You are invited to the OUHSC Department of Pediatrics Grand Rounds Course No. 20D06 Wednesday, February 5, 2020 12:15-1:15pm \*\*\*Samis Education Center \*\*\* Rainbolt Family Auditorium

## "Safety Concerns with Over Testing: Gadolinium-based Contrast Agents Lead to the Formation of Gadolinium-rich (i.e. bimetallic) Nanostructure Intracellularly *in vivo*"

Presented by: **Brent T. Wagner, MD, MS, FASN, FACP** Director, Kidney Institute of New Mexico Associate Professor of Medicine, Division of Nephrology University of New Mexico Health Science Center Invited by: Pediatric Nephrology OUHSC Department of Pediatrics

**Learning Objectives:** Upon completion of this session, participants will improve their competence and performance by being able to:

1) Recognize that rare earth metals (including gadolinium) are not physiologic elements in any living animal,

2) Categorize the different brands of gadolinium-based contrast agents,

3) Evaluate patients for signs of gadolinium-induced systemic fibrosis, and

4) Employ critical thinking skills to the published literature (rife with retrospective bias and simplified assumptions)

### **Professional Practice Gap:**

Multiple different formulations of gadolinium-based contrast agents have been correlated with gadolinium-induced systemic fibrosis. These include the brands Omniscan, Magnevist, and OptiMARK. Gadolinium, the common element and the active ingredient of each, is the cause of gadolinium-induced systemic fibrosis. Based on retrospective data and simplified assumptions (extrapolating from non-physiologic, *in vitro* properties, some societies sprinted to conclude that seldomly- or unapproved (in 2006) gadolinium-based contrast agents were devoid of the risk of causing a catastrophic man-made disease. At the time of this writing, there are published cases of gadolinium-induced systemic fibrosis with such agents (e.g., MultiHance, Gadovist/Gadavist). The pathologic consequences of gadolinium-based contrast agents are not well known to many in the radiology, nephrology, or hospital care fields.

# If you wish to view live or video tapes of past GR, go to <u>https://mediasite.ouhsc.edu/Mediasite/Channel/ch-pedsgr</u>

Note: We do not have permission from all presenters to videotape their presentations.

A list of upcoming Pediatric GR topics can be found at: <u>https://www.oumedicine.com/department-of-</u>

### pediatrics/research-and-education/grand-rounds

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Accommodation Statement: For accommodations, please contact Alix Darden, PhD, MEd at 405-271-4401 or <u>alix-darden@ouhsc.edu</u>.

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