



## **FACTS ABOUT NEVI WITH SEVERE CYTOLOGIC ATYPIA**

One of the more difficult diagnoses in my practice is that of the “**Nevus with Severe Cytologic Atypia**” or the “**Severely Atypical NevoMelanocytic Proliferation.**” First, what does that mean?

“Nevus” is the medical term for what we call a “Mole.” A nevus is a skin growth which typically is dark in color. They are common; most of us have a few. “Cytologic” refers to the cells, so “cytologic atypia” would mean that the cells look atypical. “Melanocytic” means pigmented, or containing melanocytes (pigment producing cells). A “NevoMelanocytic Proliferation” would be a growth a pigment producing cells.

Sometimes we find a mole that looks different than what we think it should look like. It might be new, or changing, or just a funny color. For whatever reason, we often remove such moles. Every time we remove such a growth, we send it to a pathology lab to be examined by a “dermatopathologist,” a skin pathologist. These doctors specialize in examining skin lesions. It is all that they do, all of the time.

In a perfect world, a pathologist would look at such a growth and say for certain that it is a healthy mole or it is a melanoma skin cancer. Unfortunately, it is often not that easy. Try to think of it as a spectrum of gray between a healthy mole and a melanoma cancer, or as a step ladder which starts at the bottom with a healthy mole and ends at the top with a cancer. Rather than moles being all good or all bad, in most cases they fall somewhere in between. In a single growth, there may be some totally normal cells and some very atypical cells. Those atypical cells have to reproduce quickly and turn themselves into a cohesive mass of atypical cells before they can make trouble.

We think that most melanomas arise in healthy moles, and such moles must go through several stages before they become cancers. As we know, a melanoma skin cancer has the potential to be deadly, and our goal is to remove risky moles before they get to the point where they are a melanoma. If we have one goal in our skin cancer screenings this is it – try to find a melanoma before it has the ability to hurt you. Plain and simple.

### **So let’s get back to why we use the confusing language:**

To say for certain that a growth is a melanoma cancer, there are several criteria that must be met. Pathologists look at a number of factors: the size and shape of the growth underneath the skin, whether the cells are in a neatly organized pattern or a disorganized and asymmetric pattern, if the cells look healthy or if they look “atypical,” if the surrounding immune cells seem like they are trying to attack the area, and if the cells are turning over too quickly, to name a few.

The pathology lab that we use will classify a growth either as a compound melanocytic nevus (which is a healthy mole), an atypical melanocytic nevus, or a melanoma. If they define a nevus as atypical, they then go on to say that it is mildly, moderately, or severely atypical. The vast

majority of the moles (more than 90%) that I remove are called either mildly or moderately atypical. In my mind, this means that the mole had the potential to be a problem but was not yet a danger. Once a mole is completely removed, the risk of it coming back and causing harm is negligible.

On occasion we receive a pathology report that states that the growth had “severe cytologic atypia.” In these cases, there are generally a number of red flags, things look wrong overall, but there might be one characteristic that reassures the pathologist that it isn’t yet a melanoma. In most cases, if not every case, multiple pathologists within the same lab look at the lesion and give their opinions. They usually take several days to look at it, stain it with different markers, and they make every effort to discern if the growth is ready to be called a melanoma. Sometimes they just can’t say for certain. In this case, they classify it as “severely atypical.”

In my mind, a severely atypical nevus is on the cusp of becoming a melanoma. Most of the time, the pathologist will even add a comment in their final report that says something along the lines of “this lesion may represent an evolving melanoma in situ” or “the possibility of melanoma cannot be completely excluded in this case.” No doctor wants to say that you have a scary cancer if you don’t, but by the same token, we don’t want to tell you it isn’t a cancer if it is or might soon be. When the pathologist diagnoses a growth as severely atypical, they generally also recommend that it be treated as if the diagnosis were melanoma.

WHY? We know that one severely atypical cell has the ability to turn into a melanoma. We know that a melanoma has the potential to spread in the body through the lymph system and through the blood. We don’t have many effective treatments at this time for melanoma, and once it starts to spread, we can’t make it stop. In some cases, melanoma has already spread through the body at the time it is diagnosed. Those are the worst case scenarios and the ones we try our very best to avoid.

For this reason, when we diagnose a “Severely Atypical Melanocytic Nevus,” we also recommend that it be treated as if it were a melanoma. This means that we send our patient to a surgeon and an additional surgery is done to take a wider “margin” or a border of healthy skin around the area. This helps protect you if some of those atypical cells are left behind in or around the biopsy site, as one cell is enough to grow a cancer, or if some of the cells have started to spread to the surrounding area. There is a standard protocol that surgeons follow that tells them how much of a margin they need to take based on the depth of the growth.

Sometimes people ask why we don’t just take a large margin with every biopsy. The reason is that a small margin is sufficient about 95% of the time, and that is what we normally do. If we took a large margin with mild and moderately atypical lesions, we would be leaving larger scars than necessary and over-treating most of our patients. So we start with the smallest margin possible to make the first diagnosis.

The summary of all of this is that a **severely atypical nevus is a potentially dangerous lesion**. It may not be a melanoma, but it is about as close and you could get. It has the ability to cause harm to your body, we can’t say if that is now or next year, but we strongly believe that the potential is there. The most important thing that I can do as a dermatologist is to help protect you from the potential of a deadly cancer. The most important thing that you can do is to protect your body from a non-friendly growth. This is why we treat “Severely Atypical Nevi” the way that we do.