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**Oral Testimony – House Space, Science and Technology Committee
Hearing on “Prizes to Spur Innovation and Technology Breakthroughs”**

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Chairman Bucshon, Congressman Lipinski, and members of the Committee, my name is Dr. Sharon Moe, and I am the President of the American Society of Nephrology, better known as ASN. I'm a kidney doctor in Indianapolis, Indiana, Professor of Medicine, and the Director of the Division of Nephrology at Indiana University School of Medicine. I thank the committee for calling this hearing to discuss the role of prize competitions in promoting innovation, and I appreciate the opportunity to testify before you.

With nearly 15,000 physicians, scientists, nurses, and other healthcare professionals, ASN leads the fight against kidney disease.

Kidney disease is the eighth leading cause of death in the United States; it is a silent killer that destroys lives and places a staggering burden on our society.

Of the more than 20 million Americans with kidney disease, nearly 450,000 have progressed to complete kidney failure and rely on the Medicare End-Stage Renal Disease Program for lifesaving dialysis. The ESRD Program costs \$35 billion annually and covers all Americans regardless of age or disability. Despite this spending, kidney care has not advanced in the 25 years that I have been practicing Nephrology. ASN believes that a prize competition is an optimal way to promote innovation, reduce costs, and improve patient outcomes and quality of life.

Dialysis keeps patients alive but does not come close to replacing normal kidney function. It does not return patients to full health or allow them to pursue fulltime employment. Innovation has been stymied by a lack of competition among payers and a payment system that doesn't support novel therapies.

If Congress uses a prize competition to signal that it wants alternatives to currently available dialysis care, I believe the private sector will produce life-changing, cost-saving results. The knowledge is there to revolutionize kidney replacement therapy with innovative biotechnology and bioengineering methods. American ingenuity will do the rest and create alternatives to dialysis.

My patients constantly ask for an alternative to dialysis. I have a 48-year-old patient who epitomizes the need for innovation. He survived cancer, but damage from the radiation treatment caused kidney failure. He is on dialysis, still awaiting his kidney transplant after three years on the list. He tried dialyzing at night so he could continue working fulltime, but was too sick to function. He had to quit work and go on disability.

He recently told me, "I can't take it anymore. I hate the needles. I feel bad all the time. I can't work, and it seems like the transplant will never happen. I would like to stop dialysis. Will you be my doctor while I die?" A 48 year old went from working fulltime to contemplating death as a better option than dialysis over the course of one year. That's because the few options available to him have not significantly advanced in the last 25 years.

This reality is in stark contrast to dramatic therapeutic advances for other chronic diseases. Since the late 1980s, we have developed insulin pumps that automatically deliver accurate insulin doses, implantable defibrillators that shock a heart back to function, and robotic surgery to minimize hospital stays and pain after gallbladder and prostate surgery, to name just a few.

In contrast, over the same time period, dialysis machines have become smaller, computerized, and more portable so that some patients can dialyze at home. However, patients still endure getting stuck with needles and having their blood filtered for an average of 12 hours a week.

We need breakthroughs, not incremental changes to old technology. A prize competition that helps harness the power of the private sector can spur the scientific and technological breakthroughs to deliver improved technology for kidney replacement therapy. The FIRST Act would help pave the way for such an incentive, as well as other important prize competitions, by providing the guidance that federal agencies need to make the competitions a reality.

We need to transform dialysis, or prevent the need for it altogether. Prize competitions are a powerful lever that would draw a diverse group of inventors, scientists, and investors to innovate and develop better alternatives. Such innovation would improve the lives of thousands of Americans on dialysis covered by the Medicare ESRD Program and offer hope to the millions of Americans facing the possibility of dialysis in their future.

I appreciate the opportunity to testify and welcome the opportunity to answer your questions.