THE SURE THING PRINCIPLE
(Savage, 1954)

Let f and g be two alternative possible acts of any sort, and let C be any event.

If you would definitely prefer g to f, either knowing that the event C obtained, or knowing that the event C did not obtain, then you definitely prefer g to f.

	C patients		C' patients	
Treatment:	Standard	New	Standard	New
Dead:	950	9000	5000	5
Alive:	50 (5%)	1000 (10%)	5000 (50%)	95 (92%)

	All patients	
Treatment:	Standard	New
Dead:	5950	9005
Alive:	5050 (46%)	1095 (11%)

f: Draw patients at random until you get one who got the standard treatment, and bet a dollar that he recovered.

g: Draw patients at random until you get one who got the new treatment, and bet a dollar that he recovered.

C: The patient you bet on is a local one.

- Given that C obtained, you would definitely prefer g to f (g gives double the probability of winning).
- Given that C' obtained, you would definitely prefer g to f (g gives you nearly double the probability of winning)
- But you definitely prefer f to g because f gives you over four times the probability of winning.