

## **Master Answer for Gene Profiling**

**The questions posed in this small group were not meant to be specific to a disease. You will not be tested on the clinical or molecular specifics of lymphoma or breast cancer. You also will not be tested on Nanomedicine. What you need to take home from this exercise are the following:**

**Arrays are confirming and expanding our knowledge of how the immune system works. The different ways that both the innate and the adaptive immune systems react to different threats confirm what many bright immunologists have predicted and worked incessantly to prove over the past three decades.**

**Biologic events studied in isolation can be very misleading and it only makes sense that genes cooperate in many ways to produce a type of response best suited to the infectious agent or mutant cell. Gene cooperation documented by arrays will revolutionize the practice of medicine. Looking at a single tumor cell doesn't cut it any more!**

**For the test-be sure that you understand how genes, acting via DCs, TLRs and the MHC can dictate an immune response. This will be a recurring theme for the rest of the Course. You will be asked nothing specific about the articles-only the concepts they support.**

**Nanomedicine: this is presented solely for the excitement it should generate when you read the section in this small group. I predict that some of you will get so excited about it you will read the full new England journal article posted on the HD web site in your spare time.**