

Educational and Practical Utility of Medical 3D

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Imaging studies now offer a broad range of techniques to differentiate a new injury or illness from ongoing conditions in patient who has musculoskeletal injuries. The measure of the component-specific representation of bone, skin, muscles, arteries, veins and even nerves are determined by 3D model based on unprocessed 3D medical data using all information. However, it remains a static morphologic picture, which is dependent on clinical assessment and knowledge of the patient, to indicate relevance.

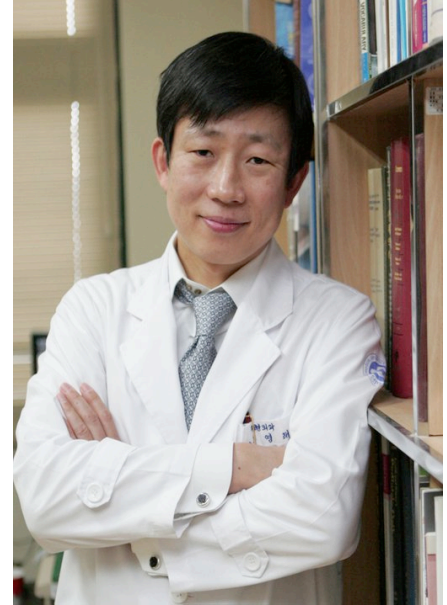
Additionally, volume rendered anatomic 3D model contains both osseous and soft tissue information. A method of practicing surgery using the 3D simulation model includes the anatomy and pathology, making anatomical references, establishing a surgical approach, dissecting the anatomy, creating an injury and repairing model.

In our group produced medical CAD modeling to create 3D models and simulation software to do simulation surgery and replicate normal anatomy for educational and practical purpose.

Bio of Moon

PERSONAL DATA

Name in full : Young Lae, Moon
Date of Birth : December 05, 1965
Sex : Male
Age : 44



Present Address (Work Place) : Orthopedic department, Chosun University Hospital, 588, Seoseok-dong, Dong-ku, Gwangju, 501-717, Korea
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EDUCATION (EDUCATIONAL BACKGROUND)

February, 1990

: Graduated from Chosun University Medical School School, Gwangju, Korea

February, 1984

: Graduated from Dukin High School, Jeonnam, Korea

Internship of Chosun University Hospital, Gwangju, Korea.

Mar., 1990-Feb., 1991

Residency of Orthopedic Department, Chosun University Hospital, Gwangju, Korea

Mar., 1991-Feb., 1995

Fellowship of Orthopedic Department, Shoulder and Elbow Service, Columbia University Hospital, New York, USA

Mar., 2005-Aug., 2006

MILITARY SERVICE

Enlisted in the ROK Army as Captain for Public Health Care in February, 1995
Discharged from Military Service in April 1998.

WORK EXPERIENCE

Chief of orthopaedic department, Youngkwang Christian Hospital, Jeonnam, Korea

Apr., 1995-Apr., 1998

Chief of orthopaedic department, Seonam University Hospital, Gwangju, Korea

May, 1998-Aug., 2000

Chairman and Professor of Orthopaedic department, Chosun University Hospital, Gwangju,

Korea

Professor of Medical Informatics

Sep., 2000-Present

Research Scholar of Orthopedic Department, Shoulder and Elbow Service, Columbia University Hospital, New York, USA from Dr. Bigliani

Mar., 2005-Aug., 2006

Job title : Chairman, Professor

Speciality : Arthroscopic surgery, Shoulder and Elbow Surgery, Sports medicine

SPECIAL ACTIVITIES

Editorial committee of Korean Orthopaedic Association

Editorial committee of Korean Shoulder and Elbow Society

Editorial committee of Korean Orthopaedic Sonographic Society

Editorial committee of Korean Orthopaedic Sports Medicine

Editorial committee of English Journal of Korean Orthopedic Society

Directorial Committee of Korean Sports Medicine Society

Member of Academic Committee of Korean Arthroscopic Society

Consultant doctor of Korean Occupational Insurance

Organizing committee of International Symposium of Simulation Surgery, 2012

International advisor of GOTS journal (one of the European Sports medicine journal)

Paper

1. Young Lae Moon, Sung Jae Kim : Bursoscopic evaluation for degree of rotator cuff tear using an air-infusion method. *Arthroscopy*, 20: e105-107, 2004.
2. Young Lae Moon, Chul Gap Lee, Dong Hui Kim, Young Kwan Lee : The impingement of the posterior elbow in the heavy workers. *Journal of Korean Arthroscopy Soc*, 9: 60-64, 2005.
3. Dong Hui Kim, Young Lae Moon, Kug Jin Kim : Partial Tear of Upper Portion of Subscapularis. *J Korean Shoulder Elbow Surg*, 8: 9-21, 2005.
4. Young Lae Moon, Dong Hui Kim : Arthroscopic treatment of osteochondritis dissecans of the elbow in adolescents, *Joint Diseases and Related Surgery*, 16(3), 2005.
5. Jang SJ, Han HL, Lee SH, Ryu SY, Chaulagain BP, Moon YL, Kim DH, Jeong OY, Shin JH, Moon DS, Park YJ : PFGE-based epidemiological study of an outbreak of *Candida tropicalis* candiduria: the importance of medical waste as a reservoir of nosocomial infection, *Jpn J Infect Dis*, 58(5): 263-267, 2005.
6. Young Lae Moon, Dong Hui Kim, Kun Sang Song : Pathophysiology of rotator cuff tear. *J Korean Orthop Sports Med*, 4(2): 86-90, 2005.
7. Young Lae Moon et al : Evaluation of infrequent-Restriction-Site PCR for Epidemiological typing of *Candida tropicalis*. *Korean J Clin Microbiol*, 10(2): 96-101, 2007.
8. Young Lae Moon et al : Management of cyst in anterior tibial following cementless total knee arthroplasty. *J Korean Orthop Assoc*, 43(2): 257-261, 2008.
9. Young Lae Moon et al : Autologous bone marrow plasma injection after arthroscopic debridement for elbow tendinosis. *Ann Acad Med Singapore*, 37(7): 559-563, 2008.
10. Young Lae Moon et al : Upper airway compromise by extravasated fluid: a rare complication after arthroscopic repair of atrophic cuff tear. *Orthopedics*, 32:1-3, 2009.
11. Young Lae Moon et al : Bilateral and simultaneous triceps avulsions in a patient with chronic renal failure receiving long-term peritoneal dialysis, *Orthopedics*, 32:603-606, 2009
12. Young Lae Moon et al : Isolation and phenotypic characterization of multipotent

mesenchymal-like stem cells from human subacromial bursa, *Tissue Engineering and Regenerative Medicine*, 6:527-532, 2009.

13. Young Lae Moon et al : The primary reverse total shoulder arthroplasty for post-septic destroyed shoulder - A case report-. *J Korean Shoulder Elbow Surg*, 12:232-235, 2009.
14. Young Lae Moon et al : Arthroscopic treatment with suture anchor for the isolated subscapularis tear. *J Korean Shoulder Elbow Surg*, 12:137-141, 2009.
15. Young Lae Moon et al : Subscapularis muscle metastases of duodenal adenocarcinoma: A case report. *J Shoulder Elbow Surg*, 19:e18-21, 2009.
16. Young Lae Moon et al : The Effectiveness of Prolotherapy Postoperative Rotator Cuff Tear. *J Korean Orthop US Soc*, 3:21-25, 2010.
17. Young Lae Moon et al : Life-threatening posterior circumflex humeral artery injury secondary to fracture-dislocation of the proximal humerus. *Orthopedics*, 33:200, 2010.
18. Young Lae Moon et al : The effectiveness of ultrasonography-guided suprascapular nerve block for perisoulder pain. *Orthopedics*, 33:238, 2010.
19. Young Lae Moon et al : Sonographic probe induced tenderness for lateral epicondylitis: an accurate technique to confirm the location of the lesion. *Knee Surg Sports Traumatol Arthrosc*, 18:836-839, 2010.
20. Young Lae Moon et al : Evaluation of shoulder disorders by 2-[F-18]-fluoro-2-deoxy-D-glucose positron emission tomography and computed tomography. *Clinics in Orthopaedic Surgery*, 2:167-172, 2010.
21. Young Lae Moon et al : The ultrasound-guided injection of prolotherapy and steroid mixture in patients with adhesive capsulitis. *J Korean Orthop Soc Sports Med*, 9:109-113, 2010.
22. Young Lae Moon et al : Arthroscopic treatment of stiff elbow. *J Korean Shoulder Elbow Surg*, 13:299-303, 2010.
23. Young Lae Moon et al : Superior labrum anterior and posterior lesion: The diagnosis and treatment. *J Korean Orthop Soc Sports Med*, 10:1-3, 2011.
24. Young Lae Moon et al : Arthroscopic rotator interval closure by purse string suture for symptomatic inferior shoulder instability. *Orthopedics*, 34:269, 2011.
25. Young Lae Moon et al : Arthroscopic management of stiff elbow. *Orthopedics*, 34:435, 2011.
26. Young Lae Moon et al : Conservative managemnet of forzen shoulder. *J Orthop Pain Soc*, 2:435, 2011.
27. Young Lae Moon et al : Epidemiology of the spinal cord and cauda equina injury in korea -Multicenter study-. *J Korean Spine Surg*, 18:83-90, 2011.
28. Young Lae Moon et al : Plcental tissue-derived multipotent stem cell. *J Stem Cell Tissue Reg*, 2:1-3, 2012.
29. Young Lae Moon et al : Platelet Rich Plasma와 비수술적 치료 -근골격 질환의 새로운 접근-. *Young Chang*, 65-88, 2012.
30. Young Lae Moon et al : 증례로 알아보는 어깨질환 회전근 개 파열. *Young Chang*, 116-128, 2012.

Presentation

1. Young Lae Moon : Open treatment of glenoid & humeral head defect. 2007 Shoulder & Elbow Symposium at the Catholic University of Korea, 77-82, 2007.
2. Young Lae Moon, Chang Hun Song, Jin Kim, So Hee Kim, Soo Jung Chang : Isolation and characterization of mesenchymal stem cell from human subacromial bursal tissue. 15th Congress of Korean Shoulder and Elbow Society combined with 3rd Mayo Asian Elbow Club Meeting, 62, 2007.
3. Young Lae Moon : Rotator cuff tear: Traumatic vs degenerative. 15th Congress of Korean Shoulder and Elbow Society combined with 3rd Mayo Asian Elbow Club Meeting, 117, 2007.
4. Young Lae Moon, Sang Ho Ha, Dong Hui Kim, Seung Hwan Jo : Anterior shoulder dislocation with rotator cuff tear or greater tuberosity fractures. The Korean Fracture Society, 92, 2007.
5. Young Lae Moon : Rehabilitation of the throwing athlete. Korean Orthopaedic Society for Sports Medicine, 58-64, 2007.
6. Young Lae Moon : Physical examination of shoulder instability. 16th Annual Meeting of the Korean Arthroscopy Society, 46-51, 2007.
7. Young Lae Moon : Rotator cuff injury; traumatic or nontraumatic. Korean Orthopaedic Association. 2008
8. Young Lae Moon : Endnote for Article writer. Korean Orthopaedic Association, 2008.
9. Young Lae Moon : Arthroscopic Management of Subscapularis Injury. The 2nd ConMed Linvatec Asia Arthroscopy Symposium, 58, 2008.
10. Young Lae Moon : Rotator cuff injury associated with anterior dislocation of the shoulder. The 2nd ConMed Linvatec Asia Arthroscopy Symposium, 69, 2008.
11. Young Lae Moon : Multidirectional shoulder instability:Fact and clue, 1st Asian Arthroscopic Congress, 49-50, 2008
12. Young Lae Moon : Normal Glenoid Size of the Korean in 7th and 8th Decades, ISTA 2008, pp.299, 2008
13. Differential potential of various stem cells -subacromial bursa, bone marrow, umbilical cord blood-, Tissue Engineering and Regenerative Medicine, 2009
14. Trophogel, as a developed three dimensional matrix for UCB-MSC culture, Tissue Engineering and Regenerative Medicine, 2009
15. Bone marrow plasma injection for shoulder and elbow entheses, Tissue Engineering and Regenerative Medicine, 2009
16. Effect of placental hormones and crude placental extracts(PLx) on proliferation of human umbilical cord blood derived mesenchymal stem cells(hUCB-MSCs), Tissue Engineering and Regenerative Medicine, 2009
17. Isolation and characterization of placental tissue derived multipotent stem cell Tissue Engineering and Regenerative Medicine, 2009
18. Arthroscopic rotator cuff repair, The Forth International Congress of Chinese Orthopaedic Association, 506-507, 2009
19. Arthroscopic stabilization of shoulder instability, The Forth International Congress of Chinese Orthopaedic Association, 201-202, 2009
20. The Efficacy of Autologous Bone Marrow Plasma Injection after Arthroscopic Repair of Rotator Cuff Tear, AAOS, 2010
21. Computer-assisted navigation for shoulder arthroplasty to aid in implant placement, 2010 Shoulder Symposium at the College of Medicine, The Catholic University of Korea, 189-193, 2010.
22. Dominant vs pancapsular plication for MDI, Gachon shoulder meeting 2010, 31-33, 2010.
23. Efficacy of autologous bone marrow plasma injection after arthroscopic repair of rotator cuff tear,

- AAOS 2010 Annual Meeting, 600, 2010.
24. Isolation and characterization of placental tissue-derived multipotent stem cell, 56th Annual Meeting of the Orthopaedic Research Society, 2010.
 25. Sectional and surface 3 dimensional image of arm obtained by continuous whole body section image, 18th Congress of Korean Shoulder and Elbow Society, 73, 2010.
 26. Three dimensional shoulder model for shoulder arthroscopy, The 4th ConMed Linvatec Asia Arthroscopy Symposium, 72, 2010.
 27. The efficacy of autologous bone marrow plasma injection after arthroscopic repair of rotator cuff tear, The 4th ConMed Linvatec Asia Arthroscopy Symposium, 81-82, 2010.
 28. LCP applications for olecranon and proximal ulna fractures, 1st Shoulder and Elbow Trauma Symposium, 124-128, 2010.
 29. Ultrasounographic diagnosis and treatment of the elbow disease, Ultrasonographic Diagnosis and Treatment of the Elbow Disease, 27-43, 2010.
 30. Computer simulation for arthroplasty of the proximal humerus, 11th International Congress on Shoulder and Elbow Surgery, 15, 2010.
 31. Three dimensional shoulder model for shoulder arthroscopy, The 2nd Biennial Asia Arthroscopy congress, 167, 2010.
 32. Platelet rich plasma, 3th The Korean Orthopaedic Pain Society, 66-67, 2010.
 33. Arthroscopic release of elbow contracture, 23th Korean Arthroscopy Society, 59, 2010.
 34. Arthroscopic environment & portal, 1th Instructional Course Lecture Korean Arthroscopy Society, 77-81, 2010.
 35. Essentials of arthroscopic cuff repair, The 54th Annual Fall Congress of the Korean Orthopaedic Association, 324-337, 2010.
 36. Platelet rich plasma, 38th The Korean Orthopaedic Pain Society, 66-67, 2010.
 37. Tendinosis, IFSSH2010, 2010.
 38. Complications of instability repair, Korean Shoulder and Elbow Society, 2010.
 39. Navigation and robotics of the shoulder, Gachon Shoulder Meeting 2011, 148-153, 2011.
 40. PRP for elbow problems, 4th The Korean Orthopaedic Pain Society, 119-122, 2011
 41. Arthroscopic simulator of the shoulder based on korean anatomic studies, 19th Congress of Korean Shoulder and Elbow society, 104, 2011.
 42. Mononuclear cell treatment. 52th Congress of the Korean Association of Oral Maxillofacial Surgeons, 26, 2011.
 43. A complicated fracture case of distal humerus in child, The Korean Fracture Society, 74, 2011.
 44. Evaluation of shoulder disorders by 2-[F-18]-fluoro-2-dexoy-D-glucose positron emission tomography and computed tomogram, The 7th ACASA 2011, 92, 2011.
 45. Differentiation potential of stem cells according to their origin: subacromial bursa, bone marrow, umbilical cord blood, The 7th ACASA 2011, 77, 2011.
 46. Pros of platelet rich plasma treatment, 5th The Korean Orthopaedic Pain Society, 83-87, 2011.
 47. Arthroscopic portals : Elbow, The Korean Arthroscopy Society, 21-25, 2011.
 48. 3D simulation for total shoulder arthroplasty, Regional Elbow & Shoulder Course, 2011.
 49. Arthroscopic release, 1th SMCH Elbow Symposium, 2011.
 50. Use of PRP in orthopedic surgical fields, 69th Congress of the Korean Society of Plastic and Reconstructive Surgeons, 350-351, 2011.
 51. Thoracic outlet injection technique for borderline of shoulder and neck pain, Korean Orthopaedic Ultrasound Society, 20, 2011.
 52. Calcific tendinitis, Korean Shoulder and Elbow Society, 212-217, 2011.

I hereby declare upon my honour the above to be a correct statement.

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