# CAP Author Chat - Grossing, Staging, and Reporting’s Dr. Qihui "Jim" Zhai

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**Julie McDowell:**

The three functions of grossing, staging, and reporting are fundamental to the practice of surgical pathology, yet no surgical pathology tech has ever discussed these three functions in an integrated manner. A new book entitled, Grossing, Staging, and Reporting: An Integrated Manual of Modern Surgical Pathology, promotes the standardized approach for practicing pathologists, pathologists in training, and pathologist assistants who handle specimens, explains the author, Dr. Jim Zhai in this CAPcast episode. Welcome, Dr. Zhai. Let's start with what inspired you to create this manual?

**Dr. Jim Zhai:**

Thank you very much, Julie, for this opportunity and allowing me to share some of the ideas about this project. First of all, this is a team effort and coming from more than 40 distinguished pathologists from all over the world, all over the country, and also tremendous amount of efforts by CAP today, they're honored to be leading the efforts and coordinating the efforts with the hope that we can promote the idea of standard practice, that is one of the CAPs missions.

The idea to put together a manual including grossing, staging, and reporting has been with me for a while. Actually, it kind of reflects my career, starting from my residency training at Mayo Clinic Rochester. At that time, we had a conference called MBD Conference to memorize Dr. Daparthi, one of the pioneer pathologists in the country, in the world. The format is gross photos, at that time, it's two by two Kodak slides projected and every resident has opportunity to comment on the organ, and on the findings and came to a conclusion what is the macroscopic diagnosis then the macroscopic findings will be correlated, will be shown. All this monitored by Dr. Uni, legendary surgical pathologist at Mayo Clinic.

I learned so much by doing that. The start of the whole process is specimens. You look at, macroscopically, before you cut it. If you are an experienced the pathologist after solid training, by looking at the grossing picture, you had a very good idea about what likelihood to be of the diagnosis of the specimen. And I'm still using that skill in my daily practice now. When I look at them, I have a good idea and we look at macroscopic to make a correlation. So that's first part of my macroscopic diagnosis, it's critical.

Then I did my fellowship at MD Anderson Cancer Center, and that's a cancer center dealing with a lot of complex specimens. So how do we organize the complex findings of a big specimen is critical because so much information you want to present the information in an organized way to highlight the key point. Then you add to the secondary findings. Dr. Kevin Rheman was leading the efforts put together, we call paragraph system, means we design a few paragraphs, each paragraph is focused on different information and later on that material was put into a manuscript and published on the CAP journal actually, is his archives of pathology and lab medicine. And when I took the first job at the Baylor stationed at Methodist Hospital, we implement that approach. And Dr. Albert [inaudible] and Mary Schwartz, all these senior pathologists support the idea and we felt it's very successful.

So that's another part along my thinking, put together something that other pathologists can benefit. And later on I was involved with many, many CAP committees including surgical pathology committee, including publication committee, and also working at the Mayo Clinic, we receive a lot of [inaudible] sized slices for second opinion. And I realize many reports are very, very different. Occasionally it's hard to imagine what the specimen look like, hard to do an imaginary reconstruction. So this is a kind of critical time. I think we'll probably should do something now. And the newer edition, AGCC edition, eight and nine versions are coming. And so to feel I have to put something together, integrate, because these three steps are for the same purpose. They're all closely related for the same purpose, which is offer accurate reports so that the patient will be properly treated. So then I made this proposal to the publication committee of CAP and received very enthusiastic support.

And at that time, Dr. Gallaghan is the chair of the committee and actually the members of the committee offered some critical advice and later on, Dr. Bui carried on the chair [inaudible] and made this book happen. So that's kind of, I walked with you through the process, the inspirations at different stages of my career. And finally with the team efforts, we put this project together with some of the best input including Dr. Mary Kay Washington reviewed the manuscript and offered constructive advice. That's how this idea and this project came to be as a real book. We can look at that I hope as many as thought as possible to benefit from our teamwork.

**Julie McDowell:**

So the standardizing approach to grossing, staging and reporting will certainly help standardize data collected for each specimen, which could help with combining reports into larger databases for analysis. Was this one of the goals of the authors of this book?

**Dr. Jim Zhai:**

Yes, Julie. That's one of the goals. Again, this is a pretty ambitious endeavor. So we thought a lot and what will be the material, how to put them together, what will be potential benefits. So we heard of the big data, of course. How do we use our reports more efficiently to contribute to the big data analyze and how to extract the data more consistently, more effectively. Clearly we hope that this book will be beneficial to big data analysis and that's important for our public information. It's important for bioinformatics. So we think this is an important piece of the current medicine and we hope certainly that this book will help to reach that goal and to assist some of the efficiency and efficacy to the goal to have the big data analysis relatively a little easier and more effectively.

**Julie McDowell:**

Are there other benefits to be gained from standardizing grossing, staging and reporting?

**Dr. Jim Zhai:**

Yes, absolutely. A few things. It's great for teaching. For the resident teaching, we need to think logically where to start. And the grossing is not the purpose. Grossing is the means, and the staging is critical information and cannot be accurate without a proper grossing. But the ultimate goal is to provide a report that is including all the necessary information. The patient will have the prognostic information, therapeutic information, their comprehensive, and yet succinct because the more information you put in, the more efforts you'll put in, the more mistakes might happen. So we want to make sure the important information goes first in an organized way that our treating physicians will understand the key points of the whole report. So that's what we do actually as a pathologist, right? To offer the guideline for the oncologist or reduce oncologists or surgeons to continue their care for the patient.

So that's a critical part. Second, as I mentioned when we started the consultation service, consistency is extremely valuable. Otherwise, you would never imagine what a regional pathology meant by a different style, different organization of the macroscopic description. So those are the things in our mind to again promote the standard format, the standard approach to report supported by accurate staging and appropriate grossing. We also spent quite a bit of time about the pitfalls of the staging and some of the specimens are pretty straightforward and some of the specimens are tricky that we need to again, stage accurately because it has to do with the prognosis of the patient that has to do with the subsequent treatment. So we have all this in mind and we designed this format and 44 pathologists with firsthand experience and coming from different institutions and contribute their efforts and expertise. We hope this is beneficial, again, valuable to the practice and pathologists.

**Julie McDowell:**

So let's talk a bit about molecular testing. Obviously molecular testing plays a big role in modern medicine, and you included molecular testing and pathology methods in this book. What can you tell us about molecular testing and pathology methods that you speak about in the book?

**Dr. Jim Zhai:**

Thank you for the question. This is, as you see the title that we call, Integrated Manual, integrated. At the same time the title we used grossing, staging and reporting. We didn't even highlight the molecule. However, in the book, as you mentioned, we include quite a bit of information that has to do with molecular findings. The modern medicine has a lot to do with the molecular pathology because the molecular information will help us to make the right diagnosis. Many tumors are classified based upon molecular information as molecular classification. So without those informations, the diagnosis cannot be a completely accurate thing. You cannot report in the right way. So that's one thing. Second, molecular pathology has to do with therapy and we call individualized the medicine based upon the signature of the profile and the different protocol will be designed to treat the specific patient. However, the staging is so critical.

Many, many pathology coming from molecular information has to be validated by the staging. So it's integrated. We didn't feel that molecular will replace the, quote, unquote, traditional surgical pathology by looking at HE slides by other immuno stains.

Those will be there. The more information we need from molecular actually the more solid surgical pathologies information we need because the information from molecular has been validated. Otherwise, the molecular alone will have a hard time to integrate. So that's why we call integrate. Although the title didn't include the molecular, however, molecular information with us now is not in the future. It's with us now in the future, it's only going to play a more and more crucial role as science and technology moves on. But at the same time, we want to emphasize, continue to emphasize that the foundation of the whole disease, how extensive of the disease, the classification of the disease still rely on largely of quote, unquote, traditional surgical pathology. So that's our philosophy is to make these tools help us in a complementary way for the accuracy of the diagnosis and precise information for the subsequent individualized medicine.

**Julie McDowell:**

How do you and the other authors address emerging technologies and their impact on anatomic pathology in the book?

**Dr. Jim Zhai:**

The other emerging, we entertain molecular a lot, which is like the big profile, hundreds of genes and even the whole genome sequence. And again, those information will play more and the more important roles in our future medicines. And actually we are using them in our daily practice already to help the patient, to help the oncologist and the radiation oncologist to design a specific protocol to treat the patient. So we address the way complimentary that no matter what fancy technology is going to come, we are going to use our tested information like staging information to validate the new technology. So the bioinformatics is critical and the foundation of the whole process is the surgical pathology information. And again, in the future, our new technology will influence the way we sample a specimen in the future. That's why we look at an integrated way to embrace the new technology. At the same time, give the feedback to the new future version of AGCC, for example, staging manual again for the benefit of the patient care.

**Julie McDowell:**

Well, thank you Dr. Zhai for talking about your book. Any parting thoughts about this book that you'd like to share?

**Dr. Jim Zhai:**

I want to thank you too, Julie, for the opportunity to share some of the thoughts. And I want to thank again the efforts from 44 pathologists and the CAP publication. I want to thank them, but I want the efforts will benefit, have some positive impact for the practicing pathologist, for the PAs, for the trainees to form more efficient organization, organized way to growth to states and to report and make our job more enjoyable, more effectively. And also at the same time, this is the first edition of such integrated manual and we hope that to receive some constructive advice if we do in the future, additional new additions and it will benefit from the feedback. And then eventually we'll serve our fellow pathologist to offer a better tool to serve the patient.

**Julie McDowell:**

That was Dr. Jim Zhai. Talking about his new book entitled, Grossing, Staging and Reporting an Integrated Manual of Modern Surgical Pathology, which is available online by searching for the book title on estore.cap.org.

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