Defining Bronchioloalveolar Carcinoma (BAC): One End of a Spectrum

The clinical syndrome of BAC is characterized by spread primarily through the lungs, a higher proportion of never-smokers or light former smokers, a greater proportion of women, and often progresses more slowly than most other lung cancers. This clinical and radiographic (scans) scenario isn’t necessarily seen only with “pure BAC” under the microscope from a biopsy, but rather can be a spectrum from pure BAC to part non-invasive BAC pattern and part invasive adenocarcinoma, and on the other end of the continuum is invasive adenocarcinoma, as shown in the illustration of how these appear under a microscope.

Pure BAC Adeno w/BAC Invasive Adeno

Features

It doesn’t have to be “pure BAC” to behave like a BAC clinical picture. The variability in how BAC behaves is still poorly understood. Overall, invasive adenocarcinoma (without BAC) has a worse prognosis than adeno/BAC mix, but there’s tons we don’t know yet. Importantly, many of the amazing responders with what is called BAC actually have adenocarcinoma with BAC characteristics under the microscope. And the response rate on BAC trials of drugs like Iressa (gefitinib) and Tarceva (erlotinib) actually suggest that patients with adenocarcinoma with BAC characteristics may do better than pure BAC. One of the other complications is that there are two different types of pure BAC, mucinous and nonmucinous. In the BAC trial with Iressa, which I led and published recently, patients with mucinous pure BAC did very poorly, while those with the non-mucinous type did considerably better. In any event, most current trials for “patients with BAC” allow patients with pure BAC or adeno with BAC to participate, and then the trial tries to collect tissue from the tumors to figure out patterns of which patients are getting a benefit and which are not. Right now, we really don’t know nearly enough about the different subtypes of BAC and how they will do with various treatments. But we’re getting better all the time.