Understanding Science and Scientific Methods:

An Overview for Lawyers

SUMMARY – 28 November 2005

Class on 21 November 2005 covered Topic 4 on the Syllabus

I. The Role of the Press (F & H, Appendix A): Most reporters did not understand the Daubert decision; misreport most statistical analyses; are hostile to corporate defendants; and commit the Post Hoc Ergo Propter Hoc fallacy.

II. Breast Implants


B. There had been no systematic studies before 1992!

C. The allegation was that silicone-gel implants (and later, other medical devices – artificial joints, heart valves, shunts, tubing – also, disposable needles and syringes [silicone lubrication]) caused autoimmune disease.

D. April 1994 Class Action Settlement: $4.25 billion of which $1 billion was set aside for attorneys.

1. **Cases** – All women in Olmsted County, MN, who received a breast implant between 1964 and 1991 were included.

   \[N=749.\]

2. **Controls (2 Types)** – (1) 2 women of the same age for each of the 749 Cases; (2) 2 women who had mastectomy but no reconstructive surgery.


4. An analysis of **Diagnoses, Clinical Signs or Symptoms**, and **Abnormal Laboratory Test Results showed no pattern of significant results.**

F. **Swedish study** – **1998 British Medical Journal**

1. Basic Design – Compare Two Groups, (1) Those who had implant with \[n=7442\] (2) Those who had Breast Reduction \[n=3353\].

2. Used Swedish database of citizens so that all women in both groups from 1964-1993 were included.

3. **No significant differences between the two groups.**