

Charles E Johnston MD (“Charlie”) is assistant chief of staff emeritus at Texas Scottish Rite Hospital for Children, where he practiced continuously since 1985, until his retirement from direct patient care in 2021. A native of Los Angeles California with family ties to south Texas, he graduated from Yale University and Columbia University College of Physicians and Surgeons, completed a surgical internship in San Antonio, and an orthopedic surgery residency at the University of Virginia Medical Center in Charlottesville. He returned to Texas as a Harrington Fellow in Pediatric Orthopaedics and Scoliosis at TSRH in Dallas in 1981-2 (fellowship had no relationship to Dr. Paul R. Harrington).

Dr. Johnston is currently Professor in the Department of Orthopaedic Surgery at the University of Texas Southwestern Medical Center at Dallas, and continues as volunteer orthopedic staff and researcher at TSRH. He is an elite reviewer for the Journal of Bone and Joint Surgery and the Journal of Children’s Orthopaedics. He is a fellow in the American Academy of Orthopaedic Surgeons and serves on two committees and is a former member of the executive committee of the Pediatric Spine Study Group and Foundation.

Now in emeritus status, he has been a member of the Scoliosis Research Society since 1987, and delivered the 2021 Harrington lecture on “The Search for Biologic Treatments Addressing *Etiology* of Scoliosis.”

As a member of the Pediatric Orthopedic Society of North America since 1986, he has served on multiple committees, received its Humanitarian Award in 2020, and was elected to the POSNA Hall of Fame in 2022. He also is a member of the European Pediatric Orthopaedic Society and the Texas Orthopedic Association.

Dr. Johnston has published over 150 papers in peer-reviewed journals and authored approximately 30 book chapters. He has been an invited faculty or visiting professor at national and international institutions on over 60 occasions.

Most important, Charlie and his wife Ellen have been married for 47 years, have two daughters and five grandchildren.

Books & Publications - recent

Presentations

Faculty, Controversies in Pediatric Limb Reconstruction. Texas Scottish Rite Hospital for Children, Dallas, February 8-9 2019.

1. Blount’s disease: growth modulation in young patients.
2. Non-lengthening reconstruction options for severe congenital femoral deficiency.

Johnston C. Faculty, 13th International Congress on Early-onset Scoliosis. Atlanta GA. Nov 21-22,2019

1. Panel: Final fusion after EOS growth-sparing treatment
2. Breakout session: neuromuscular challenges, moderator
3. Management of the complex patient: too small and stiff

Johnston C, Thompson G, Sponseller P et al: Analysis of EOS cases that are resistant to correction and length gain. Paper #10, 13th ICEOS Atlanta GA. Nov 21-22, 2019

Johnston C: Managing growth disturbances of the lower extremities following musculoskeletal infection. Controversies in Pediatric Limb Reconstruction, Texas Scottish Rite Hospital for Children, Dallas. February 7-8 2020

Johnston CE, Eamara P, Thornburg D et al: Update on pulmonary outcomes for non-neuromuscular early-onset scoliosis undergoing surgical correction. E-poster, 55th Scoliosis Research Society (virtual) Sept 2020; 43rd Brandon Carrell Visiting Professorship, Texas Scottish Rite Hospital, Dallas TX Apr 29 2021

Johnston CE: Toward biologic treatments addressing etiology of scoliosis. Harrington Lecture, 56th Annual Meeting of the Scoliosis Research Society, St Louis, MO. September 22-25 2021.

Johnston CE: 36th Annual Eugene Rogala Visiting Professor, Shriners Hospital for Children Montreal/ McGill University Division of Orthopedic Surgery. Montreal PQ. October 28 2021:

1. Toward a biologic treatment for pediatric spine and orthopedic conditions. (McGill University Orthopedic Grand Rounds)
2. Infantile Tibia Vara – New Classification and Analysis of Treatment Options
3. Congenital Knee Dislocation and Instability – Importance of Ligamentous Reconstruction

Johnston CE, Tran D-P, Herring JA: Risk of Surgical treatment for scoliosis associated with Chiari-1 Malformation. Fall Spine Symposium, Scottish Rite for Children, November 5 2021

Johnston CE: invited faculty, 15th International Conference on Early Onset Scoliosis, Salt Lake City UT, November 10-12 2021.

1. MCGRs: How is the pendulum swinging in 2021?
2. Are there patients we should probably not operate on?

Johnston CE: faculty, Ste Justine Pediatric Orthopedic Review Course 2022 (SPORC). Montreal, PQ, March 9-11 2022; February 22-23 2023

1. Congenital and Early-onset Scoliosis – Diagnosis and Treatment
2. Angular deformities of the lower extremities
3. Neuromuscular scoliosis overview and management

Johnston CE: 1) New technology: When to give up – abandoning the new for the tried and true. Subspecialty day – Spine; 2) Evolution of treatment of early onset Blount disease. Subspecialty day – lower extremity. POSNA Annual Meeting, Vancouver BC, May 11-14 2022

Johnston CE, Thornberg DC, Palmer R: Index definitive fusion produces outcomes equivalent to growth-sparing methods in patients > age 6 years. Paper # 93, 57th Annual Meeting Scoliosis Research Society, Stockholm Sweden, September 14-17 2022

Johnston CE: Management of the knee in skeletal dysplasia. Controversies in Pediatric Limb Reconstruction, Scottish Rite for Children, Dallas TX. February 3-4 2023

Publications

Murphy RF, Barfield WR, Emans JB, Akbarnia B, 8 others, Johnston C Pediatric Spine Study Group. Minimum 5-Year Follow-up on Graduates of Growing Spine Surgery for Early Onset Scoliosis. **J Pediatr Orthop** 2020; 40(10):e942-946

ElBromboly Y, Hurry J, Johnston C, McClung A, Samdani A, Glotzbecker M, St. Hilaire T, Flynn J, El-Hawary R, Pediatric Spine Study Group. Can distraction-based surgeries achieve minimum 18 cm thoracic height for patients with early-onset scoliosis? **Spine Deformity** 2020

Hardesty CK, Murphy RF, Pawelek JB, Glotzbecker MP, Hosseini P, Johnston CE, Emans J, Akbarnia BA, Pediatric Spine Study Group. An initial effort to define an early-onset scoliosis “graduate” – the Pediatric Spine Study Group experience. **Spine Deformity** 2020 online 11/30/20. Doi 10.1007/s43390-020-00255-6

Bouton D, Karol L, Poppino K, Johnston C. Continued deterioration in pulmonary function at average 23-year follow-up from early thoracic fusion in non-neuromuscular scoliosis. **Spine Deformity** 2020; online publication 10/19/2020, doi.org/10.1007/s43390-020-00224-z

Karlin LI, McClung A, Johnston CE, Samdani A, Hresko MT; Perez-Grueso, F J, Troy M. The growth-friendly surgical treatment of scoliosis in children with osteogenesis imperfecta using distraction-based instrumentation. **Spine Deformity** 2021;9(1):263-74

Zapata KA, Jo CH, Carreon LY, Johnston CE. Reliability and validity of a kyphosis-specific spinal appearance questionnaire. **Spine Deformity** 2021 Jan 29; doi: 10.1007/s43390-021-00292-9. Online ahead of print

Laine JC, Choi I-H, Dahl MT, Herzenberg JE, Horn J, Iobst C, Johnston C, Joseph B, McClure PK, Noonan K, Shah H. Management of congenital pseudarthrosis of the tibia: an international expert panel case discussion. **JPOSNA online** November 2021; 3(4)

Johnston CE, Karol LA, Thornberg D, Jo C-H, Eamara P. The 18-cm thoracic-height threshold and pulmonary function in non-neuromuscular early-onset scoliosis. A Reassessment. **JBJS Open Access** 2021; e21.00093

Matsumoto H, Sinha R, Roye BD, Ball JR, Skaggs KF, Brooks JT, Welborn MC, Emans JB, Anari JB, Johnston CE, Akbarnia BA, Vitale MG, Murphy RG, Pediatric Spine Study Group. Contraindications to magnetically controlled growing rods: consensus among experts in treating early onset scoliosis. **Spine Deformity** 2022;10(6):1289-1297. Epub 2022 Jul 3.

Quan T, Matsumoto H, Bonsignore-App L, Ramo B, Murphy RF, Brooks JT, Welborn MC, Emans JB, Anari JB, Johnston CE, et al, Pediatric Spine Study Group: Definition of

tweener; consensus among experts in treating early-onset scoliosis. **J Pediatr Orthop** 2023 Mar 1;43(3):e215-e222.

El-Hawary R, Chukwunyerenwa CK, Gauthier LE, Spurway AJ, St.Hilaire T, McClung AM, El-Bromboly Y, Johnston CE, Children's Spine Study group. \Distraction-based surgeries increase thoracic sagittal spine length after ten lengthening surgeries for patients with idiopathic early-onset scoliosis **Spine Deformity** 2020

LaMont LE, McIntosh AL, Jo CH, Birch JG, Johnston CE. Recurrence After Surgical Intervention for Infantile Tibia Vara: Assessment of a New Modified Classification. **J Pediatr Orthop**. 2019; 39:65-70

Wiley MR, Riccio AI, Felton K, Johnston CE . Quengel Casting for the management of pediatric knee flexion contractures: a 26-year single institution experience. **J Pediatr Orthop** 2017;37:e421-e426.

Helenius IJ, Sponseller PD, McClung A, Pawelek JB, Yazici M, Emans JB, Thompson GH, Johnston CE, Shah SA, Akbarnia BA. Surgical and health-related quality-of-life outcomes of growing rod "graduates" with severe versus moderate early-onset scoliosis. **Spine** (Phila Pa 1976). 2019;44(10):698-706.

McIntosh AL, Ramo BS, Johnston CE. Halo-gravity traction for severe pediatric spinal deformity: A clinical concepts review. **Spine Deformity** 2019; 7:395-403

Singer D, Johnston CE. Congenital Pseudarthrosis of the Tibia: Results at Skeletal Maturity of the Charnley-Williams Procedure. **JBJS Open Access** 2019:e0004

Helenius IJ, Saarinen AJ, White KK, McClung A, Yazici M, Garg S, Thompson GH, Johnston CE, Pahys J, Vitale MG, Akbarnia BA MD and Sponseller PD. Similar Deformity Correction, but Limited Spinal Growth and Lower Health Related Quality of Life in Children with Skeletal Dysplasia Undergoing Growth-Friendly Management for Early-Onset Scoliosis. A Matched Comparison with Idiopathic Early-Onset Scoliosis. **Bone Joint J** 2019; 101B ()

Helenius IJ, Saarinen AJ, White KK, McClung A, Yazici M, Garg S, Thompson GH, Johnston CE, Pahys JM, Vitale MJ, Akbarnia BA, Sponseller PD. Results of growth-friendly management of early-onset scoliosis in children with and without skeletal dysplasias. A matched comparison. **Bone Joint J** 2019;101-B:1563–1569.

Helenius IJ, Oksanen HM, McClung A, Pawelek JB, Yazici M, Sponseller PD, Emans JB, Sánchez Pérez-Gruoso FJ, Thompson GH, Johnston C, Shah SA, Akbarnia BA. Outcomes of growing rod surgery for severe versus moderate early-onset scoliosis: A matched comparative study. **Bone Joint J.** 2018; 100-B(6): 772-9

Wiley MR, Riccio AI, Felton K, Johnston CE . Quengel Casting for the management of pediatric knee flexion contractures: a 26-year single institution experience. **J Pediatr Orthop** 2017;37:e421-e426.

Harris L, Andras L, Sponseller P, Johnston C, Emans J, Skaggs D: Comparison of Percentile Weight Gain of Growth-Friendly Constructs in Early-Onset Scoliosis. Accepted for publication, **Spine Deformity**, 2017

Woon RP, Andras LM, Noordeen H, Morris S, Hutchinson J, Shah SA, Pawelek J, Johnston C, Skaggs D, Children's Spine Study Group, Growing Spine Study Group: Surgeon Survey Shows No Adverse Events with MRI in Patients with Magnetically Controlled Growing Rods (MCGR). Accepted for publication, **Spine Deformity**, 2017

Johnston CE, Tran D-p, McClung A: Functional and Radiographic Outcomes Following Growth-Sparing Management of Early-Onset Scoliosis. **J Bone Joint Surg Am** 99-A: 1036-42, 2017

Books

Johnston CE: contributing author. In Herring JA (ed): **Tachdjian's Pediatric Orthopaedics from Texas Scottish Rite Hospital**, 6th Edition. Philadelphia, Elsevier, 2022

Johnston CE II: Congenital Knee Dislocation. In Skaggs DL and Kocker MS (eds). Master Techniques in Orthopedic Surgery, Pediatrics 2nd Edition. Wolters Kluwer, Philadelphia, 2016. Chapter 34

Johnston CE: Halo-Gravity Traction (chapter 30); Apical Control in the Management of Severe Early-Onset Scoliosis (chapter 46). In Akbarnia BA, Yazici M, Thompson GH (eds.): **The Growing Spine – 2nd Edition**. Springer-Verlag, Berlin Heidelberg, 2016

Johnston CE: Congenital Deformities. In Scott WN (Johnston CE: Congenital Deformities. In Scott WN (ed.): **Insall & Scott Surgery of the Knee. 6th Edition**. Elsevier Churchill Livingstone, Philadelphia, 2017. Chapter 88

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Johnston CE: Apical Control Techniques in the Management of Severe Early Onset Scoliosis (Chapter 43). In Akbarnia BA, Thompson GH, Yazici M, El-Hawary R (eds.): **The Growing Spine – 3rd Edition**. Springer Nature Switzerland, Cham Switzerland. 2022