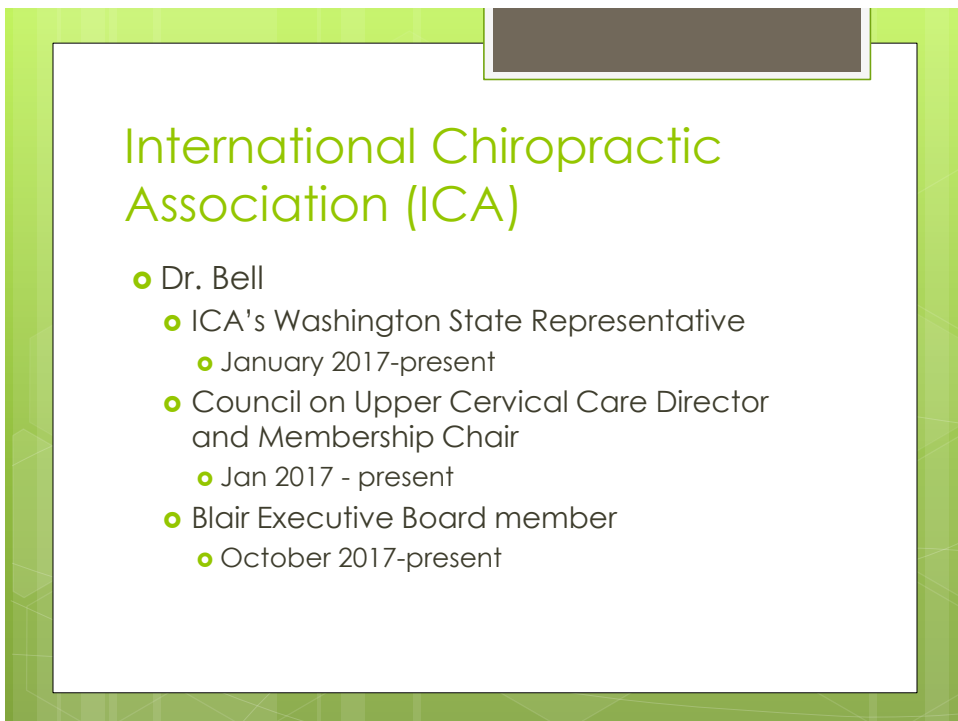


Advanced Imaging and X-ray at stake

Rachae Bell DC, DCCJP
Tyler Evans DC, DCCJP

Nashville, TN 2018



International Chiropractic Association (ICA)

- Dr. Bell
 - ICA's Washington State Representative
 - January 2017-present
 - Council on Upper Cervical Care Director and Membership Chair
 - Jan 2017 - present
 - Blair Executive Board member
 - October 2017-present

Choosing Wisely

- The American Chiropractic Association has partnered with this campaign..
- Choosing Wisely is an initiative of the ABIM Foundation that seeks to advance a national dialogue (between providers and patients) on avoiding unnecessary medical tests, treatments and procedures. (we all agree!)
- <http://www.choosingwisely.org/patient-resources/imaging-tests-for-back-pain/>

Choosing Wisely Details

- Recommendations from the ACA
- <http://www.choosingwisely.org/clinician-lists/#keyword=Chiropractic>
- <http://www.choosingwisely.org/societies/american-chiropractic-association/>

ICA standards of care

- Practicing Chiropractors Committee on Radiology Protocols
 - <http://www.pccrp.org/>
- Chapter 6 of Best Practices and Practice Guidelines
 - <http://www.chiropractic.org/wp-content/uploads/2018/05/7-Chapter-6.pdf>

What are we doing about it?

- ICA representation at the state, national and international levels.
- CUCC research, DCCJP doctors doing research, UC docs research, collaborative
- Cone Beam CT- standards of care necessary - and Tyler takes the floor with his resounding expertise in this area

Tyler Evans BS DC DCCJP

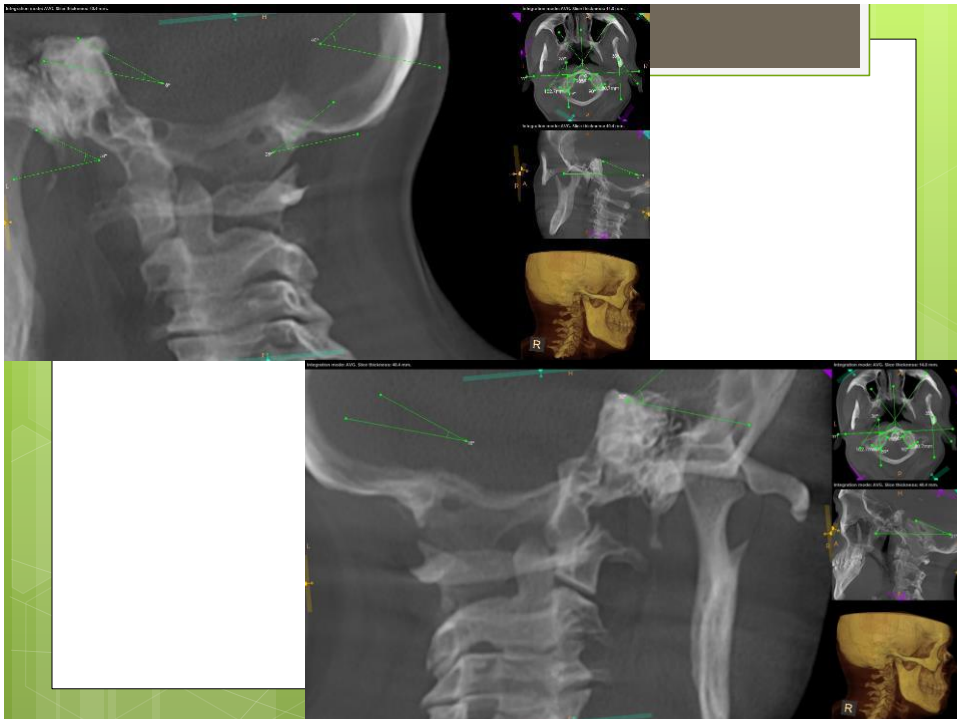
- 2011-2015 Associateship with Dr. Darren White in Kirkland Washington
- 2014 Blair Proficient
- 2105 Diplomate in Craniocervical Junction Procedures DCCJP
- 2015-Present Private Practice with Dr. Mychal Beebe in Portsmouth NH
- Chair of ICA CUCC Standards of Care
- Delta Sigma Chi Alumni

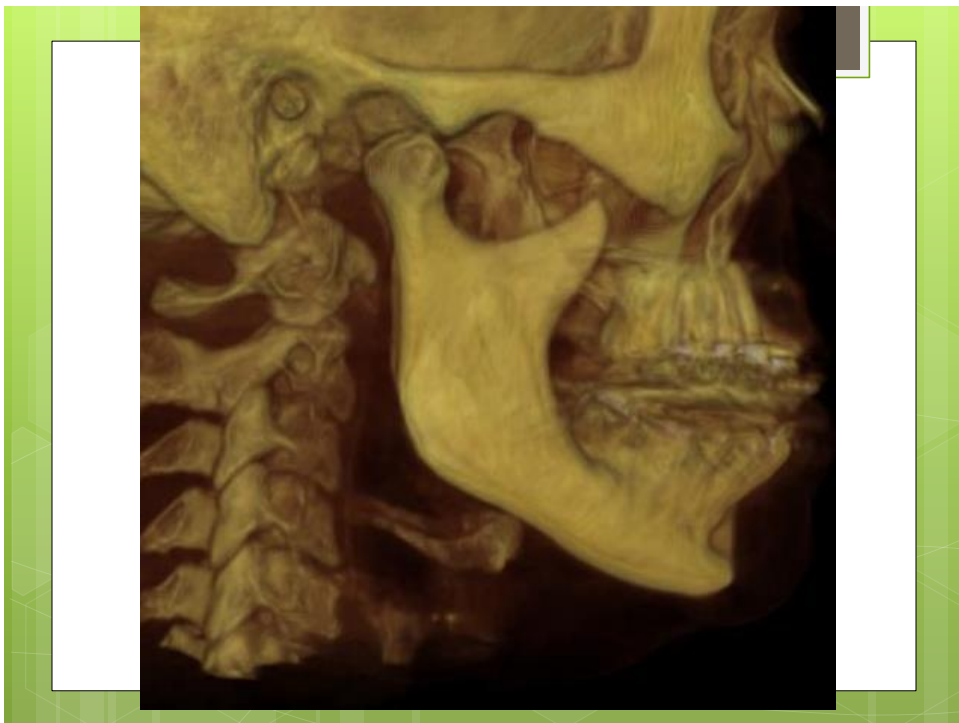
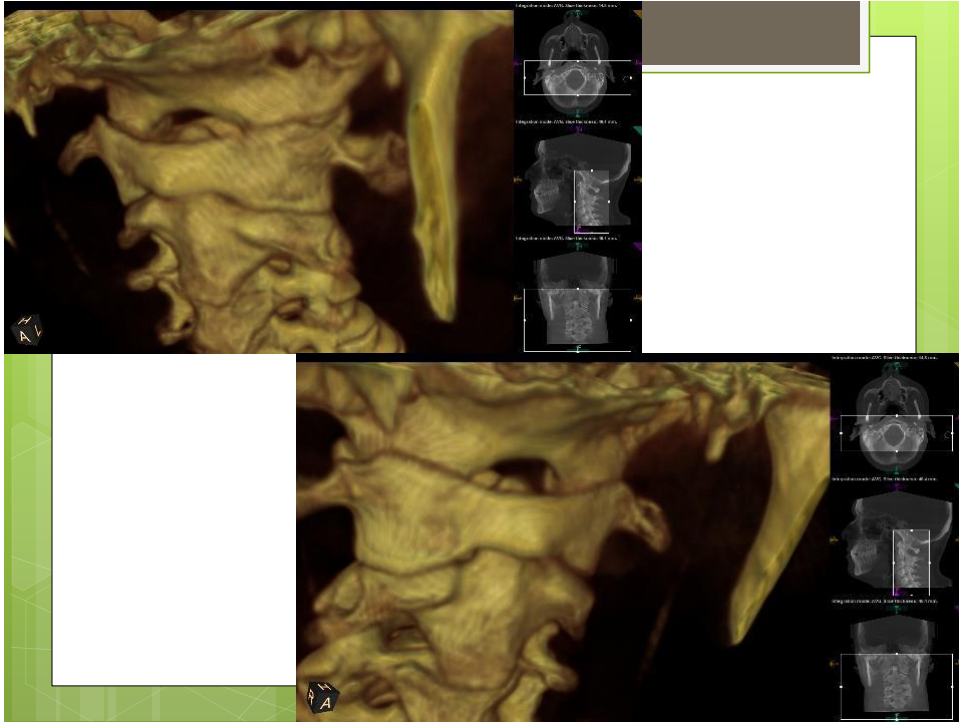
CBCT and Advanced Imaging: "Glory of Going On"

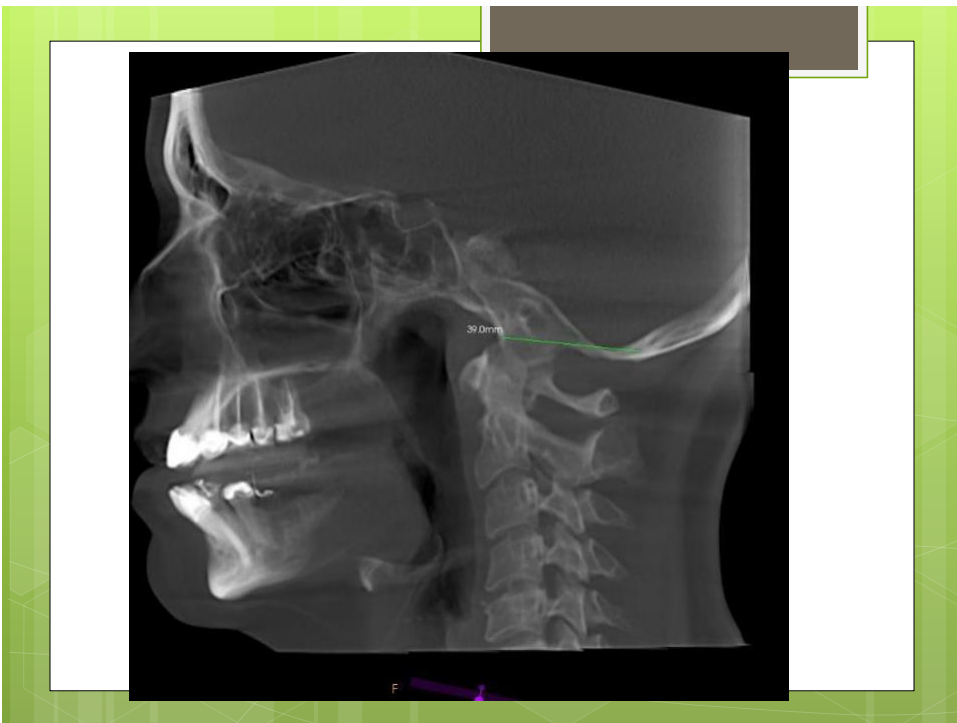
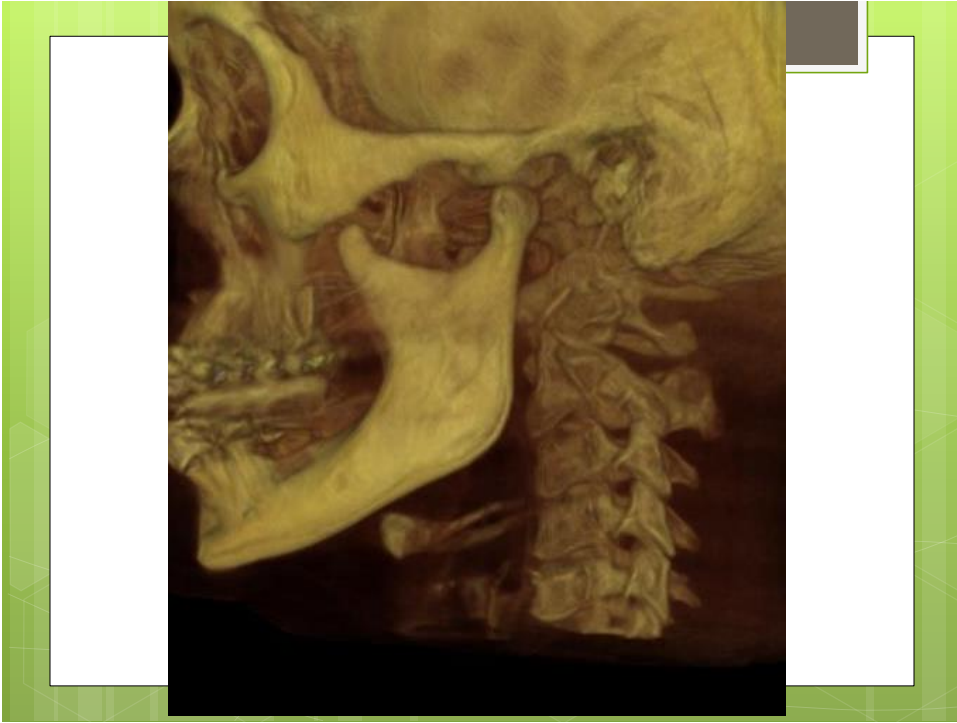
- Because it's the next leap for the UC Profession.
 - Now or later? BJ didn't wait he pushed: 1905, 1910, 1924, 1930, 1935-1951
 - Why 1910? Sparks and Loud noises? First spinal xray? Our Masterpiece pg 72 1961.
 - 1913-1975 Licensure and UCA/ICA
 - New Day New Struggles: Licensure, Chiropractic State Boards/Radiology Boards, World is Smaller, American College of Radiology, DACBRs
 - A quick story...

Dose

- What's a Sievert?
 - **1 Sievert = 5% increased risk of developing cancer in lifetime**
- **10 Sv** fatal within weeks
- **6 sv** typical dosage recorded in Chernobyl workers who died within a month (50 out of 300,000 in the fall out zone)
- **5 sv** single dose which would kill half of those exposed to it within a month
- **1 sv** single dose which would cause radiation sickness nausea but not death
- **.6 sv** maximum radiation levels recorded at the Fukushima plant on 3.16.11/per hour
- **.35 sv** exposure of Chernobyl residents who were relocated
- **.1 sv** Lowest level linked to increased cancer risk (100 msv)
- **.01 sv** Full Body CT scan (10 msv)
- **.0024 Sv** average natural annual background dose (2.4msv)
- **.001 Sv** Head and neck CT (1-2 msv)
- **.0001-.0002 Sv** Blair Upper Cervical X ray series 9 (100-200 microsv)
- **.00005-.0003 Sv** CBCT Large FOV (50-300 microsv)
- **.00001 Sv** Average daily background dose (10microsv)







Utilization

- How many Offices currently Utilize CBCT?
- How many refer out?
- How many have it in house?

Hurdles

- FDA Approval: Oral Maxillofacial and adjacent structures.
- Advanced Imaging Education/Certification: Palmer, LCCW, Sherman
- Chiropractic Schools: Funding and Awareness
- State Boards: Awareness
- DACBR's
- Guidelines

Liability

- Are You Reading Every Single Voxel...
- Who's got your back?
- DACBR's (Diplomate American Chiropractic Board of Radiology)
 - Cliff Tao, Alisha Russ, Matthew Richardson
- Wyoming and North Dakota outside reads
- All others 50/50 verbal agreements no solid legislation (CYA)

Cost: New vs Used Machines?

- iCAT, Planmeca, Carestream
- Henry Schein and Patterson 90-150k
- Capital Dental and Renew Digital 30-40k
- Relationships with the imaging companies: **Diaki Ishiyama**
- Machine in a school? Funding? Which School? LCCW, Sherman, Palmer

FDA: i-CAT FLX

- Devices of the iCAT family consist of an xray system that uses a cone beam with a rotational sequence providing two dimensional images and three dimensional volume reconstructions of the head area, which includes **ENT** and maxillofacial areas (such as TM joint studies mandible and maxilla for implant planning, sinuses, airway) for use in planning and diagnostic support in adult and pediatric care.

FDA: Planmeca Promax MAX

- The DENTRI series is a CT Xray imaging device specialized in diagnosing general dental treatments and orthodontic purpose using Panoramic and Cephalometric images respectively. In addition DENTRI series is used in the field of Otolaryngology by capturing 360 degree rotation sequence of the head and neck areas, including the ENT and dentomaxillofacial areas for a dental treatment in adult and pediatric dentistry and obtains xray images from different angles and calculate through computer processed to produce 3D computed tomographic images. The DENTRI series is used by **physicians** dentists and xray technologists.

FDA: Planmeca Promax MID

- The performance testing for ENT imaging applications was carried out taking clinical images for nose sinuses airways middle ear temporal bone and **vertebrae**. The images were reviewed by a specialist and were deemed to be of clinically usable diagnostic quality.

STATE Boards

- Awareness/Ignorance
- **Run faster alone; but further together**
(chiro tend to run alone) lets run together
- Ohio Board Approval-verbal/written
- South Dakota and New York are NO's
- Who do you know on State Boards?
- Radiology Boards are a little more lenient.

RESEARCH

- We have 0 Pubmed Research on CBCT and the Upper Cervical Spine.
- To get in Pubmed come from the diagnostic angle then the Subluxation angle.

ICA Council Upper Cervical Care

- Education/Advanced Certification and Upper Cervical Organizations (BLAIR, NUCCA, AdvO, Orthospinology) (CUCC)
- Upper Cervical Standards of Care Document (Dan Judge, Ian Bulow and Myself)
- Funnel funding for a machine to go into Chiropractic College
- Guidelines for CBCT
- Special Committees on Advanced Imaging and CBCT

CBCT Guidelines

- SEDENTEXCT
- **S**afety and **E**fficacy of a new and emerging **D**ENTAL **X**ray modality
 - http://www.sedentexct.eu/system/files/sedentexct_project_provisional_guidelines.pdf
- Radiological Protection in Cone Beam Computed Tomography (CBCT) ICRP Publication 129
 - <http://www.icrp.org/docs/TG88DraftForConsultation.pdf>
- Conebeam CT of the Head and Neck, Part 1: Physical Principles and Part 2: Clinical Applications
 - <http://www.ajnr.org/content/30/6/1088>
 - <http://www.ajnr.org/content/30/7/1285.long>

How can we protect ourselves?

- Create a certification program and continuing education.
- Taught in Schools.
- Machines regularly maintained.
- DACBR reads
- Be able to show justification and cause for Scanning
- Get CBCT's in schools
- Once we have the education/certification/Infrastructure system in place then the State Boards will bring it on.

What can you do?

- Back the Blair Society/Pay your dues.
- Back the Council on Upper Cervical Care/ Pay your dues.
- Refer out to a dentist on tough cases.
- Get informed/Read guidelines/Read the research.
- DO NOT go to State Boards asking if you can bring in CBCT by yourself.