Let's assume that there are only 2 causes of lung cancer such that all sufficient causes of are:

Out of 4,000 people, 23 get lung cancer by the following sufficient causes:

S+

	LC+	LC-
A+	15	985
A-	5	995

S-

	LC+	LC-
A+	3	997
A-	0	1000

3 5 15

Among those with asbestos exposure, the presence of smoking increases the absolute number of cases from 3 to 15. The effect modifier (smoking) strengthens the effect of the exposure of interest - synergistic EM.

$\frac{3}{4,000}$ $\frac{5}{4,000}$ $\frac{15}{4,000}$

Among those with asbestos exposure, in the absense of smoking, 3/3 people with lung cancer (100%) had asbestos exposure. In the presence of smoking, 15/20 with lung cancer (75%) had asbestos exposure. The effect modifier (smoking) dimenishes the effect of the exposure of interest - antogonism.

Smoking and Asbestos both cause LC, and exposure to both causes more cases of cancer than either alone. Therefore, the presence of both dimenishes the relative importance of either alone.