The IARC Monograph 83, 2004, provides no information on the relationship of cigarette smoking to CVD. The last time that they did so was in Monograph 38, 1986. There is a very brief discussion of the putative relationship of CVD to ETS exposure (pp. 1358-1362) that briefly discusses the epidemiological data and even more briefly some data on ETS exposure and human biological endpoints.

Chapter 3 in the US Surgeon's General Report (USSG), 2004, is devoted exclusively to active cigarette smoking and CVD. This chapter reports five findings (see Executive Summary, pp. 9-10 and main report, Chapter 3). They conclude: (1) that the evidence is sufficient to infer a causal relationship for smoking and subclinical atherosclerosis; (2) that the evidence is sufficient to infer a causal relationship for smoking and coronary heart disease; (3) the evidence suggests only a weak relationship between the type of cigarette smoked and coronary heart disease risk; (4) the evidence is sufficient to infer a causal relationship between cigarette smoking and stroke (cerebrovascular disease); and (5) the evidence is sufficient to infer a causal relationship between smoking and abdominal aortic aneurysm. None of these conclusions represent changes to the already published literature, nor are any of these conclusions new to Philip Morris scientists.

Chapter 3 of the main report discusses these five conclusions in considerably more detail. Although much of the evidence to support these conclusions derives from epidemiological studies, conclusions of the epidemiological studies are supported by a number of published biological observations. These include the inflammatory properties of cigarette smoke and the potential role of inflammation as a risk factor for CVD (supported by increasing levels of certain biomarkers for inflammation, such as C-reactive protein), reduction of oxygen carrying capacity due to cigarette smoking, the role of cigarette smoking in endothelial dysfunction, and the association of cigarette smoking with adverse lipid profiles. This chapter also points out that the four major cardiovascular diseases (see above) that are associated with smoking are all probably mechanistically related, with blood vessel plaque formation and thrombosis being the major initiators of the disease state. Once again, this information is not new and is well known to us. What is still not known, as was pointed out in the USSG Report in a number of places in Chapter 3 is the mechanism through which cigarette smoking acts on the cardiovascular system. This is an area in which PM has started an active research program, but there is room for expansion.

It is interesting to note that on page 11 of the main USGG Report, Table 1.2 lists the terminology/descriptors used by previous USSG reports regarding CVD and smoking. These are as follows: **1969** - associated with a significant increase in atherosclerosis; **1971** - a likely factor for the development and aggravation of peripheral vascular disease; **1973** - major risk factor for the development of peripheral vascular disease; **1974** - strong association with peripheral vascular disease, major risk factor for arteriosclerotic peripheral vascular disease (APVD), and strongly associated with increased morbidity and death from the above; **1980** - major independent risk factor for APVD in women; **1983** - the most powerful risk factor predisposing to APVD; **1989** - cause of and the most powerful risk factor for APVD. This information is of more than simply historical importance, and it was presented to demonstrate how inferences regarding causation change as a function of increasing information. This point will be dealt with in more detail in the causation section of this summary.