JAMA published "HIP PRO" study offers no predictive value for hip protectors in the prevention of hip fractures. In lay terms, the product studied was a "dud".

Background:
The Hip Pro study was an NIH taxpayer funded multicenter study on the FallGard brand hip protector. Dr Douglas Kiel of Harvard University was the lead author. The study was recently published in JAMA.[1]

Key Points:
The basis of product selected for this study rests on biomechanical tests reports constructed by Stanley Wiener, the president of the for-profit HipCo Company.[2]

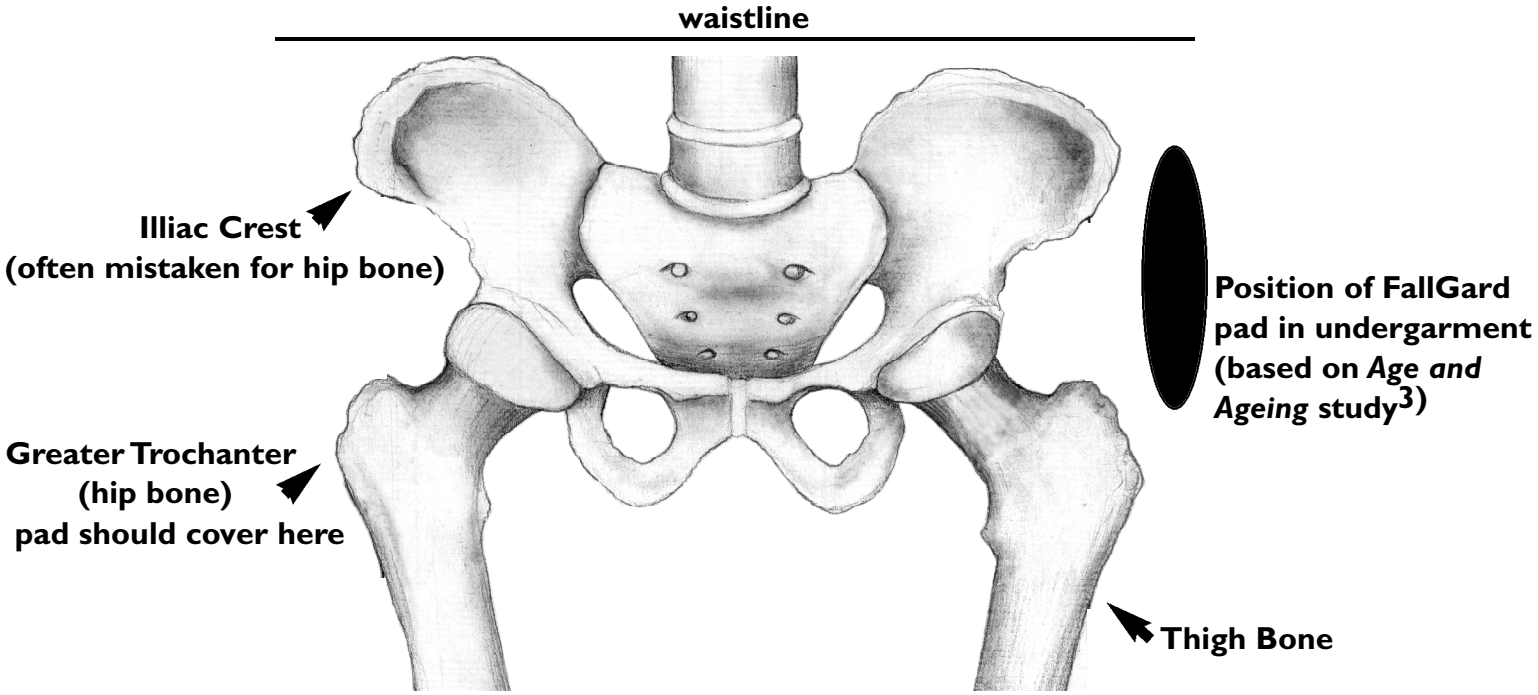
Dr. Wiener had NIH funded tests conducted that determined that the his FallGard hip protector was "superior" to other hip protectors on the US market. Certainly a conflict of interest concern automatically should arise in this situation.

Based on Dr. Wiener test reports, the JAMA study authors state:" ---this hip protector ---had been demonstrated to reduce impact forces to below the fracture threshold of the hip of an elderly individual (referring to the studied FallGard)." [1]

The recent JAMA published study now offers the conclusion that more hip fractures occurred on hips with the FallGard protector than on hips with no pad (ie the product is not only a dud, but possibly dangerous).

Key Question Raised:
The FallGard pad is a 3/4" thick semi-soft pad. Ignoring considerations of potential conflict of interest in Dr. Wiener test reports, why would more hip fractures occur in hips wearing this semi-soft pad? More to the point: isn't it better for a hip bone to fall on such a pad than on a hard tiled concrete floor?

Answer: The product doesn't fit right.
The missing link is provided by a recently published study in Age and Ageing [3] Which shows that the FallGard pad is fixtured too high in the garment and does not even cover the hip bone. Now that explains why more hip fractures could occur by falling on the FallGard product! See illustration below.



Conclusion:
Based on this single study which was terminated because of lack of efficacy using this flawed product the authors generally conclude: " These results add to the increasing body of evidence that hip protectors, as currently designed, are not effective for preventing hip fracture among nursing home residents."

It is totally irresponsible for public health opinion leaders with tax-funded grants to study and publish the results of a dud hip protector and then trash the entire field of hip protection.

The future of hip protectors will be determined by well-designed products and not on a rush toward tax funded studies of poorly designed products.

Each year 340,000 older Americans fall and fracture their hips costing Medicare about 10 billion dollars in surgery and rehabilitation. Over ninety percent of these fractures are the result of a sideways fall to a hard surface.[4] There are two key criteria to qualify a hip protector product: an independent biomechanical test (not one constructed by the influence of the manufacturer) to determine the protective effect in relation to the osteoporotic trochanter and an independent evaluation that the protective pad covers the trochanter when worn. These two criteria, along with comfort and durability, should be the bar that that a hip protector clears before wasting tax payer money on statistically clever studies.

References:

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2.Wiener St., ANderson GB, Nygus LM, Czech J. Force reduction by an external hip protector on the human hip after falls. Clin Orthop Relat Res 2002;398: 157-168

3. Minns RJ, Marsh A-M, Chuck A, Todd J. Are hip protectors correctly positioned in use? *Age and Ageing* Feb 2007 doi:10.1093/ageing/af1186

4.Parkkari J, Kannus P, Palvanen M, Natri A, Vainio J, Aho H, Vuori I, Järinven M. Majority of Hip Fractures Occur as a result of a fall and impact on the greater trochanter of the femur. *Calcif Tissue Int,* 1999 Sep; 65(3): 183-7