The History of the Radiology Specialty in Chiropractic

JOSEPH W. HOWE DC, DACBR, FELLOW ACCR

Special Thanks To:

Dr. Kenneth Young
Dr. James Rehberger
Dr. Alicia Yochum
Dr. Terry Yochum

Discovery

Roentgen discovered x-ray in Nov. 1895, received Nobel Prize in physics in 1901

Soon used in medicine and use proliferated – no realization of dangers early on and many early users suffered damage.

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Eigenthum von Prof. Zehnder Freiburg "B

1895 THE DISCOVERY OF X-RAY AND CHIROPRACTIC--FOREVER LINKED

Professor Wilhelm Conrad Roentgen obtained the first radiograph of his wife in a laboratory on November 8, 1895 at Wurtzburg, Germany. Although this image was somewhat primitive, it began an era that changed the practice of medicine and medical technology. Roentgen was later given the Nobel Prize for his discovery. Chiropractic was discovered by Daniel David Palmer on September 18, 1895, just two months prior to Roentgen's discovery in West Germany. These two moments in time have forever linked x-ray and chiropractic as each approaches its Centennial Celebration in 1995. The very first 14 x 36 full spine radiograph was performed by Warren L. Sausser, D.C. of New York City in July of 1933. From the crude images in the early 1900's, imaging has undergone many changes. Improvements in plain film radiography, as well as the development of linear tomography and myelographic techniques, provided early advancements in x-ray technology. The discovery of CT in the early 1970's and MRI in the early 1980's has revolutionized diagnostic imaging.

First Use of X-Ray in Chiropractic

- 1910- Palmer School of Chiropractic (PSC)
- ▶ BJ palmer
- ^{1st} machine installed in an upstairs bedroom
- No shielding was used because of lack of knowledge of effects of radiation exposure at that time
- Use of x-ray in chiropractic was controversial and was part of the reason the Universal Chiropractic College was formed by faculty from the PSC.
 - My parents graduated from UCC in 1914 and 1915
- Earnest A. Thompson- First head of radiology at PSC
 - 1919- Chiropractic Spinography published
 - Left PSC and spent over a year in private practice in UT
 - Sausser became head of Radiology at PSC during that time and did some work with spinography



Spinography

- The term SPINOGRAPHY was introduced early to differentiate chiropractic use from <u>diagnosis</u> – a bad word in early chiropractic
- Initially used to verify palpation findings and look at subluxations as well as scoliosis
 - NOT to diagnose pathology or anomaly
- In Thompson's book Chiropractic Spinography in 1924 (2nd edition) there were already references to anomalies and pathology
- Its use by BJ Palmer at PSC made it popular
- Contributed to the division in chiropractic into "straight" or "mixer" depending on your use of radiography





SHILLS OF SUCCESS AND DEPARTMENT BY 26, WARNEY, L. SALLARD, PERSONANT OF (DISCH, OF BOUNCE), AND BOUNCESS BORDERS LEFT, AND DELA CONDITION, PERSONANT OF NEW TORE STATE SOCIETT (DESER) AT HED-REA BY UNFRANCE STRACTOR, N. T., WARRE ESTANCIONY OF NEW TORE STATE SOCIETT (DESER) AT HED-REA BY UNFRANCE STRACTOR, N. T., WARRE ESTANCIONY OF NEW TORE STATE SOCIETT (DESER).



Warren L. Sausser

- In Dr. Thompson's absence Dr. Sausser headed the radiology department at PSC
- When Dr. Thompson returned, Dr. Sausser entered the armed forces where he got much training as a radiographer.
 - Incidentally most of the early x-ray people in chiro sought their training in the services
- Sausser developed 14x36 radiographs in cooperation with Eastman Kodak which developed the cassettes and film
- 8X36 films were also done but were not practical for scoliosis, etc.
- Actually some full body films were done and exhibited, but never achieved any real use
- Sausser's work was published in Eastman Kodak's Radiography and Photography
- Upright vs recumbent films





Warren L. Sausser DC 1937

Sausser opened an x-ray laboratory in NYC in early 50s with an MD fronting for him.

He was upset that an MD with no knowledge of x-ray could have a lab, but he could not.

Licensure of Chiropractors in NY did not occur until middle 50s and use of x-ray was restricted to specific body areas for years.



Universal Spinography Society

The Universal Spinographic Society was formed in 1924 with Sausser its president. Palmer was much involved and it became part of the Universal Spinographic and Neurocalometer Society and soon was lost.





Board of Counselors of Spinographers

In 1930 the Board of Counselors of Spinographers and X-ray Operators was formed as a committee of the National Chiropractic association (NCA), with Sausser its president.

Articles by him and others appeared in The Chiropractic Journal for several years.

In 1934 it became the National Council of Chiropractic Roentgenologists (NCCR) with Sausser still president

▶ Waldo Poehner succeeding him as president in 1937.

Waldo G. Poehner, DC

- Considered the Father of chiropractic radiology
- Poehner had accumulated some training from MDs and was acknowledged the premier chiropractor in roentgenology at the time.
- He taught 3 "post-graduated courses" (3 days each) attended by Michael Giammarino, DC, who acquired more training and became one of the early experts.





Leo E. Wunsch, D.C., D.A.C.B.R. September 12, 1894 - July 29, 1983

Dr. Wunsch was the founding father of the National Chiropractic Board of Radiology in 1958 and served as its first president. He was a graduate of Lippencott College of Pharmacy in 1918 and a graduate of Palmer College of Chiropractic in 1922. He initiated the formation of the National Chiropractic Association X-ray Council in 1937 in conjunction with Drs. Waldo G. Poehner and Fred H. Baier.

NATIONAL COUNCIL OF CHIROPRACTIC ROENTGENOLOGY MEETING

Chicago, Illinois - April, 1950



Drs. Joseph Janse, Robert D. Ingram, Leo E. Wunsch, Waldo G. Poehner, Michael A. Giammarino, Theodore Vladeff and Earl A. Rich

ST. LOUIS, MISSOURI - 1952



Left to Right - (seated) Drs. Michael A. Giammarino, Leo E. Wunsch, Theodore Vladeff, Hilary Pruitt, Waldo G. Poehner, Lester P. Rehberger

Left to Right - (standing) Drs. Ralph Powell, Earl A. Rich, Roland Kissinger, Joseph Janse, Mc Millan, Carl S. Cleveland, Jr., L.M. Rogers, Long

Formation of a Certification Program

There was talk of a certification program for several years in the NCCR (late 40s) and in 1957 the Council on Education of NCA recommended a certification board which was appointed by Ed Kropf, the President of NCCR.

Over the next months the rules, requirements, etc were approved by the CCE who also approved those chosen to be the board, based on their reputations and training which was acquired over the years.

Board members: Waldo Poehner, Leo Wunsch, Fred Baier, Duane Smith and Michael Giammarino.

Ed Kropf DC President of the Council on Roentgenology

Appointed the Board



1st Postgraduate course at National College



 1958
 Taught by Dr. Janse and Dr. Kissinger

National College of Chiropraria Bradmatte School Prartic 1958

To.All to Whom these Presents may come, Greetings Be it Known that

Joseph W. Howe. D.C.

has completed a course of Graduate Study in Diagnostic Roentgenology in this institution

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In Testimony Whereof, we have subscribed our names and caused the Seal of the College to be affixed hereto.

Requirement to Take Exam Requirement to take the exams were ► 5 years in practice using x-ray ▶ 100 hours of post-graduate training (acquired from almost any source) The hourly training moved up to 200, then 240 and eventually to 300 hours acquired through an

accredited chiropractic college with the training under a certified roentgenologist.

Eventually the educational requirement was a full time residency at first 2 years and now 3.

Contents of Examination

- Subjects for examination (3 days) were:
 - Oral film reading of osseous and soft tissue abnormalities

Written exams in:

- Skull and sinuses
- Lung fields and thoracic cage
- Lumbar spine and pelvis
- Osseous pathologies Gall bladder
- Gastrointestinal abnormalities
- Genitourinary abnormalities
- Arthropathies
- Spine including spinography
- Heart
- Encephalography
- Safety factors
- Myelography
- Hysterosalpingography.

First Exam

- The first exam was given in March 1958 in Omaha Neb. with 25 applicants. There were 3 who passed: Joseph Janse, Earl Rich, and Lester Rehberger.
- A month before the 1st exam Poehner and Baier died and the board proceeded with 3 examiners.
- Rehberger was chosen as a 4th member a second exam was given in May for some who had not passed.
- Ronald Watkins and Leonard Ritchie were successful.
- The 3rd exam was in the spring of 1959 in which J.J. McCarthy and I were successful. (To brag a bit: I was the first after the 1st 3 to pass on 1st try and was the 12th to pass).



First NCCR x-ray certification exam, at Omaha, in 1958; Janse seated in suspenders, Earl Rich seated at table behind Janse, Leo Wunsch standing behind Earl Rich, Giammarino standing at rear of phone speaking on phone; Duane Smith, board member/examiner, seated on Janse's left; bald headed man in front is James McCarthy

First Exam

- The Postgraduate course at NCC had been held before the 1st exam and many of those who attended took the 1st exam expecting it to be like many previous situations.
- The scope and difficulty of this exam exceeded the expectations of most takers and most declined further tries, but some persisted.
- NCCR became ACCR in 1964 with the birth of the American Chiropractic Association.



First NCCR x-ray certification exam, at Omaha, 1958; Janse seated in suspenders, Giammarino handin paper to Duane Smith, board member; Earl Rich is seated at table directly behind Janse

NATIONAL CHIROPRACTIC BOARD OF ROENTGENOLOGY (NCBR) Indianapolis, Indiana - April, 1959



Drs. Leo E. Wunsch (*President*), Lester P. Rehberger, Duane M. Smith and Michael A. Giammarino (*Secy./Tres.*)

The Training Begins

- Classes leading to eligibility for the exam were conducted by Lincoln Chiropractic College, NCC, Logan and Texas CC.
- They followed syllabi that each college developed the first being by Earl Rich at LCC in conjunction with several of us who were presenting the classes.
- A major part of the course consisted largely of presentations from his book Rich's Atlas, slides of which were used by the instructors with a copy of the book given to all participants.
- Problem there was no text, only the films and labels. His response to my desire for text was: "you are the text."
- Tom Goodrich and James Cox were in the first LCC class.
- NCC used Meschan's text for its syllabus and other colleges had their own.
- This made some inhomogeneity but a handful of us taught for all the colleges so there was some uniformity.



Earl Rich DC, DACBR



Earl A. Rich, D.C., D.A.C.B.R. June 8, 1921 - August 6, 1967

Dr. Rich pioneered image-enhanced cineroentgen ology at the Lincoln Chiropractic College in 1961 and 1962. His masterful text book, "Rich's Atlas". published in 1965, was ahead of its time in both quality and vision. Copies of this text were distributed around the world. He organized the first syllabus in postgraduate radiology and had the first college-sponsored training program for eligibility to the D.A.C.B.R. exam. His first student was Thomas M. Goodrich, D.C., D.A.C.B.R.

ATLAS OF CLINICAL ROENTGENOLOGY

BARE A RICH

1

ROENTGENOLOGY OF THE SPINE AND PELVIS Fig. 544 ADVANCED ANKYLOSING SPONDYLITIS Fig. 545 ANKYLOSING SPONDYLOSIS



Calcium infiltration into all ligamentous elements of the motor units with exception of the interspinous ligaments. Sacroiliac and symphysis pubic ligaments also are calcified.

Fig. 546 EARLY SPONDYLOARTHRITIS



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Ligamentous change is confined to the anterior longitudinal ligament.

Fig. 547 ADVANCED SPONDYLOARTHRITIS



- Early calcium infiltration into anterior common liga-ment, I.4, 5, S1.
 Sclerosis of vertebral rim.
 Calcium infiltration into ligamentum flava.

4. Obliteration of joints.



1. Lipping and spurring of anterior longitudinal ligament. 2. Destruction of C2, 4, 5, 6 joints (rheumatoid arthritis).

FIG. 1098. PLEURAL CALCIFICATION



1. Massive calcification of pleura. 2. Pleural thickening (fibrosis). 3. Tenting of diaphragm. 4. Retraction of ribs. 5. Obliteration of left cardiophrenic angle. 6. Thoracic curvature.

FIG. 1099. PLEURAL CALCIFICATION



Lateral view of case in Fig. 1098.

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THE NATIONAL BOARD OF CERTIFIED CHIROPRACTIC ROENTGENOLOGISTS

PRESIDENT LEO E. WUNSCH, D. C. 1601 VINE STREET DENVER, COLORADO VICE-PRESIDENT DUANE M. SWITH, D. C. 7006 SEVILLE AVENUE HUNTINGTON PARK, CALIFORNIA SECRETARY-TREASURER M. A. GIAMMARINO, D. C. 519 EAST LINCOLN HIGHWAY CDATESVILLE, PENNSYLVANIA LESTER P. REMBERGER, D. C. 1000 ZSCHOKKE HIGHLAND, ILLINOIS

May 18, 1959

Dr. Joseph W. Howe 431 Bridge Street New Cumberland, Pennsylvania

Dear Doctor Howe:

In behalf of the National Board of Certified Chiropractic Roentgenologists, I am pleased to inform you that you successfully passed the examination held in Indianapolis on April 2, 3, and 4, 1959.

You are hereby Certified as a Roentgenologist in the chiropractic profession.

To make certain that a Certified Roentgenologist is active in this field, a stipulation for renewal is that one must either attend a recognized lecture in x-ray, write a 2,000 word thesis, or lecture at some recognized professional meeting.

Within thirty days or so, you will receive your certificate from this Board.

I add my personal felicitations to the Board's good wishes. I also would like to inform you that you made excellent grades having the highest average of all the applicants who wrote the examination in Indianapolis.

Sincerely yours,

M. A. Glammarino, D. C.

Dr. Joseph W. Howe 431 Bridge Street New Cumberland, Pennsylvania

Grades of Certification Examination

	Extremities	97%
	Myelography & Hysterosalpingography	97%
	Spinography	88%
	Gastro-Intestinal Tract	76%
	Safety Factors	80%
	Lung Field & Thoracic Cage	90%
	Lumbar Spine & Pelvis (Osseous Pathologies)	925
	Heart	83.1%
	Encephalography & Ventriculography	89%
	Genito-Urinary Tract	92%
	Gall Bladder	86%
	Sinuses	98%
	Osseous Pathologies of the Skull	86%
	Arthropathies	82%
	Film Inter	pretation
	Dr. L. E. Wunsch, Examiner	86%
	Dr. L. P. Rehberger, Examiner	80% (Osseous Pathologies of Spine & Pelvis)
	Dr. D. M. Smith, Examiner	76.25%
	Dr. M. A. Giammarino, Examiner	90% (Gall Bladder)
	Dr. M. A. Giammarino, Examiner	80% (Genito-Urinary Tract)

75% - Passing Grade

THE NATIONAL BOARD

CERTIFIED CHIROPRACTIC ROENTGENOLOGISTS

Joseph D. Howe, D.C.

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CERTIFIED ROENTGENOLOGIST

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Text Book Dilemma

- There was not one textbook that encompassed all the topics that needed to be covered in skeletal radiology.
- Dr. Terry R. Yochum and Dr. Lindsey Rowe wrote Essentials of Skeletal Radiology to fill the need for an all encompassing text.
- It was the first textbook published by a medical publishing house that was written by a Chiropractor.
- It opened the door for other Chiropractors to publish texts.







Certified Chiropractic Roentgenologists to Diplomate

- Those who passed the exams were at first designated Certified Chiropractic Roentgenologists. Dr. McCarthy was selected as the 5th member of the board and he suggested the title of Diplomate, which became the designation.
- With the certification of radiologists the colleges upgraded their radiology departments to be headed by diplomates, and all PG courses leading to certification had to be taught by diplomates.
- Residencies were provided at several colleges, the first at NCC where James Winterstein and Donald Tomkins, trained by Leonard Ritchie were the first to pass the board.
- Michael Buehler and John Danz, both trained by me, were the next to pass and from there on the number of residency trained candidates grew until residency was the required route.

NATIONAL COLLEGE OF CHIROPRACTIC

June - 1970



Left to Right

Dr. Donald B. Tomkins (Radiology Resident), Dr. Joseph Janse (President of NCC and Radiologist), Dr. Leonard F. Richie (Head of Radiology Department of NCC, Radiologist), Dr. James F. Winterstein (Radiology Resident)

First Residents



ACCR CONVENTION Atlanta, Georgia - November 1983



Drs. Pyzik, Yochum, Winterstein, Janse, Phillips and Jackson Table 1. Dr. Howe's "Extended Family Tree": Diplomates of the American Chiropractic Board of Radiology. Parentheses indicate year of D.A.C.B.R. certification.

A. Full-time residents trained by J.W. Howe and his residents

First Generation	Second Generation	Third Generation	
Michael T. Buehler (72)	Terry D. Sandman (80)* Robert A. Hacker (82) R. Bruce Fox (83) Eldon L. Huslig (83)	Stephen G. Kovach (84 Anna T. Oestreich (85) Deborah M. Pate (85)	E×
John Danz (74)	Duane J. Marquart (86) John A. Aikenhead (88) William C. Bogar (88) Edward J. Dailey (90) Christopher D. Goeser (90) John R. Henry (91) Craig Church (91) Norman W. Kettner (84)	Garv P. Casper (88)	
John Dales (14)	James R. Grilliot (85)	Dariell Hobson (91) Marilyn J. Staines (88) Sandra M. O'Conno ⁻ (91)	
Terry R. Yochum (76)	Lindsay J. Rowe (81) Gary M. Guebert (82) Michael S. Montileone (84) Jeffrey R. Thompson (85) Thomas P. Molyneux (85)	Andre F. Cardin (86)	
Lawrence C. Pyzik (76) Raymond N. Conley (76)	Doran L. Nicholson (83) Ian D. McLean (84)	Jan Martensen (90) Allison J. Peel (91)	
	Robert J. Longenecker (84) Joseph A. Scherpf (85) Gary A. Longmuir (87) Douglas A. MacGillis (91)	B. Dr. Howe and his graduate rad	
Reed B. Phillips (77) Vinton L. Albers (77) Andrew H. Jackson (79)	Scott J. Murray (82)	Virgil D. Good (61) Ernest N. Elipolous (62) Richard R. Hasemeier (62)	Homer H. Utz (67) Carl N. Matthews (6 John W. Muilenberg
Andrew H. Jackson (79) Sharon A. Jaeger (80) Victor Y. W. Tong (83) Cynthia A. Baum (84) Gary Lindquist (84) Margaret A. Seron (84) Anita L. Manne (85) Gary L. Bustin (87) Michael A. Sladich (87) Phillip J. Shanks (87)		Herbert B. Schmidt (62) Harold T. Virgin (62) Anthony J. Darr (63) Alfred V. Kawamura (63) Earl W. Swallen (64) Earl A. Turner (66) Wess O. Culwell (67) Thomas M. Goodrich (67)	John R. Bestgen (69 Clark L. McClain (6 Richard A. Leverond Brian M. Davis (70) James M. Cox (71) Jack D. Lehman (71) Albert A. Walter (71) James A. Mertz (72)
Tracy C. Matsumoto (88) Lawrence A. Wyatt (88) Gary D. Schultz (88)	sumoto (88) Wyatt (88) Itz (88) Timothy A. Hall (91)	C. Summary of total number of radiologists trained by Dr.	
Timothy J. Mick (89) Marshall N. Deltoff (89)	John A.M. Taylor (91)	First generation residents-25 Non-residents-46	Second g
Jeffrey R. Cooley (90) William H. Whittley (90) Glynna S. Rangel (91)		(Michael T. Buehler, Norman W. K Gary L. Bustin, Bryan Gatterman, J	ettner, James R. Grilliot, oseph W. Howe, Robin C

xtended Family Tree Total 108 Many More since then

the training of the following nonresident graduates

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Raymond Messick (72) Richard S. Pasko (72) Francis P. Tierney (72) Saul H. Ufberg (72) Jerold L. Balduf (73) James R. Freas (73) Robin Canterbury (74) Edward J. Lynch (74) Warren P. Brown (75) John C. Pammer (75) Frederick E. Fricke (76) Raymond Roscioli (76)

Leonard O. Farlow (78) Eric J. Griffiths (78) William E. Litterer (78) David Millman (78) Susan L. Vlasuk (81) John J. Van Horn (82) Randolph J. Bacs (86) Ronnie Firth (87) John K. Hyland (88) Christine M. Bedker (90) Richard P. Corbett (91) Kenneth D. Garrett (91)

r. Howe and his descendants:

generation residents-27

Third generation residents-10 TOTAL-108

Gary M. Guebert, Robert J. Longenecker, Reed B. Phillips, Andrew J. Jackson, Sharon A. Jaeger, Gary L. Bustin, Bryan Gatterman, Joseph W. Howe, Robin Canterbury, James F. Winterstein, telephone interviews, September, 1991) (ACCR 1991e)
Workshops

- About 1961 Dr. Rich invited those of us who were certified to Lincoln for a workshop.
- I can't find a list of those attending, but can recall Cox, Goodrich, Herman Schlisserman, Giammarino, Douglas Ray, and Ron Watkins.
- We were so pleased with those proceedings that we began an annual program which became the American Chiropractic College of Radiology.
- Douglas Ray was the first president, Alfred Kauamura VP and Homer Utz secretary.

FIRST MEETING OF THE

AMERICAN CHIROPRACTIC COLLEGE OF ROENTGENOLOGY WORKSHOP

Los Angeles, California - November 1, 1968



First Executive Officers of the American Chiropractic College of Roentgenology

Drs. Douglas Ray (President), Alfred Y. Kawamura (Vice President), Homer Utz (Secy./Tres.) AMERICAN CHIROPRACTIC COLLEGE OF ROENTGENOLOGY Los Angeles, California - November 1, 1968



American Chiropractic Board of Roentgenologists

Drs. Douglas Ray, Leo E. Wunsch (President), Donald G. Hariman (Vice President), Michael A. Giammarino (Secy./Tres.), Joseph W. Howe



Clockwise from left: Duane & Mrs. Smith; Michael Giammarino; Donald Hariman; Mrs. & Virgil Good (Cinn.); Joseph Howe; at the Huntington Sheraton (CA?) in 1968

ACA Journal

First Workshop for Diplomates in Roentgenology

O N OCTOBER 30, 31, and November 1 the first workshop conducted by doctors of chiropractic certified in the field of roentgenology was held at the Lincoln Chiropractic College. Present were nineteen of the thirty-six who are diplomates of the American Board of Chiropractic Roentgenologists.

Six of the accredited colleges of the American Chiropractic Association were represented at this meeting, at which time discussions were held on: Standardizing Radiographic Procedures, Format for a Radiographic Report, Format for a Lecture, Film Study Methods, Methods of Slide Making, Cineradiographic Demonstrations, Affiliation of Diplomates with Chiropractic Colleges as Lecturers, and the Full Spine Radiograph. This was the first attempt in standardizing nomenclature, radiographic procedures, and minimum views for studying various parts of the body radiographically.

It is hoped that, by this beginning, all the chiropractic colleges will participate in the next workshop in order that there will be a uniformity of terminology and X-tay procedures throughout the profession.

Recommendations were made regarding some of the above topics under discussion with a continuation to take place at the National College of Chiropractic during November of 1965. In the interim, the conclusions that were reached will be announced probably at the Symposium of the American Council of Chiropractic Roentgenologists, which will be held in Atlanta, Georgia, April 1, 2, 3.

There was much enthusiasm shown throughout the sessions with a recommendation to include other topics during the next workshop to elevate standards radiographically and also to mprove the quality of lectures.

Much of the discussions centered around the postgraduate course in roentgenology, which is to be approved by the Council on Education and sponsored by various chiropractic colleges.

All who attended are looking forward to the next meeting, at which time we hope that all diplomates of the Board of Roentgenology can participate.—M. A. Giammarino, D. C., workshop chairman.



Workshops Continue

Subsequent workshops have become annual highlights for most Diplomates and there are usually between 100 and 150 attendees.

Lecturers have included some of the most noted radiologists from medicine and osteopathy as well as our own Diplomates.

AMERICAN CHIROPRACTIC COLLEGE OF ROENTGENOLOGY WORKSHOP

Kansas City, Missouri - April, 1972



Left to Right - (seated) Drs. Joseph Janse, Homer Utz, Leo Wunsch, John Muilenberg, Donald Hariman, Herman Schlisserman

Left to Right - (standing)

Drs. Douglas Ray, Joseph Howe, Earl Swallen, Thomas Goodrich, Weldon Odom, Rhea Caster, Eric Shrubb, Albert Walter, Richard Leverone, Brian Davis, Carl Mathews, Frank Hoffman, James Cox, John Bestgen

AMERICAN CHIROPRACTIC COLLEGE OF ROENTGENOLOGY WORKSHOP

Kansas City, Missouri - April, 1972



American Chiropractic Board of Roentgenologists

Drs. Douglas Ray (Vice President), Earl W. Swallen, Leo E. Wunsch (President), Donald G. Hariman (Secy./Tres.), Thomas M. Goodrich

Dr. Debbie Forrester



Dr. Donald Resnick



Dr. Stephen Rothman



Dr. Sharon Jeager Dr. Lindsey Rowe



Dr. Lee Rogers









AMERICAN CHIROPRACTIC BOARD OF RADIOLOGY San Francisco, California - 1988



Drs. John R. Bestgen, Lawrence C. Pyzik, Sharon A. Jaeger, Reed B. Phillips, Terry R. Yochum and Gary M. Guebert









