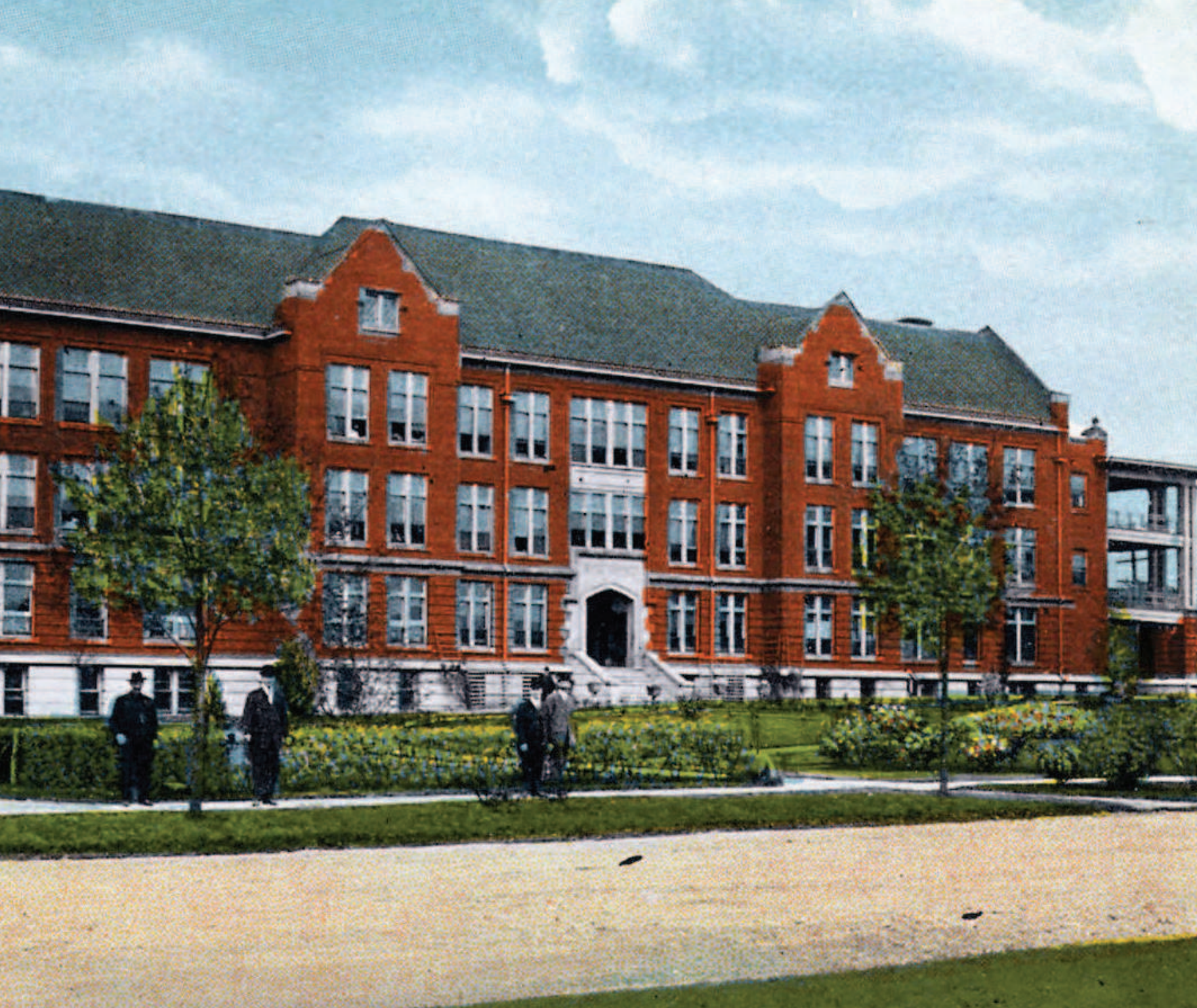
Tacoma General Hospital created prepaid insurance contracts for industrial and government workers, not common at that time. The administrator of The Fannie Paddock Hospital, Dr. McCutcheon, struck a per capita prepaid agreement in 1893 with the St. Paul and Tacoma Lumber Mill, a form of hospital insurance with a hidden-fee split with the staff physicians — the first of its kind in the country. This was followed by many other “prepaid arrangements” with the lumber, railroad, and marine companies, as well as, government workers. One of the few “staff”

physicians at the time, Dr. James R. Yocum, seized upon the same idea and created a similar physician prepaid insurance product through his Yocum and Curran Clinic on Pacific Avenue. His clinic later transitioned to The Western Clinic, the precursor to the present Franciscan Medical Group.

The power struggle between the hospitals and physicians was alive and well at the turn of the 20th century. Dr. Yocum, a connected and smooth Harvard man, had the industrial contracts sewn up. The Western Clinic is referenced as the first HMO (Health Maintenance Organization) system in 1910.

The antithesis of Dr. Yocum, except in ambition, was Dr. Albert Bridge. He arrived in Pierce County in 1905. He was born in a logging camp in Vermont where his father was killed in a logging accident while Albert was still a youth. His mother worked as a cook to provide funds for his education which culminated in graduation from the University of Vermont Medical School in 1904. He was attracted to Eatonville, a logging community, and was able to observe the new industrial medicine model being created in Tacoma.

To devise a better competitive strategy, this man who looked and dressed like a logger, decided to sell “hospital tickets”— a form of insurance to individuals and their families who were not covered by businesses. His insurance product included a hospital, a small house with beds in Eatonville, physician services, a pharmacy and an ambulance, all for the price of one dollar each month. For additional coverage of your spouse and children, the price was another quarter.



◀ The Northern Pacific Hospital was built in 1904 on land cleared by the Northern Pacific employees, was one of a string of hospitals built with funds provided by the Northern Pacific Beneficial Association. The building at 801 East Wright Avenue admitted its first patient, a bridge carpenter with a fractured leg, in August of 1905. The hospital closed in 1968 and was demolished in 1973. The Federally funded McKinley Terrace senior housing project was built on the hospital site in 1979 and opened in 1980.

Drs. Yocum and Bridge became very wealthy as they developed multiple clinics and hospitals throughout Puget Sound. Dr. Bridge eventually had 13 hospital and clinics in Washington State including Seattle, Everett and Wenatchee.

The private practice physicians of Puget Sound became alarmed as they lost market share. Both the Pierce County Medical Society and King County Medical Society had these doctors censored and canceled their memberships. They also created competing prepaid products, Pierce County Medical Bureau in 1917, the first in the country, and King County Medical Bureau in 1933. Many years later they merged to form Regence Blue Shield.

In the midst of all this competition, hospital

development continued. The Northern Pacific Beneficial Association and its railroad employees built their new hospital in the McKinley Hill area. The new St. Joseph Hospital and Tacoma General Hospital were built at the sites of the present hospitals in 1915. The Pierce County Charity Hospital was built in 1929 to replace the City-County Hospital. The Cushman VA Hospital opened in 1916 and was moved to American Lake in 1925.

A Contagion or Pestilence Hospital was built in 1920 for infectious disease isolation, also known as the "Pest" hospital. The Influenza Epidemic of 1918 was devastatingly lethal and killed nearly one million Americans nationally. Pierce County had one of the highest mortality rates in the nation with recorded total of 985 deaths.



American Lake Veterans Hospital. Construction began in early 1923 for the new hospital for veterans carved out of dense forests located on the north shore of American Lake. More than 450 workers were employed on the massive 1.4 million dollar project (exclusive of equipment) which had to be completed by the government deadline of October 10. By August 19, the fireproof hospital with its 28 buildings was 70% completed. The first patients would be admitted in March of 1924.



THE NEW YORK
Davis Smith & Co.
FURNITURE, CARPETS, DRAPES, ETC.
STOVES & RANGES

RAMMAY THE



1922 Panorama of Tacoma



A Look Back in Time

◀ Interval timer manufactured by the Adams X-ray Company of Detroit, MI. The time was used to control the length of time the exposed x-ray films were in the various processing solutions. Adams X-ray Company was in business from 1919 to 1940.

Below:
Barium Powder



Top row left: Robert Wood's Barium Platinocyanide (late 1800s) was the first radiation detector. It was the glowing screen of barium platinocyanide that alerted Wilhelm Röntgen to the fact that some mysterious ray was being produced by a gas discharge tube that he was using to investigate cathode rays. He named this mysterious new type of radiation: x-rays. **Top row center:** Bellows-Type Fluoroscope (ca. 1897-1900). **Top row right:** X-ray paper manufactured by the Defender Photo Supply Company, Inc. of Rochester, N.Y. **Bottom row left:** Radelin Adaptometer (ca. 1953-1960). The adaptometer provided a convenient method by which the radiologist could assess how well their eyes were adapted to the dark. **Bottom row center:** Wolf X-ray Fluoroscope (ca. 1930s) with head straps. **Bottom row right:** Red goggles (ca. 1940s) Picker X-ray Corp. used by a physician prior to a fluoroscopic procedure as a way to dark adapt the eyes.

Credit: ORAU, Radiology Museum Directory; <http://www.orau.org/ptp/collection/Radiology/radiology.htm>

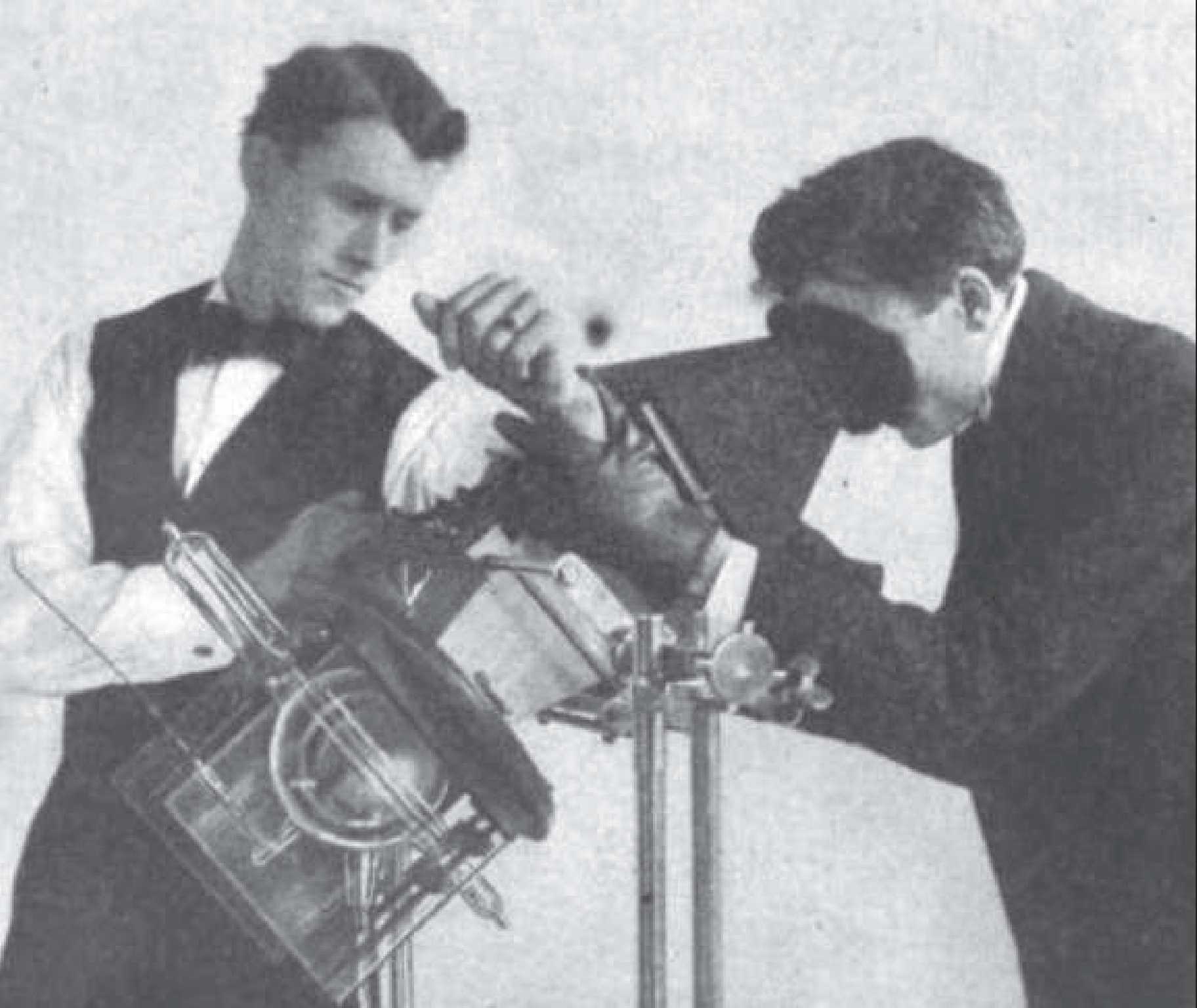


Early Technology

◀ Wilhelm Röntgen discovered x-ray using the Crookes tube in 1895. Shown is an early Crookes x-ray tube from the museum of Wilhelm Conrad Röntgen in Wurzburg. These early cold cathode tubes were used from about 1900-1920.



Photo of experimenters taking an x-ray with an early Crookes Tube apparatus. The Crookes x-ray tube is visibly suspended at center of image. The man standing is examining the bones of the hand with a fluoroscope screen. The man sitting is taking a radiograph of his hand with a photographic plate. No precautions against radiation; its hazards were not known at the time. Circa 1896.



Portable X-ray 1927

◀ Black and White photo of an early x-ray procedure, using a fluoroscope screen, around 1910.



Display at the 38th Annual Convention of the Washington State Medical Association, held August 29-31, 1927, extolling x-rays as a means of determining fractures. Signs on the wall proclaim the necessity of x-rays and the proper way to set a fracture. A woman is shown in traction in the hospital bed surrounded by a nurse and (presumably) doctors. What appears to be a portable x-ray machine lies to the right of the photograph. Over 300 physicians from across the state attended the convention. Included in the activities were exhibits of curative machinery, electrical and mechanical, presented by manufacturers and demonstrations of new equipment at local hospitals.



◀ The tallest building in Tacoma in the 1930s was the Medical Arts Building, a 17-story facility, touted in the press as “the most modern building ever erected in the Far West for the medical-dental fraternity.” Dr. MacRae, served at this location.

Radiation Therapy patient. Tacoma General Hospital, 1930. ▶

Dr. Alan Hart, Radiologist and nurses in x-ray room with patient on table (Fluoro) at Tacoma General Hospital. One piece of equipment has a large dial and the other is a camera with a screen mounted on a steel frame. X-rays were accepted as a medical practice in the 1920s. Photo shown 1933. ▶

1930s in Tacoma

In 1928, a Canadian nurse opened a 7-bed hospital in the Washington Building on 11th and Pacific Avenue in Tacoma. It was called the Washington Minor Hospital because it only handled minor surgical cases.

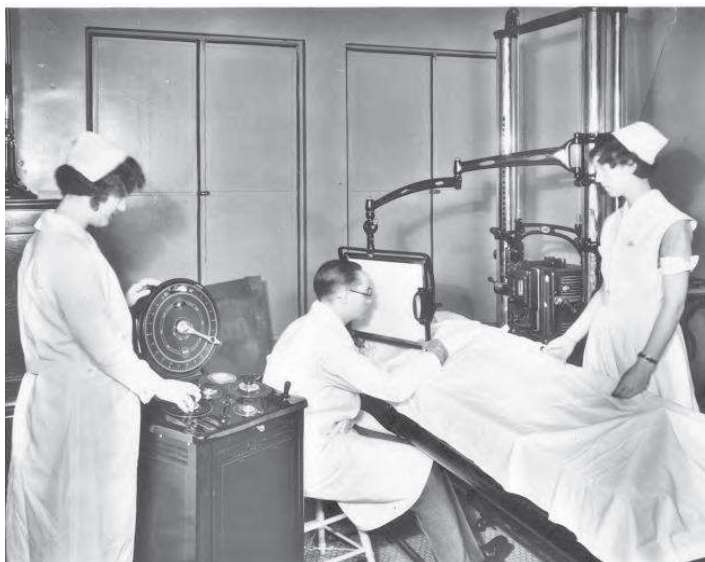
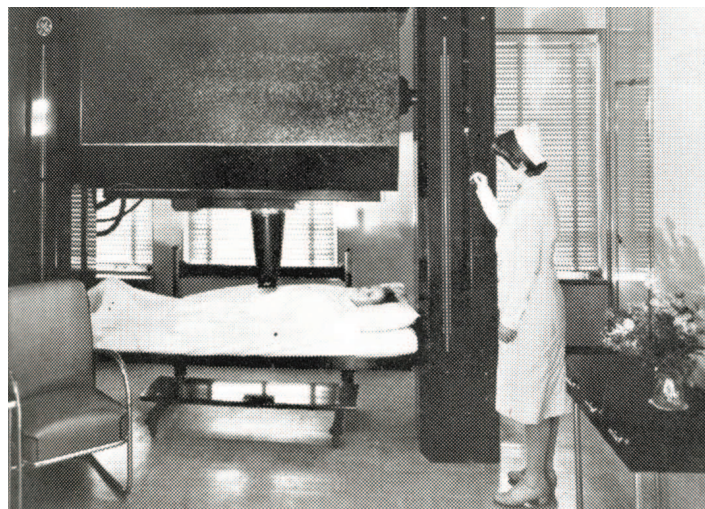
The nurse, Mabel Patterson, soon found herself in financial difficulties and took time off to investigate the possibility of moving her hospital to Toronto where her brother was a physician. She asked a nurse friend, Henrietta Sowa to run the hospital in her absence. After determining to move to Toronto, Nurse Patterson packed up everything — taking the dishes, surgical equipment and bedding.

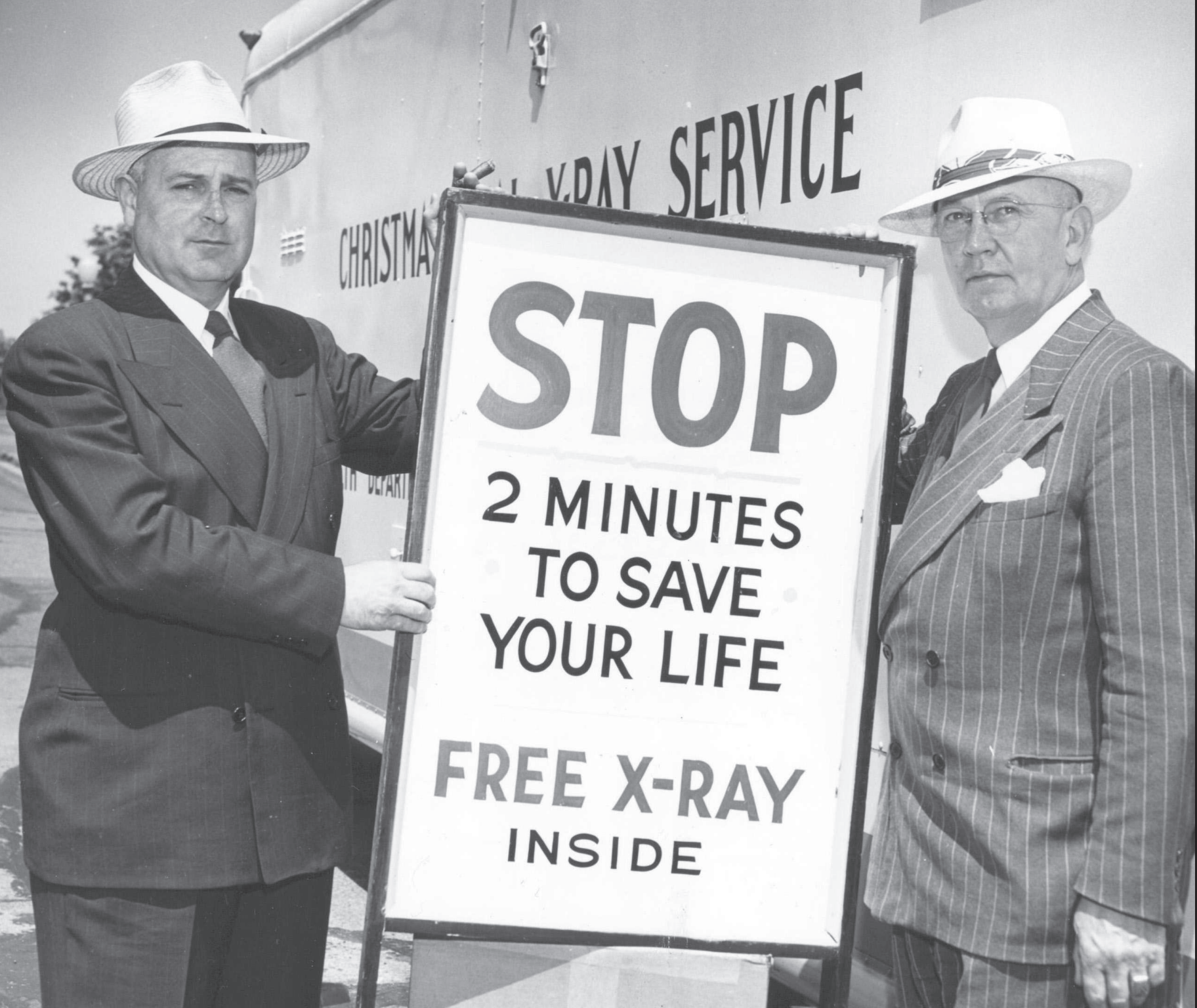
On September 1, 1929, the manager of the Washington Building asked Nurse Sowa to reopen the hospital. Wasting no time, she lined up her medical suppliers, purchased equipment and was ready three days later on September 4.

When developers planned the celebrated Medical Arts Building on St. Helens Avenue, Sowa moved her fledgling hospital to the new structure. She worked with the architect to design the facility, and in December of 1930, she opened a 14-bed hospital on the fifth floor. The 17-story facility was touted in the press as “the most modern building ever erected in the Far West for the medical-dental fraternity.” The hospital included two surgery rooms, a 4-bed men’s ward, 5 private rooms, a 3-bed children’s ward and a 2-bed women’s ward.

“We never turned anyone away,” Mrs. Henrietta (Sowa) Gaetz said, “regardless of whether they could pay. Some paid bills with chicken, vegetables and fruits.”

Excerpt from: Rita W. Happy, “Humana Hospital Tacoma,” Partners in Progress, p 159.”





CHRISTMAS V.D. DAY SERVICE

STOP

**2 MINUTES
TO SAVE
YOUR LIFE**

**FREE X-RAY
INSIDE**

◀ Tacoma's Mayor C. Val Fawcett (left) and Fircrest's Mayor Nelson J. Morrison are promoting free x-rays, encouraging all Pierce County citizens to get their chests x-rayed. The free x-ray service was sponsored by the Tuberculosis League of Pierce County. The mobile x-ray unit started taking x-rays on January 5, 1948; exactly one year later, they had successfully completed more than 50,000 exams.

"There's nothing wrong with this chest, it's been x-rayed" says Dave Schrader to Bill Courtney, employees at Permanente Metals Corp. All of the employees at the Kaiser Aluminum plant in Tacoma received x-rays in 1949. Permanente employed over 3,600 men across three Washington plants. ▶

1940s and Tuberculosis



Four members of the Tacoma Rockets Ice Hockey team joined more than 60,000 other Tacomans who received x-rays as part of the February 1949 chest x-ray program. Shown at the x-ray unit in the display window of the Kelly Furniture Store located at 5428 South Tacoma Way are: (l to r) George Robinson, forward; Bill Jenkins, defenceman; William Wentworth, x-ray technician; Doug Toole, forward; and Wingy Johnson, forward.



fight tuberculosis

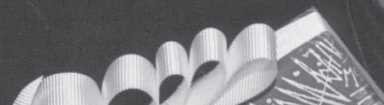
buy and use
**CHRISTMAS
SEALS**



on every letter



on every package



◀ Billy and Janet McAlister, 3-1/2 year-old twin children of Mr. and Mrs. McAlister of Puyallup, were chosen locally to portray the twins on the 1955 Christmas Seals. In early November, over 84,500 Pierce County homes received the new Christmas Seals in the mail along with a plea for contributions. Tuberculosis was still very common in the 1950s. 107 new cases of tuberculosis were discovered in Pierce County in 1955; 16 Pierce County residents died.

Eradicating Tuberculosis



Hal Murtland, a Tacoma attorney, had just been appointed chairman of the mass chest x-ray survey to be conducted in Tacoma and Pierce County the next winter. The first mass x-ray since 1948 would begin in November and utilize four mobile x-ray units. Murtland planned for 140,000 Pierce County adults to be x-rayed in the fight to

eradicate tuberculosis. Mayor Harold Tollefson points out to Hal Murtland (right) the pins on the map marking reported and treated tuberculosis cases. Also shown: County Commissioner Harry Sprinkler (seated) and Dr. Charles McGill, president of the Tuberculosis Association of Pierce County. Photo dated 1956.



◀ Shown is the abandoned cabin of Ezra Meeker, the city of Puyallup's founder and first mayor. Meeker and his wife Eliza Jane built this cabin in 1862, 15 years before he platted the town, and they lived in it for 26 years. Eliza Jane planted the ivy vine in 1864. Upon her urging and with a fortune amassed through the hop industry, Ezra built and moved his family into the Meeker Mansion in 1890. He gifted his former homestead to the city of Puyallup. In recognition, a pergola was built in what is now Pioneer Park to support the ivy vine still marking the cabin site, circa 1906.

In 1912, it was leased to be used as a hospital.

In 1948, it served as a Critical Care Nursing Home.

A Hospital for Puyallup



1922: Five area doctors (Raymond Morse, F.F. Cullen, W. Karshner, S.D. Barry, and C.H. Alyen) opened the Puyallup Valley Hospital, with their own money.

1929: Puyallup Valley Hospital was renamed Puyallup General Hospital. However, it was still a financial failure.

1952: The Lutheran Home and Welfare Society assumes management of Puyallup General Hospital at the request of the doctors who owned that facility. The hospital in downtown Puyallup, near Meridian Street and Fourth Avenue NW, is renamed Good Samaritan Hospital and has 42 beds. In the same year, The Lutheran Home and Welfare Society also completes construction in Puyallup of a new facility for Lutheran Home for the Aged, which is renamed the Lutheran Minor Hospital for the Chronic Diseases of the Aging. The 3-story, 76-bed facility is on 14th Avenue SE.

1954: Good Samaritan Hospital begins offering physical rehabilitation programs, the first privately operated rehab center in the state, which will establish the hospital's reputation as one of the finest rehab providers in the Pacific Northwest.

1957: Good Samaritan Hospital is directed by health and fire authorities to acquire a more adequate building for its expanding programs. The hospital's board of governors decides to consolidate Good Samaritan with Lutheran Minor Hospital for the Chronic Diseases of the Aging in Puyallup, and to greatly improve the Lutheran building.

1958: A public open house celebrates completion of the renovated and expanded Lutheran facility into a general hospital that is now called Good Samaritan Hospital in Puyallup.

Photo shown above is the original Puyallup General Hospital, downtown Puyallup, built in 1922. For more history, visit: <https://www.multicare.org/multicare-history>



A Great Advancement

◀ Mary Bridge Children's Hospital's main surgery. The surgery contained all the most technologically advanced equipment, sized for children. The large lamp over the table is a shadow-proof lamp for more clarity of vision for the surgeon. An x-ray illuminator board was also available. The floor in and near the surgery was nonconductive; eliminating the hazards from chance sparks near anesthesia. All air in the surgery was first washed, heated and humidified.

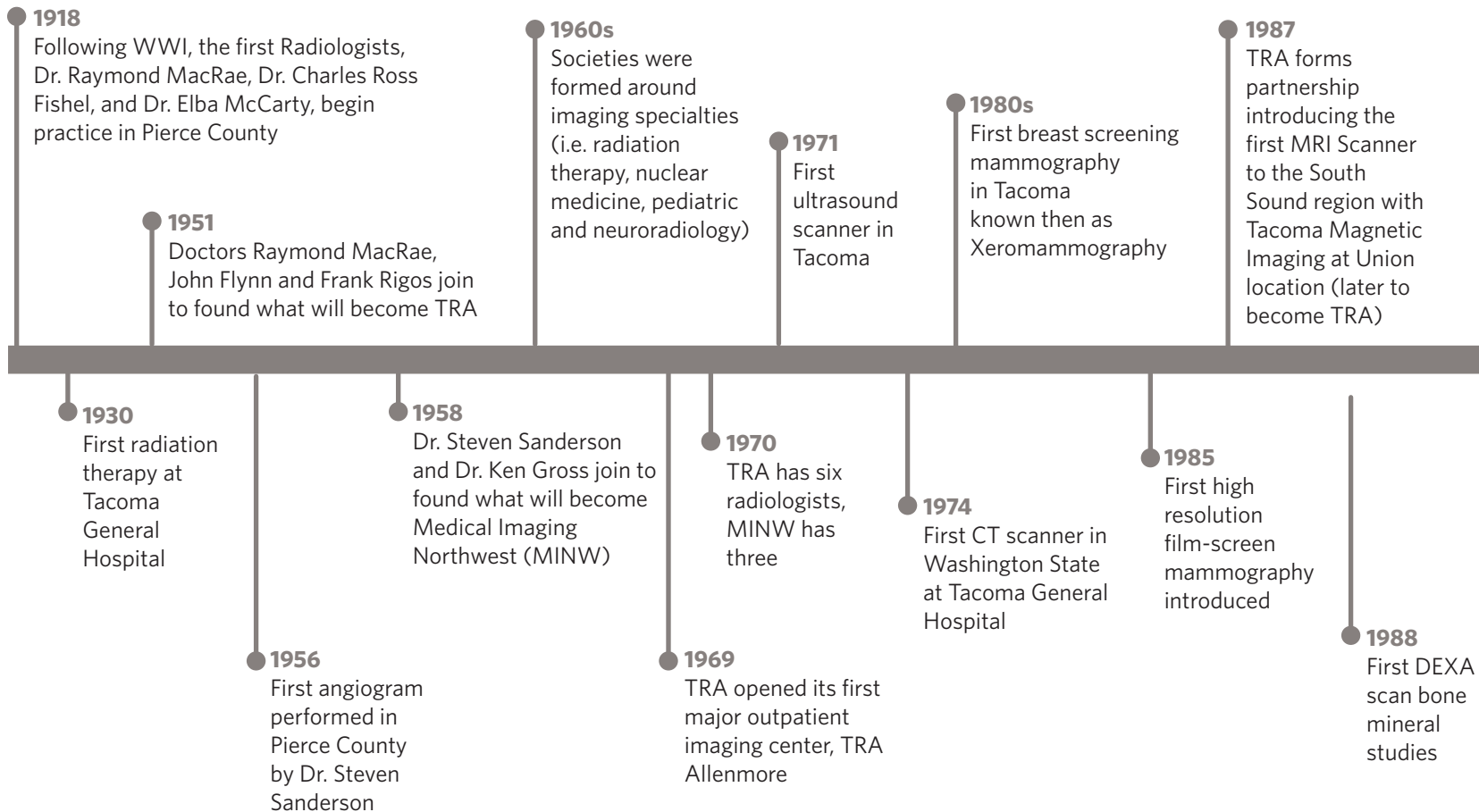


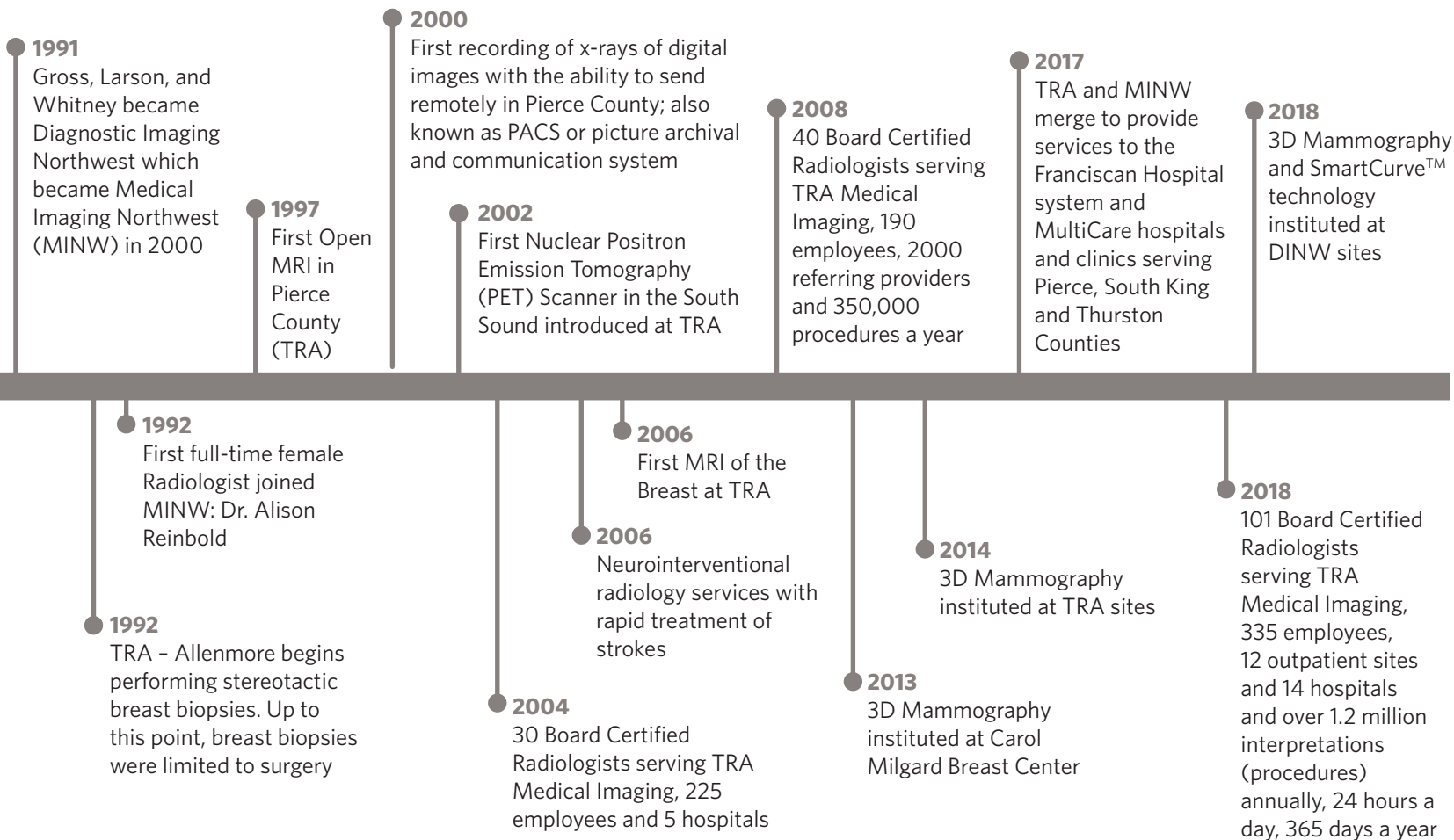
Mary Bridge Hospital opened in 1955. The first image intensifier (x-ray) was added in 1956. The equipment in the hospital was specially designed for its pint-sized patients, ranging from birth to age fourteen. This was a great advance in radiology.

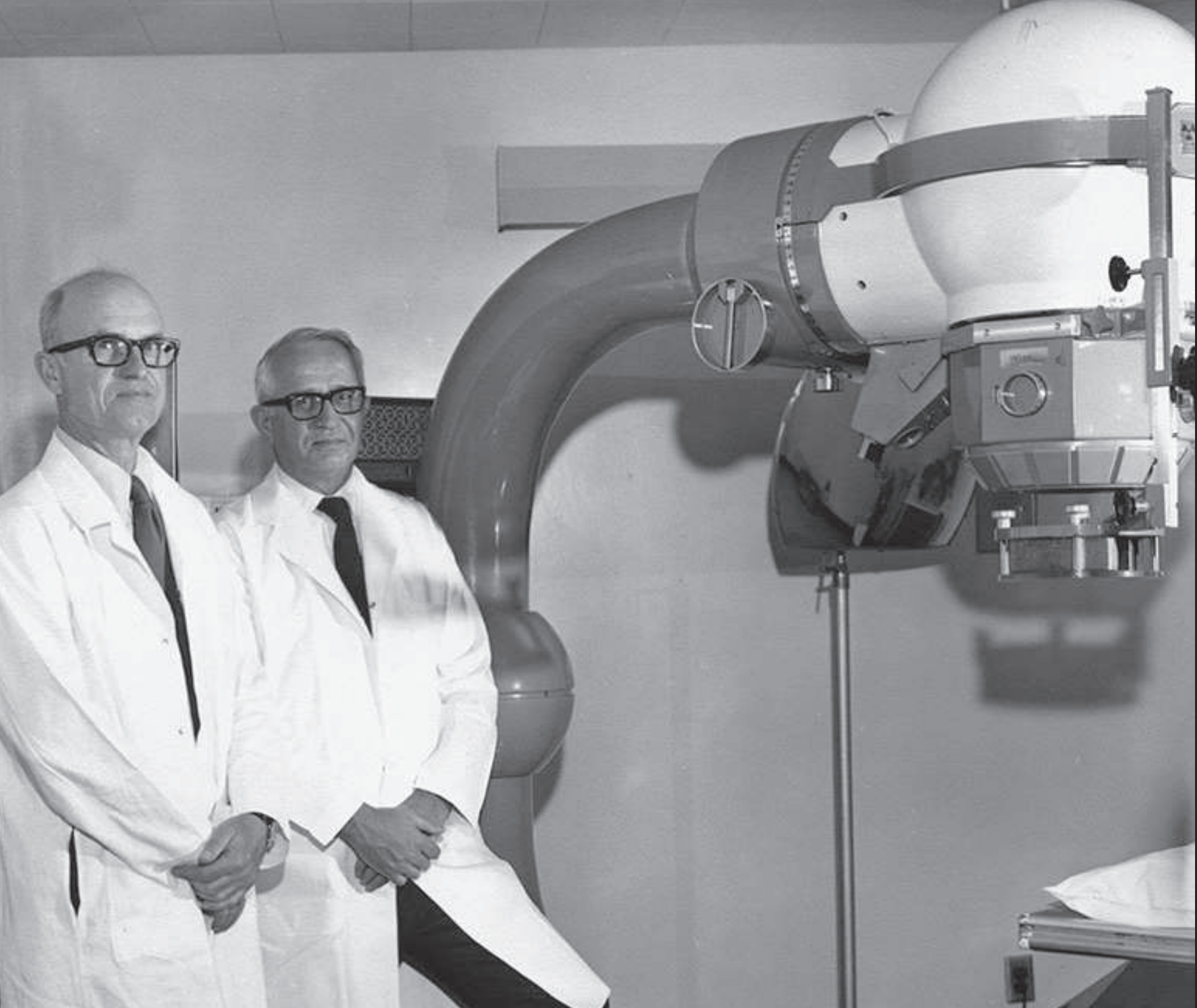
Prior to the mid 50s it was necessary to wear “red goggles” for 30 minutes in the dark to adapt

before doing the fluoro schedule. It wasn't until the early 70s before all of the old units were replaced. This scientific advance also led to the development of multiple special procedures.

Dr. Frank Rigos, who had a medical waiver for military service for previous tuberculosis, became Director of Radiology for Tacoma General Hospital from 1942 until 1974.





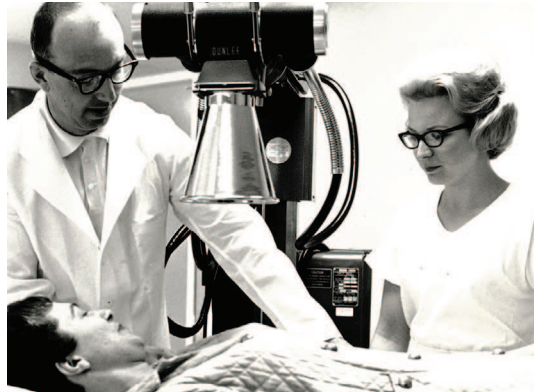


Stacks of Film

◀ The 1960s was a period of increasing specialization and special studies development. Shown with the Cobalt Therapy (cancer radiation) machine is Drs. Frank Rigos and Dr. Henry Maki who became the founders and developers of TRA.

Don Morgan, Chief Technologist 1962-1965 at Tacoma General Hospital shown performing a fluoroscopy. ▶

Special studies exam and Franklin film changer. ▶



The practice of radiology in the 1960s was quite different from present day practice. The radiologists were all general radiologists whose training consisted of a one-year internship and a three-year radiology residency, six months of which was in radiation therapy. Compare that to today where radiologists must complete a minimum of four years of residency after medical school, bringing their total education to a minimum of 12 years. After residency, most radiologists then complete one to two years of a subspecialty fellowship.

Days were spent reading a stack of film cases and performing fluoroscopies. It was common to perform 15-20 fluoroscopies in a day, as well as, supervising the radiation therapy cases in a room in the x-ray department.

Dictations were either directly to a transcriptionist or on an old belt type recorder. Coned images of the gall bladder or compression studies of the urinary or gastrointestinal tract were considered sophisticated studies at the time. Special studies were pneumoencephalograms, pneumoperito-



neum, or bronchograms, and angiograms using direct arterial sticks and hand injections but without catheters. Films were obtained with three stacked cassettes pulled in sequence by hand.

In the late 1960s, images progressed to a rolled film on the Franklin film changer and later to the individual cut films using the Puck film changer. Many of the films were developed manually or hand tanked until the development of the automatic processor in the early 70s. Progressive improvement of film, screen, and processing led to improved images with less radiation exposure. There were no subspecialties or certifications. Stacks of films accumulated in various offices and a radiologist would rotate to different offices or hospitals reading “the stacks” of films.

Tacoma radiologists at times covered surrounding communities such as Aberdeen, Olympia, Bremerton or Port Angeles. TRA performed all the radiological work at Ketchikan, Alaska for several years.



A Decade of More Firsts

◀ EMI scanner at Tacoma General Hospital was the first in Washington State. It would scan only the head but was revolutionary. The patient's head was placed in a water doughnut which was expanded to hold the patient's head without motion. It required 4-6 minutes to acquire one slice compared to just seconds today.

Gamma camera nuclear studies exam. ▶

Drs. James Kenney and Milton Bleiweiss shown reading film images. ▶

1972 marks the first ultrasound at Tacoma General Hospital using the Bscan. ▶



At the beginning of the 1920s, radiology consisted primarily of plain films and contrast studies. With the advent of computers, medical imaging science development assumed an exponential rate of growth.

There were twenty additional radiologists hired in Pierce County between 1970 and 1980, tripling the total number present at the beginning of the decade.

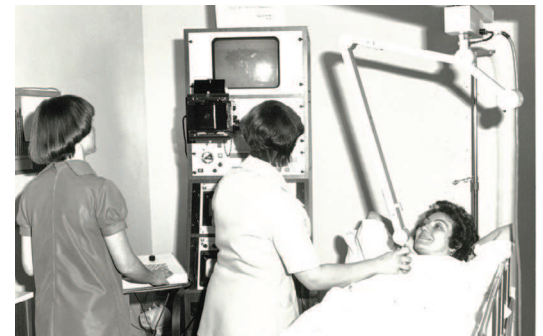
New technologies included CT (Cat Scan), ultrasound, nuclear medicine, digital imaging, special studies, mammography, new contrast agents and as other improvements such as disposable barium bags, new barium preparations, disposable needles, tubing, etc.

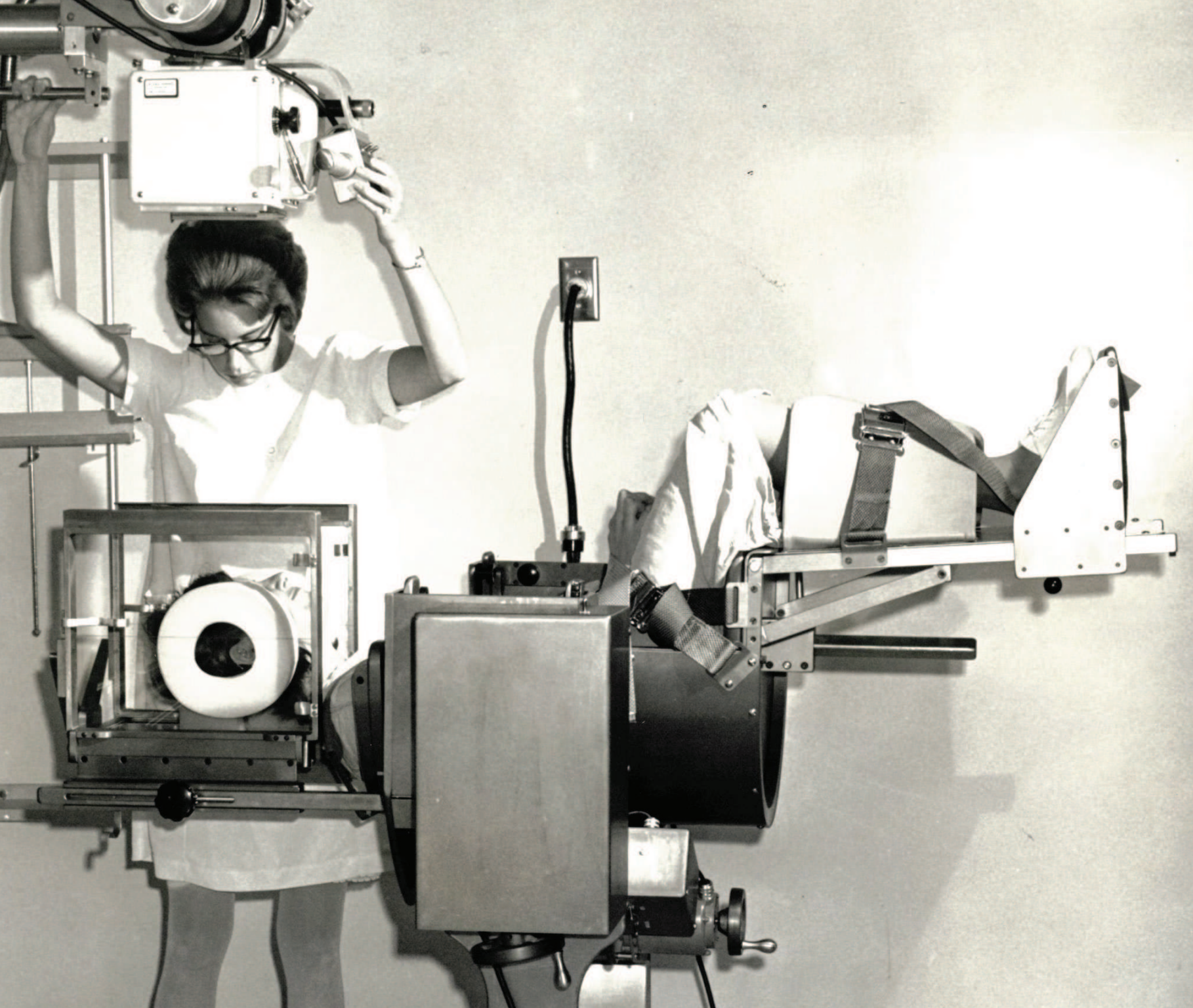
Ultrasound was first used for clinical purposes in the late 1950s. As they perfected the clinical use in British hospitals, it wasn't until the mid to late 1970s that it became widely used in American Hospitals.



1973 marked the first ultrasound in Tacoma using the Bscan (or Bistable) which was a single plane that was "painted" in by the technician. Initially, it was used primarily for fetal head measurements. The echogenic areas were white or black without grayscale. Grayscale ultrasound arrived in the later 1970s and #D grayscale in the 1980s.

A look back in history makes most women today, find it hard to imagine going through a pregnancy without having an ultrasound.





Progress Continues

◀ A patient with technologist, Rose Ness, receiving a Pneumoencephalography in 1975. A common medical procedure in which most of the cerebrospinal fluid was drained from around the brain by means of a lumbar puncture and replaced with air, oxygen or helium to allow the structure of the brain to show up more clearly on an x-ray image. It was performed extensively until the late 1970s, when it was replaced by more sophisticated and less invasive modern neuro-imaging techniques.

▶ Newer Cobalt Therapy Imaging 1970s.

Computer applications created an explosion of progress in all areas of imaging in the 1970s. A GE 8800 fan beam CT scanner was installed at St. Joseph Hospital at the beginning of 1979. Gamma cameras and ^{99m}Tc generators resulted in expansion of nuclear medicine services. Grayscale ultrasound was being provided at the hospitals and offices resulting in a marked improvement in accuracy.

Mammography prior to the early seventies was performed with the standard x-ray units, progress was using focused grids, bucky grids, or new types of film. The first screening mammography in Tacoma was a XERG (Xonics Electron Radiography) mammography on the Tacoma General Campus. Dedicated mammographic units were being installed to replace the older xeromammography units beginning in 1988.

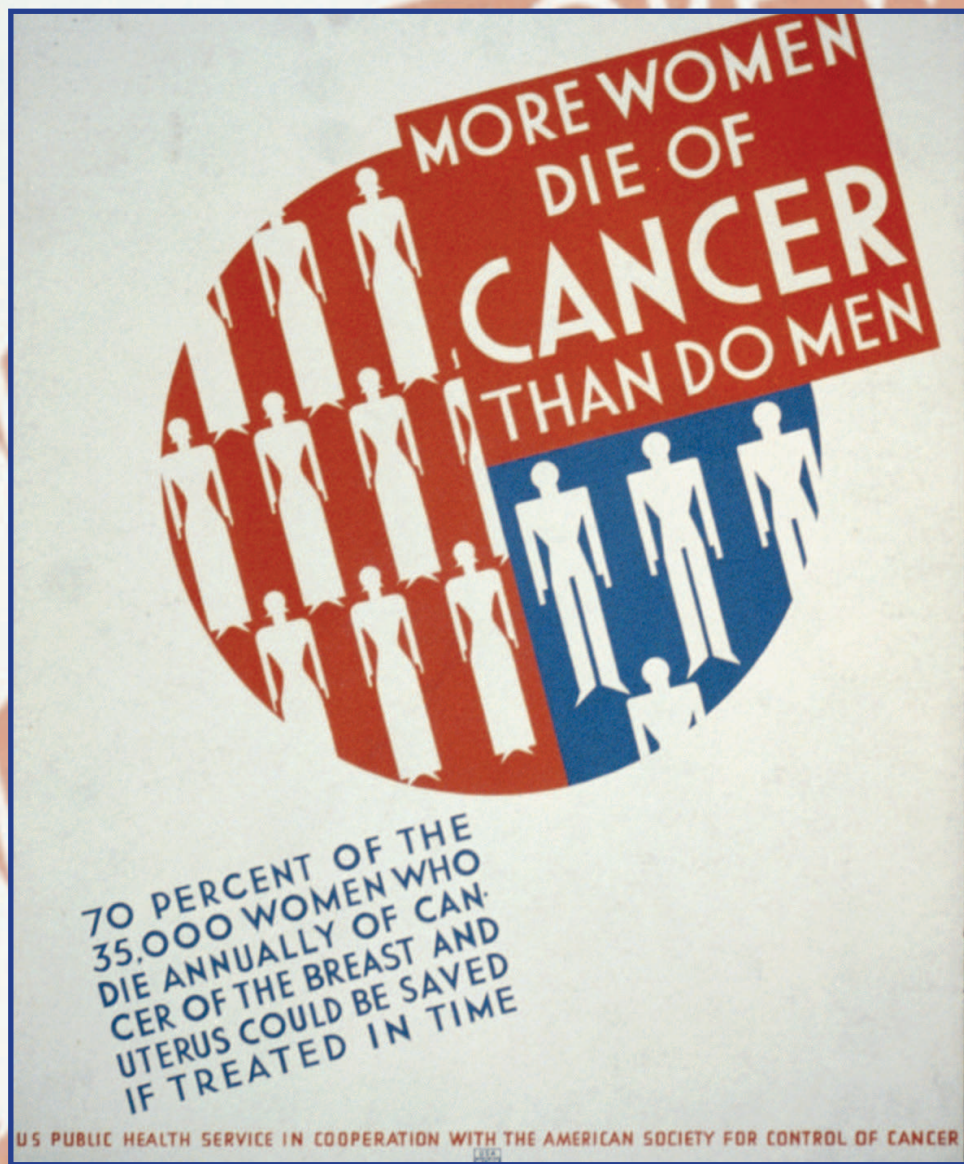
As services and patient population increased, the business aspects of radiology became more demanding. In the 1970s, management

progressed from rather basic billing offices without any accounting controls to being run by more comprehensive business managers. The billing office consisted of a room with a few boxes and handwritten paper accounts. Many of the payments were in cash and trust was the primary financial protection.

In 1970, TRA Medical Imaging had six radiologists and Medical Imaging Northwest had three — each generating 50 to 100 readings per day. Most offices were small with one to three employees. The title “business manager” now involved increasing complexity including management, billing, accounting, personnel, marketing, IT and multiple other titles.

Compare that to today, with over 1.2 million interpretations annually and over 100 radiologists, and 350 plus staff consisting of technologists, support staff, medical records, scheduling, billing, operations and IT.





Breast Imaging History

◀ The American Cancer Society was founded in 1913 by 10 doctors and 5 laypeople in New York City. It was called the American Society for the Control of Cancer (ASCC). At that time, a cancer diagnosis meant near certain death. They selected the sword to express the crusading spirit of the cancer control movement.

Early detection has always been the underlying message as seen in this 1938 poster encouraging women to seek treatment for cancer. This was a Work Projects Administration Poster Collection (Library of Congress); U.S. Public Health Service in cooperation with the American Society for Control of Cancer.

Although breast cancer has been around for centuries, there was no accurate way to diagnose it until just a few decades ago. Below is a brief timeline:

1913 – Breast cancer was diagnosed based on symptoms and the only treatment was surgery. German surgeon, Albert Salomon, made the first leap toward modern day mammography when he began studying the x-rays of women diagnosed with breast cancer and tissue from their mastectomies. He determined the difference between cancerous and non-cancerous tumors and discovered that there were multiple types of cancer.

1950s – There was a growing sense in the medical community that x-rays could be used in the routine diagnoses of breast cancer. Robert L. Egan, a doctor at MD Anderson in Houston, Texas, with a background in engineering was charged with developing breast imaging technology for the hospital. He and his colleagues took films of 1,000 women who did not have obvious cancer in a physical exam. Amazingly, they identified 238 cancerous masses, confirming the potential of the technology.

1960s – Although it was clear that x-ray could be used to diagnose breast cancer, it wasn't clear what role imaging should play in medical care. Dr. Phillip Strax, whose wife died of breast cancer, conducted the first large-scale controlled study of women to measure the role of mammograms in reducing deaths. The results published in 1966 demonstrated conclusively for the first time that a screening mammogram could find breast cancer at a stage early enough to save lives.

1970s – New treatments including radiotherapy and chemotherapy were introduced, putting a greater emphasis on detecting breast cancer. In 1976, the American Cancer Society recommended mammography as a breast cancer screening tool.

1980s – The use of radiotherapy and chemotherapy became more widespread, contributing, along with increased screening, to a reduction in cancer-related deaths. October was first dubbed Breast Cancer Awareness Month in 1985 as a way of encouraging screening and raising funds for research and treatment.

2000 – Digital mammography was introduced as an alternative to film. These images could be stored in a computer, magnified, transferred and corrected for under or over exposure without having to obtain another image.

2011 – An advance in imaging, 3D mammography, won approval from the U.S. Food and Drug Administration. Studies show that this new technology increases the rate of cancer detection while reducing the number of women called back for false positives. The American College of Radiology declared it to be an advance over digital mammography and urged its widespread use.

2018 – TRA Medical Imaging radiologists were the first to partner and build the Carol Milgard Breast Center in Tacoma, and begin 3D mammography in 2013. In 2014, all TRA outpatient sites had 3D, and in 2018, the Diagnostic Imaging Northwest centers all had 3D in place.



The Hospital Mix

◀ A prominent landmark in the Tacoma skyline was the futuristic design of the new St. Joseph Medical Center located at 1717 South J. The round “porthole” windows, “cloverleaf” sections and narrow supporting “legs” were in sharp contrast to the older hospital of the same name, located a block away. There was room for 262 patients.

Shown 1901 S. Union where Allenmore Hospital is located, circa 1970s. ▶

The hospitals of the 1970s began to consolidate and enlarge as they became hospital campuses and healthcare systems, a trend that would continue for both hospital systems to the present.

In 1980, Tacoma General Hospital, Mary Bridge Children’s Hospital & Health Center, and Doctor’s Hospital join forces as Consolidated Hospitals. In 1982, Allenmore Hospital’s name is changed to Humana. In 1983, Consolidated Hospitals becomes MultiCare Medical Center. Doctor’s Hospital closes in 1988. Then, in 1989, MultiCare Medical Center acquires Humana Tacoma Hospital and restores the name to Allenmore Community Hospital. In 1990, Lakewood Hospital was purchased by Franciscans and became St. Clare Hospital.

In 1987, Franciscan combined their few clinics with Providence Hospital of Seattle to form Medalia Healthcare. They acquired more clinics

and in 1993, Medalia purchased the 90-year old Western Clinic. Medalia became financially challenged in the 90s and in 1998 their physicians applied for union status with the government. The response was that Medalia was dissolved and the Franciscans formed the present Franciscan Medical Group, now called CHI Franciscan.

MultiCare Healthcare System paralleled the Franciscan Medical Group development. In 1994, a group of five primary physicians adjacent to the MultiCare campus became employees of MultiCare and in 1996 several clinics in South King County also joined. By 2011, each hospital system had grown to approximately 50 outpatient facilities employing hundreds of providers. The epicenter of their market areas in Tacoma extended to Federal Way, Covington, Maple Valley, Enumclaw, Eatonville, Olympia, and Gig Harbor. The growth of TRA and MINW paralleled these expansions.





More Decades of Change

◀ Aerial view of MultiCare's Tacoma General Hospital expansion. In the 1980s, the campus added the Centennial Pavilion, the Baker Building, Group Health Tower (now Kaiser) and the "L" Wing or Philips Pavilion in 1994. Photo dated 1995.

The increase of subspecialization and fellowship trained radiologists occurred in the 1980s and this decade saw even further miraculous technological development with the advent of Nuclear Magnetic Resonance, later renamed MRI.

Mobile MRI services were used in our community initially in 1985 and 1986. State health planners described these technological breakthroughs as doctor's toys that needed to be very limited. Local administrators were very cautious about these new technological miracles and doubted that they would be successful. Again, thankfully this opinion proved to be wrong.

The first fixed site MRI in Pierce County was Tacoma Magnetic Imaging, a partnership of TRA, Tacoma General Hospital, Franciscan Healthcare, and local physicians which opened in 1987.

The first scanner installed at TRA was a .5T Picker MRI which was passively shielded. A 1.5T GE sigma was added in July, 1990. Over the next decade, multiple MRI scanners were added in the hospitals and in outpatient settings. Mt. Rainier Imaging in Puyallup in 1990; and the first Open MRI in Pierce County was installed in 1997 at the TRA location on Union.

In the late 1980s, various techniques were sporadically used for bone mineral density measurement. In 1988, the first dual photon absorptiometry (DPA) was installed at St. Joseph Hospital. In the mid 1990s, the DPA was replaced by DEXA scanning. Today, DEXA is common in the outpatient imaging centers.

Outpatient Sites Highlights:

Diagnostic Imaging Northwest merged with Mt. Rainier Imaging to become Medical Imaging Northwest in 2000.

TRA opened imaging centers on Cedar St. in Tacoma in 2002, Lakewood 2002, and Gig Harbor in 2004.

MINW opened imaging centers in Puyallup 2000, Sunrise 2004, and Bonney Lake 2007.

The first fixed site PET scanner in Tacoma was installed in 2002 at TRA on Cedar in Tacoma.

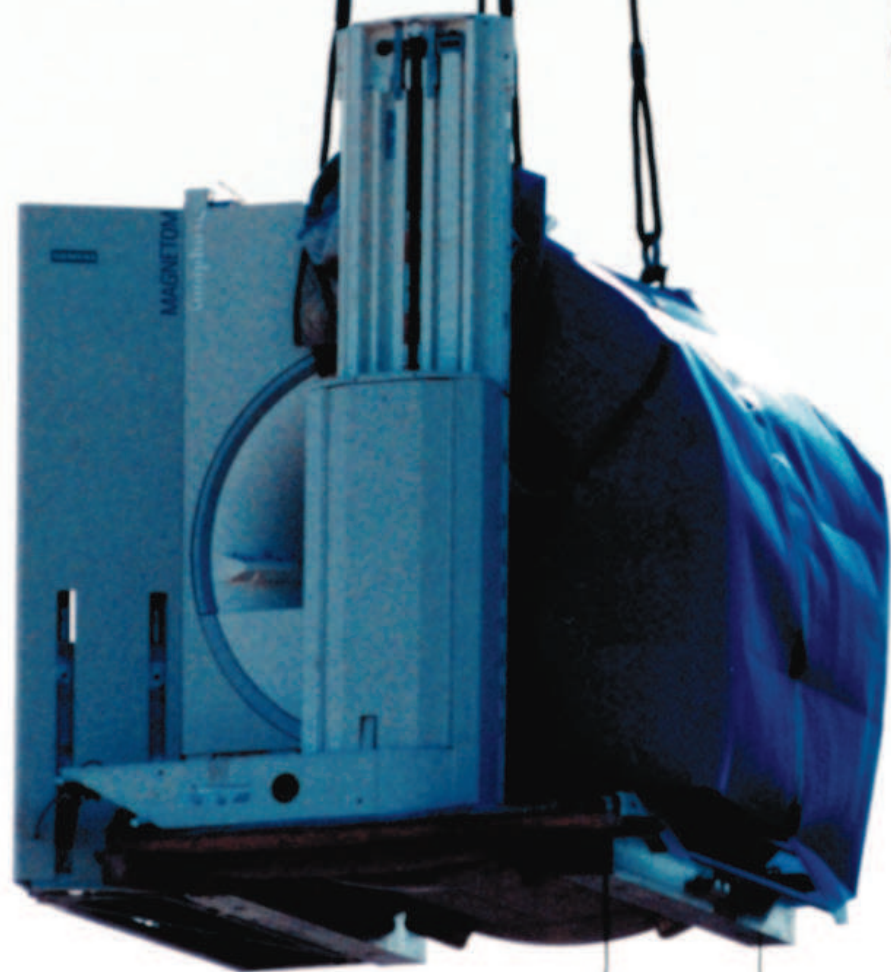
2006 digital mammography replaced the older units over the next two years.

A dedicated breast MRI was installed at the TRA Cedar Center in 2006.

2007 the first PET/CT being installed at Cedar TRA.

MINW outpatient imaging centers partnered with MultiCare which were then renamed Diagnostic Imaging Northwest in 2009.

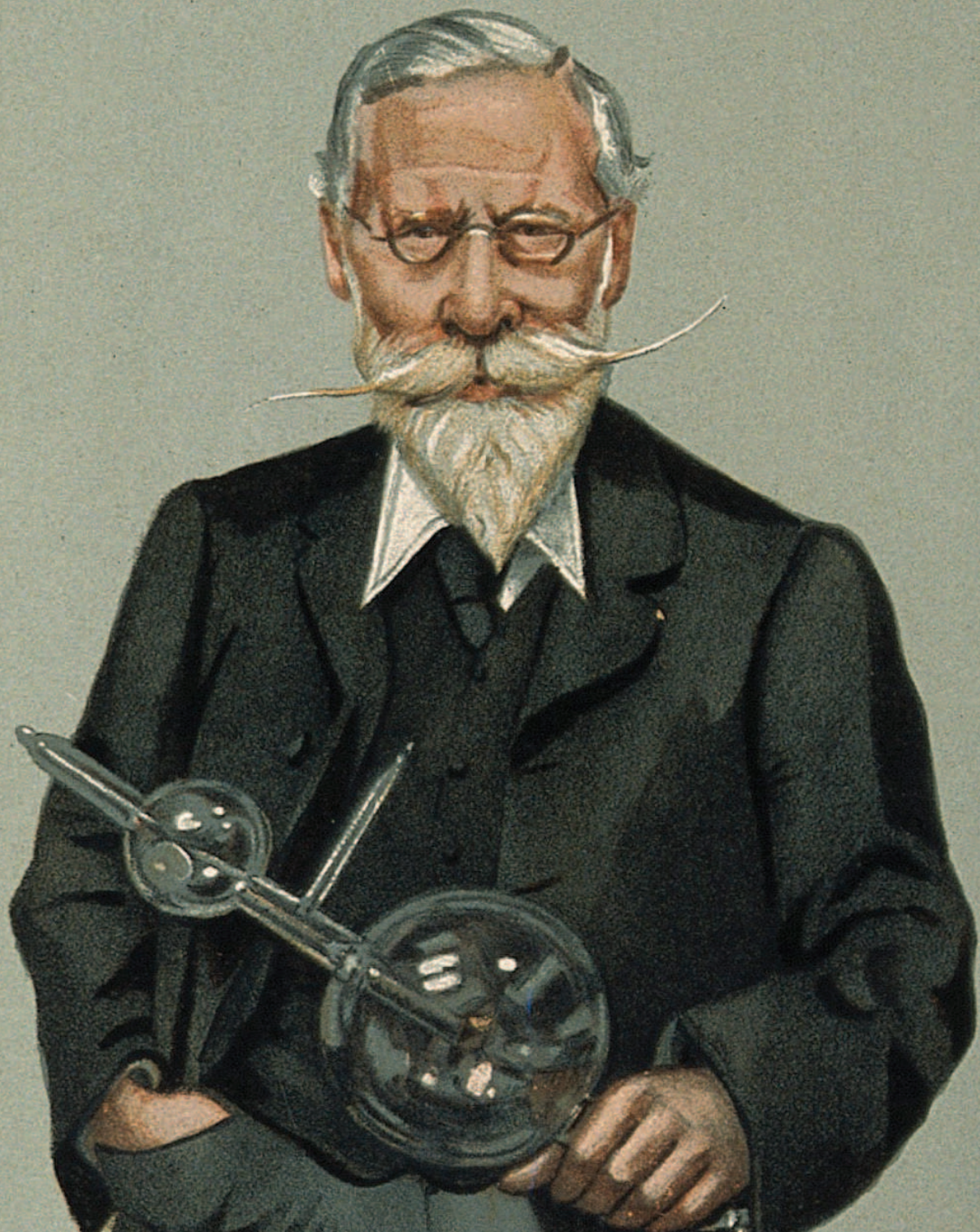
2017 TRA and MINW merge to provide services to the Franciscan Hospital System and MultiCare Healthcare System and clinics serving Pierce, South King and Thurston Counties.



◀ Installation day at Tacoma Magnetic Imaging. This was the first Open MRI in the area 1997.

Today — 2018 the Hitachi Oasis Open MRI is a true open scanner at TRA Medical Imaging on Union. It provides patients with a 270° unobstructed view. It is open to the front, back and most of the sides—and is equipped with a roomy bed allowing a more pleasant experience for larger and claustrophobic patients. ▶





◀ Illustration of Crookes and his glowing tubes gained renown, as shown by this 1902 caricature in *Vanity Fair*, with his punning Latin motto: *Ubi Crookes Ibi Lux*, —“Where there is Crookes, there is light”.

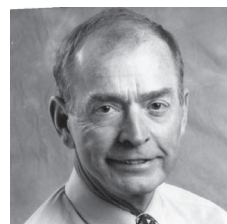
History Goes On

In conclusion, modern radiology is miraculous and will continue to progress on an unexpected mathematical scale into the future. When I started my radiology career in the 1960s, it was routine to ask the family for an autopsy at the time of the patient demise, since so often we did not have a clue as to the cause of death. Today, there is little additional information to obtain by an autopsy — not to mention the countless lives saved by the advancements of imaging.

There is a brief history written by Dr. Frank Rigos and the historical recollections of Dr. Vernon Larson appended to my original version of *The History of Radiology in Pierce County* now archived on the TRA Medical Imaging website at tranow.com. All of this information would be lost to future generations if it were just placed in a box somewhere to collect dust.

I hope that this history may be of interest now and for future generations of radiologists, medical professionals and the patients we serve.

As this publication is titled: *The First 100 Years, The History of Radiology in the South Puget Sound* — it's exciting to anticipate what advancements will be on the horizon.



Dr. William B. Jackson

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These resources and references are provided to credit and detail information on as many of the photos as possible. Many of the photos are photographs now archived at TRA Medical Imaging that were provided by Dr. William Jackson, who collected and protected them for many years. Much of the content used in this edition is taken from Dr. Jackson's *History of Radiology in Pierce County*.

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p. 12 Colorized postcard concept rendering for a new hospital; Tacoma Public Library, Northwest Room, Northwest Postcard Collection; reference: Stenger-560.

p. 13 Fannie C. Paddock Hospital, courtesy Washington State Historical Society, Catalog ID Number: 2011.0.317. Colorized postcard, Fannie C. Paddock Hospital 1908, Tacoma Public Library, Northwest Room, Northwest Postcard Collection; reference: Johnston-5.

p. 14 Tugboat pulling logs to mill, Tacoma Public Library, Northwest Room, Northwest Postcard Collection; reference: Magden-65.

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p. 18 Colorized postcard aerial view downtown Tacoma in 1918; Tacoma Public Library, Northwest Room, Northwest Postcard Collection; reference: Stenger-369.

p. 19 Photo courtesy: *The History of Radiology in Pierce County*, Dr. William Jackson.

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p. 22 Colorized postcard Northern Pacific Hospital, Tacoma Public Library, Northwest Room, Northwest Postcard Collection; reference: NWRPC-25.

p. 23 American Lake Veterans Hospital, Tacoma Public Library, Northwest Room, Marvin D. Boland Collection, Boland-B9514.

p. 24-25 Panoramic view of Tacoma in 1922 (public domain), Wikimedia Commons, Marvin D. Boland Collection source: https://commons.wikimedia.org/wiki/File:1922_Panoramic_view_of_Tacoma_WA_looking_west.jpg.

p. 26-27 Credit: ORAU, Radiology Museum Directory, source: <http://www.orau.org/ptp/collection/Radiology/radiology.htm>

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p. 30 Wikimedia Commons, Early x-ray procedure (public domain), courtesy: Wikimedia Commons; source, Elmer Ellsworth Burns (1910) *The Story of Great Inventions*, Harper & Brothers, New York, p. 233, fig. 11.

p. 31 Washington State Medical Association, 1920s, Tacoma Public Library, Northwest Room, reference: Marvin D. Boland Collection, Boland-B17296.

p. 32 Medical Arts Building 1940, Tacoma Public Library, Northwest Room, reference: Richards Studio, A9320-14.

p. 33 Radiation Therapy, courtesy: *The History of Radiology in Pierce County*, Dr. William Jackson. Dr. Hart with patient, Tacoma Public Library, Northwest Room, reference: Richards Studio, 647-9.

p. 34 Mayors Fawcett and Morrison promoting x-rays, Tacoma Public Library, Northwest Room, reference: Richards Studio, D33564-3.

p. 35 Permanent Metals Corporation, Tacoma Public Library, Northwest Room, reference: Richards Studio, D38272-7. Tacoma Rockets at Kelly Furniture store getting x-rays, Tacoma Public Library, Northwest Room, reference: Richards Studio, D38381-3.

p. 36 Christmas Seals campaign: Fight Tuberculosis, Tacoma Public Library, Northwest Room, reference: Richards Studio, D94383-2.

p. 37 Tuberculosis League of Pierce County and Mayor Tollefson, Tacoma Public Library, Northwest Room, reference: Richards Studio, D97498-1.

p. 38 Abandoned cabin of Erza Meeker, Puyallup, Tacoma Public Library, Northwest Room, reference: Greenwood Collection, Greenwood-28.

p. 39 Credit: MultiCare Health Systems, source: <https://www.multicare.org/multicare-history>.

p. 40 Mary Bridge Children's Hospital; radiology, Tacoma Public Library, Northwest Room, reference: Richards Studio, A89417-11.

p. 41 Mary Bridge Children's Hospital; radiology Tacoma Public Library, Northwest Room, reference: Richards Studio, A121049-3.

p. 42 (l to r) Tacoma General Hospital, 1929, TRA Medical Imaging collection. St. Joseph Hospital, TRA Medical Imaging collection. Pierce County Tuberculosis League Program, 1959, University of Washington Libraries, Special Collections,

SOC0864. Western State Hospital 1920s, Tacoma Public Library, Northwest Room, Marvin Boland Collection, reference: Boland A4238. Tacoma General staff with Dr. Alan Hart 1930, Chief of X-ray shown far left, Tacoma Public Library, Northwest Room, photo credit: Maarten Strode. Cushman Hospital (a veteran's hospital at 2002 E. 28th St. in Tacoma) 1925, Tacoma Public Library, Northwest Room, reference: Boland-B12992.

p. 43 (l to r): Tacoma General Hospital, 1963 rendering. School of Nursing, Tacoma General Hospital, 1925; Tacoma Public Library, Northwest Room, Marvin Boland Collection, reference: Richards Studio A1232-0. Mary Bridge Children's Hospital x-ray room, 1950s, "most technologically advanced equipment appropriately sized for children; Tacoma Public Library, Northwest Room, reference: Richards Studio D112214-3. CT Scan 1975, Tacoma Medical Imaging collection. Anti-tuberculosis League of Pierce County, July 4, 1919, University of Washington Libraries, Special Collections, SOC1737. Job fair, TRA Medical Imaging collection. Nuclear medicine study, late 70s, TRA Medical Imaging collection.

p. 44 Cobalt Therapy at Tacoma General Hospital, TRA Medical Imaging collection: photo credit: Kenneth G. Ollar.

p. 45 Special Studies and Franklin Film Changer, Tacoma General Hospital, TRA Medical Imaging collection: photo credit: Kenneth G. Ollar.

p. 46 First CT, Tacoma General Hospital, TRA Medical Imaging collection, photo credit: Russ Carmack.

p. 47 Gamma Camera; Reading Film; First Ultrasound; photo credit: Stearns.

p. 48 Pneumoencephalography (tumbling chair); TRA Medical Imaging collection, photographer unknown.

p. 49 Cobalt Therapy, photo credit: Stearns.

p. 50 Work Projects Administration Poster Collection (Library of Congress); U.S. Public Health Service in cooperation with the American Society for Control of Cancer.

p. 52 St. Joseph Hospital 1975; Tacoma Public Library, Northwest Room, reference: Richards Studio, D165646-4.

p. 53 Allenmore Hospital 1901 Union, Tacoma Public Library, Northwest Room, Tacoma-Pierce County Building Index.

p. 54 Tacoma General Hospital 1995, TRA Medical Imaging collection, photo credit: Kenneth Ollar.

p. 56 Open MRI install at TRA Medical Imaging, TRA Medical Imaging collection.

p. 57 Oasis Open MRI at TRA Medical Imaging, TRA Medical Imaging collection

p. 58 Sir William Crookes, Wikimedia Commons (public domain), published in *Vanity Fair* 1903, source: https://commons.wikimedia.org/wiki/File:Sir_William_Crookes_1902.jpg.

A special thank you

TRA Medical Imaging gives special thanks and acknowledgment to Dr. William B. Jackson, Radiologist at TRA Medical Imaging from 1972-1989. He not only read every copy of the Pierce County Medical Society Bulletin published from 1930-2008, poured over archives in historical newspapers, and researched many hours at the Washington Historical Society—he inspired us to continue telling the story of radiology in Pierce County.



The First 100 Years takes you on a journey with TRA Medical Imaging beginning with its forefathers in radiology who arrived in Tacoma in 1918. We hope you enjoy the journey in radiology history along with accents of historical highlights of the Puget Sound.