

# Prof. Ying Han: updates in clinical management of glaucoma

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## Editor's note

The Guangzhou Glaucoma Forum was held on April 21–22, 2018, at Zhongshan Ophthalmic Center (ZOC) in Guangzhou, China. Ophthalmologists from China, the United States, the UK, Korea, and other countries came together to share cutting-edge achievements in the field. Prof. Ying Han was invited to deliver a speech, “updates in clinical practice based on large clinical glaucoma trials.” We were honored to invite Prof. Han for an interview after her speech (*Figure 1*). Let's enjoy the interview and learn about the latest advancements in glaucoma clinical management!

## Expert's introduction

Ying Han (*Figure 2*) serves as an associate professor of Ophthalmology at University of California, San Francisco (UCSF). She completed her ophthalmology residency and glaucoma fellowship at UCSF, and has since stayed on as faculty. She is a member of American Glaucoma Society (AGS) and American Academy of Ophthalmology (AAO), and she serves on the resident performance committee at UCSF. She is also a director of Glaucoma at San Francisco Veterans Affairs Medical Center. Her interests include but are not limited to: glaucoma laser, tube-shunt surgery, glaucoma surgical device design, and glaucoma surgical clinical trials.

## Interview

**AES:** *Thank you for accepting our interview invitation. Could you first briefly introduce yourself, including your affiliations and research fields?*

**Prof. Han:** Sure! My name is Ying Han. I trained at UCSF, where I completed my ophthalmology residency and glaucoma fellowship before staying on as faculty. I have been conducting clinical research for the past 15 years, trying to discover the best ways to treat glaucoma and to design a new surgical instrument to minimize the risks and improve the success rates of glaucoma surgery.



Figure 1 Meeting with Prof. Ying Han.



Figure 2 Ying Han, MD, PhD.

**AES:** *What's the latest update in clinical practice based on clinical glaucoma trials?*

**Prof. Han:** There is actually a whole spectrum of clinical updates, from diagnosis to alternative treatments. To

exemplify which types of clinical trials have the most influence on clinical practice, I would point towards trials checking on narrow-angle glaucoma patients, such as the Zhongshan Angle Closure Prevention Trial (ZAP Trial) at ZOC. This kind of trial dramatically changes our understanding of narrow-angle glaucoma and how to treat this disease subtype. The trial is controversial but thought-provoking, and it brings forward a very good question about what the best treatment is for narrow-angle glaucoma. That's really significant.

**AES:** *In terms of clinical glaucoma trials, how should one define sample size?*

**Prof. Han:** Determining a sample size is a technical process. Before we start any clinical trial, we need to find out how many patients we need to recruit, which is not a simple matter of "the more the better." Large sample sizes may increase the difficulty of recruitment and follow-up. Therefore, in order to identify a proper sample size, we need to conduct a retrospective study to get a sense of the difference between the treatments we want to compare. We can then decide the sample size based on the results. In summary, defining sample size requires statistical work.

**AES:** *Glaucoma screening is very important. What role does it play in the treatment of glaucoma?*

**Prof. Han:** Researchers have been exploring this question for many years. As we know, glaucoma can be roughly categorized into open angle glaucoma (OAG) and closed angle glaucoma. It is very hard to screen patients for OAG because the disease criteria are still unclear, and we do not have the tools needed to identify different types of OAG. We need to combine many different measurements and images together for this effort. Screening, not to mention treatment, is already very difficult. There's a long way to go for OAG. On the other hand, narrow angle glaucoma may be slightly easier to identify, because we have a clear definition of the disease and we know the appropriate imaging tests. Although the mechanism of narrow angle glaucoma is not clear so far, current imaging studies will provide some models which may help in screening narrow angle glaucoma. That would definitely affect treatment, because if we have positive screening tests, we can strategically decide on next steps.

**AES:** *What are some differences in glaucoma treatment between USA and China?*

**Prof. Han:** For ZOC, I think it is very advanced and on the same level as USA hospitals in terms of diagnosis, treatment, and understanding of disease. The main difference between the two countries is the relationship between doctors and patients. In the USA, the relationship is easier to form and maintain. Doctors see fewer patients a day, allowing more time to discuss and decide on a treatment plan together with the patient. American patients also trust their doctors more. In China, while the doctors have superb skills, they are very overloaded, which makes it difficult to talk in-depth with individual patients. Overall, it is harder to be a doctor in China.

**AES:** *What are your opinions of today's forum?*

**Prof. Han:** I was very impressed by today's meeting. The talks were cutting-edge and guided, directly impacting clinical practice. I am very glad to be a part of this event.

**AES:** *Thank you for sharing!*

**Prof. Han:** Thank you.

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