Ladies and gentlemen. It’s a great honor for me to talk here about the concept and the treatment strategies of gastric adenomas.

Most cases of endoscopic treatment of early gastric cancer have been performed in Korea and Japan. ESD in Korea and ESD in Japan is similar in some aspects, but there are also significant differences in some areas. What is the greatest difference in the landscape of ESD between Korea and Japan?

I think this is the Japanese situation. Everything is the same. Before ESD, it is a cancer, After ESD, it is also a cancer. The difference between pre-ESD diagnosis and post-ESD diagnosis in Japanese ESD landscape is very small.

This is the Korean situation. It looks like the same. However, there is something different among them. Did you find the differences? In the Korean landscape of ESD, adenoma and cancer are mixed. The difference between pre-ESD diagnosis and post-ESD diagnosis in Korea is not small.

Today, I’d like to start with a representative case of early gastric cancer and then I would review the concept of dysplasia and adenoma. And finally, I hope to discuss the treatment strategies with you.

40 years old woman visited my clinic with a depressed lesion in the antrum. The pathology was high grade dysplasia, but I thought chance of cancer is very high. I usually do not repeat endoscopy before ESD, but I ordered repeat endoscopy for this case.

The reason for repeat endoscopy is this. If the biopsy at the second endoscopy is cancer, I would recommend surgery instead of ESD. Actually, I thought the biopsy will be a cancer.

However, it was high grade dysplasia again.

So, I did an ESD like this. No other option.

The final pathology was a cancer like this. 26 millimeter well differentiated adenocarcinoma in the lamina propria. Enough safety margin. I can say that choice of initial treatment is sometimes tricky like in this case.

Let’s think about the concept of dysplasia and adenoma of the stomach.

We need to start from the definition of dysplasia. What is dysplasia? Most simply, it is an unequivocal neoplastic transformation.

There are three important histological characteristics for gastric dysplasia. They are disorganized mucosal architecture, abnormal differentiation, and cellular atypia.

Based on those three characteristics, a lot of grading schemes have been proposed. Isn’t it confusing?

Recently, dysplasias are histologically divided into two groups, low grade dysplasia and high grade dysplasia.

Endoscopically, dysplasias can be divided into elevated dysplasias and flat/depressed dysplasias.

What is the relationship between dysplasia and adenoma? Definition of adenoma is somewhat confusing. In the western countries, adenomas mean elevated or nodular lesions with dysplasia in histology, so only elevated type dysplasias are considered as adenomas. In the eastern countries, however, both elevated and flat/depressed dysplasias are considered as adenomas. Actually, the two terms dysplasia and adenoma are thought to be the same thing in the clinical practice. The difference is who prefers what. Usually, pathologists prefer dysplasia, and endoscopists prefer adenoma.

Dysplasias are graded as either high grade or low grade. So, adenomas (= dysplasias) can be divided as adenoma with low grade dysplasia (LGD) and adenoma with high grade dysplasia (HGD). In Korean pathologists' tradition, adenoma usually means adenoma with LGD.

Ideally, there should be no difference in the histological diagnosis of adenoma and cancer, because everybody is using the Vienna classification. However, it’s not so simple.

The concept of cancer may be different between countries. In Japan, structural and cytological features are important. In the western countries and in Korea, evidence of invasion is much more important. Actually, we think that most cases of HGD in the western system and Korea, as well as some LGD, become carcinoma in the Japanese system.

This is a famous study comparing the pathological diagnosis of gastric neoplasm between western countries and Japan. About half of the cases were adenomas by the western point of view. However, only 7 percent were adenomas by Japanese doctors. There is a huge difference. Korean pathologists seem to be close to western doctors in the diagnosis of gastric adenomas.

This is my understanding of this confusing situation. Three blocks are adenoma with LGD, adenoma with HGD and EGC in Korea. The next three blocks are diagnoses in Japan. So, most cases of adenoma with HGD in Korea may be EGCs in Japan.

Professor Sun Young Lee at Konkuk University discussed this dilemma in the recent editorial. Most cases of low grade dysplasias are endoscopically resected in Korea, but observation is frequently chosen in Japan. High grade dysplasias are endoscopically resected not only in Korea but also in Japan. But the diagnosis is different.

This is a short summary. Dysplasia is a neoplastic transformation, but it’s not a cancer yet. Gastric adenoma and gastric dysplasia is basically the same thing in Korea and Japan. There is a significant difference in the pathologic diagnosis of gastric adenoma between two countries.

Let’s move on to the next topic. The treatment strategy.

The natural history of adenoma is not clear yet. In this old study, the low grade adenomas progressed to cancer in 15% in 10 years.

Excluding palliative surgeries, we have endoscopically or surgically treated more than seventeen hundred gastric cancers in 2012 at Samsung Medical Center. Among them, 72% were early gastric cancers. In early gastric cancers, cases within absolute indications were 25%. There were 263 cases of gastric adenomas in a single year.

This is an example of endoscopically treated adenoma with low grade dysplasia.

Almost the same thing except that it was an adenoma with high grade dysplasia.

I performed ESD for a small depressed adenoma with LGD.

However, the final ESD pathology was adenocarcinoma.

It’s another example of gastric cancer with initial biopsy of adenoma. In this case, the initial biopsy was adenoma with low grade dysplasia.

In this old report from my institution, 7 out of 22 adenomas with HGD were actually carcinomas in the endoscopically resected specimen.

We reviewed the discrepancy between pre-treatment diagnostic groups and post-treatment diagnostic groups. As you can see in this complicated slide, the rate of discrepancy is more than expected. For adenoma with LGD, about 34 percents were upgraded as high grade dysplasias or cancers. For adenomas with HGD, 34 percents were upgraded as cancers.

This is a personal communication. About 1/3 to half of cases with high grade dysplasia are upgraded into cancers at Samsung Medical Center, Gangnam Severance Hospital, and Asan Medical Center.

In this report from Yonsei University, 51 out of 273 endoscopically resected low grade adenomas were upgraded into either HGD or adenocarcinoma. They evaluated the risk factors for upgrading, and recommended endoscopic resection for larger lesions and lesions without white discoloration

So, small pale flat elevated low graded adenomas can be easily treated by ablation therapy using argon plasma coagulation.

Ladies and gentlemen. I’d like to conclude my short presentation. For adenomas with HGD, endoscopic resection, preferably ESD, is recommended. For adenomas with LGD, endoscopic resection is preferred for larger lesions or lesions with central depression. Ablation is an easy and effective treatment for small pale flat/elevated adenomas with LGD.

Thank you for your attention.