

Summary of the questionnaire survey regarding UGI cancer and endoscopy worldwide

By Dr. George A. Cortas

Detection, diagnosis and treatment of early cancers is the best hope for the prevention and cure of Upper GI cancers, as this is one of the leading causes of death worldwide. Detection of early cancer using white light endoscopy is challenging because the morphology can be subtle (ie, nonpolypoid; slight elevation, flat, or slight depression]) and the color can be somewhat altered.

In fact, nonpolypoid neoplasms are common and important in the esophagus, Barrett's mucosa and stomach

I think this is an excellent summary to tell us about what is going on regarding Upper GI cancer in the world that looks at various important parameters.

This is an awakening for all of us in the Endoscopy community. There is still a high incidence of both Esophageal and Gastric cancer in the world. This is unacceptable as we can possibly prevent many of these cancers by:

1. Selecting high risk individuals who have identifiable risk factors for UGI cancers
2. Identifying countries that have a high incidence of UGI cancers
3. Training Endoscopists about the use of Image-enhanced endoscopy (IEE)
4. Training Endoscopists about the use of various staining solutions for the detection of early cancer (ie: Iodine staining in the esophagus, Chromoendoscopy Barrett's esophagus and stomach, etc...).
5. As far as **Esophageal cancer** is concerned, we can see from the summary presented that the incidence of Adenocarcinoma is higher than squamous cell carcinoma in the world. This in fact is an important finding, as we can intervene and prevent in fact both types of cancer (Adenocarcinoma and Squamous) from happening by:
 - a. Identifying high risk countries that have a high incidence of esophageal adenocarcinoma
 - b. Identifying high risk individuals that may develop esophageal adenocarcinoma (white males, smokers, alcohol users etc...)
 - c. Surveillance of patients identified to have Barrett's mucosa and this is where I believe Image-enhanced endoscopy (IEE) has a role as training of endoscopists will be a key parameter in helping reduce the incidence and possible the mortality from esophageal adenocarcinoma.
 - d. The routine use of Iodine staining in the esophagus to help identify patients at high risk for squamous cell carcinoma of the esophagus.
6. As far as **Stomach cancer** is concerned, we can see that still there is a high incidence and mortality from stomach cancer in the world and I believe that the same interventions (a – c)

listed above for Esophageal cancer can also be applied for gastric cancer prevention and identification.

7. As far as **Opportunistic screening for UGI cancer** in the world, there is still a lot of work to be done and there is absence of the above mentioned in many parts of the world where the incidence and mortality from UGI cancer is high. This is where I think the World Endoscopy Organization (WEO) has a role in helping to achieve this.
8. The same can be said about the **spread, routine use of high definition and magnifying endoscopes for characterization of UGI cancer** in the world, clearly from the graph it can be seen that is scarce.
9. As far as equipment – based **Image-enhanced endoscopy (IEE)**, it is of utmost importance to spread and teach this. It can be seen from the graph provided that for esophageal/gastric cancer and Barrett’s esophagus, Image-enhanced endoscopy (IEE) is not used at all especially in countries that need it the most where the incidence and mortality from such cancers is high. And I fully agree with the notation in the graph that it is “*desirable*” in many of these high risk countries.
10. The importance about the use of **Sedation in UGI endoscopy**. It is amazing to see that still some countries do not use sedation for UGI endoscopy. We all know how difficult it is to evaluate subtle mucosal changes, even with the patient well sedated.
How could the endoscopist evaluate the mucosa while no sedation is used?
It would be interesting to perform a study and compare 2 groups of patients (sedated vs. non-sedated) and identify how many lesions are missed.
I believe sedation is of utmost importance in upper GI endoscopy as it helps you detect more lesions since you have more time to examine the mucosa while the patient is well sedated and not fighting you.
11. When it comes to the use of **mucoytic agents**, this is still underutilized. In fact, if you look at the map of North America, it is hardly utilized at all, and millions of upper endoscopies are performed yearly. We all know how important it is to use the combination of agents and what a clear view of the mucosa is provided. In my endoscopy unit, I have been using Simethicone only for the last 10 years after having read about the use of it in Japan, and actually it has rubbed off my endoscopy unit colleagues as they are all using it now to visualize the mucosa for both upper and lower GI endoscopy. They always ask the nurse to provide them with the *Cortas Cocktail*! And I think this is good! We are talking about my unit with highly specialized endoscopists that never used these mucoytic agents and they are willing to learn which means this is a good sign.
12. **Taking photos and minimal shots in upper GI cancer screening** is also underutilized. **Strict regulation** is seen in countries where they have a high incidence of upper GI cancers. But this is unacceptable as other countries also have upper GI cancers (albeit somewhat at a lower rate), and there is a protocol that should be followed to make sure that all parts of the stomach and esophagus have been evaluated thoroughly. And I truly believe that we should start this training at the GI fellow level and teach them the importance of this. I get criticized by the nurse Endoscopy unit manager why is it that I take too many photos. My answer is always: “Thank you for the compliment”.
13. **Documentation of UGI cancer** screening also needs to be worked on as in those countries where there is a high incidence of such cancers, documentation is poor as it can be seen that it

“depends on the doctors”. In those countries where there is strict regulation (Eg: Japan), a difference in detection of pre- or early cancers has been seen.

14. The **use of quality indicators in UGI cancer screening** is also poor and all over the place when you read the graph. Both the ASGE and ESGE have published very thorough guidelines regarding this topic and I believe this is where the role of National Endoscopy Societies is important as they can regulate this. I find it hard to believe that in countries such as Russia (where there is a high incidence of UGI cancers) the routine use of quality indicators in UGI cancer screening is **rare**. Even in the USA, such use of quality indicators in UGI cancer screening is not regulated and I believe it should be not only by national societies but also by insurance companies/governmental agencies.
15. **Both the duration and Description of examination time in UGI endoscopy** is also not acceptable as it *“depends on the doctor”*. Very often, I review endoscopies for a 2nd opinion in my country and I cannot believe the time that endoscopists spend in examining the mucosa. I believe that this is of utmost importance and the ASGE / ESGE guidelines address this thoroughly. My endoscopy manager complains to me all the time that I take longer than other doctors to do my upper and lower scopes. My answer is always: “Thank you for the compliment”.
16. The **Seattle protocol in Barrett’s esophagus surveillance** has been shown to be helpful in identifying pre- or early cancerous lesions. This also *“depends on the doctors”* that are performing the exam in many parts of the world. *“Strict regulation”* in only a few countries.
17. The **Sydney System and MAPS Guidelines for identification of pre-cancerous lesions in the stomach** is also poorly used. As you can see from the graph. It *“depends on the doctors”* and in some countries it is *“rarely used”*. It is the intestinal type of gastric cancer that develops through a cascade of recognizable precursors (inflammation–metaplasia–dysplasia–carcinoma sequence) that is the of utmost importance here. Identification and surveillance of patients with such precursor lesions may lead to early diagnosis of gastric cancer. This subject has been very nicely and thoroughly reviewed in an ESGE guideline published in 2012 and I think we can all learn from it.
18. As far as **fee for UGI endoscopy**, it is amazing the spread and the fees. As low as \$6 to as high as \$1000. This is unacceptable. After all, if we ask an Endoscopist to spend 20-30 minutes performing and documenting an UGI endoscopy, their time should be well reimbursed. And I think this is where the problem may be, I am not sure. A study is in order maybe!
19. As far as **Quality requirements for UGI endoscopy**, again this is not acceptable. In North America, Europe and many parts of Africa, there are none. Something needs to be done about this. I truly believe this is where the WEO will help. In addition, to national endoscopy societies and governmental agencies.
20. As far as **Endoscopic reprocessing**, in many parts of the world, manual reprocessing is still used. How do we know the quality of the manual reprocessing is adequate? Are there any quality monitoring for these endoscopy units where manual reprocessing is occurring? This is of utmost importance as we have a huge problem in the spread of infection with endoscopy equipments. Both the ESGE and ASGE have published very nice and thorough guidelines on this topic.

In summary Professor Fujishiro, I believe that we have a long way to go. I

I believe that there is ample opportunity here as WEO to intervene and raise awareness. I would like to end my summary by taking a few points from this article that I thought was excellent and this really tells you where we should concentrate on.

The article is:

Optimizing early upper gastrointestinal cancer detection at endoscopy.

Veitch, AM et al. *Nat. Rev. Gastroenterol. Hepatol.* August 2015

In summary the above article emphasizes the following and I will quote:

“In this Perspectives article, we review lessons learnt from Japanese gastroscopy technique, training and screening for risk stratification. We suggest a key performance indicator for upper gastrointestinal endoscopy with a minimum total procedure time of 8 min, and examine how quality assurance concepts in bowel cancer screening in the UK could be applied to upper gastrointestinal endoscopy and improve clinical practice”.

They looked at Indication and access, Training and guidelines, Endoscopic technique, Risk stratification and Quality assurance.

They then proposed an algorithm for the systematic examination of the upper gastrointestinal tract at endoscopy.

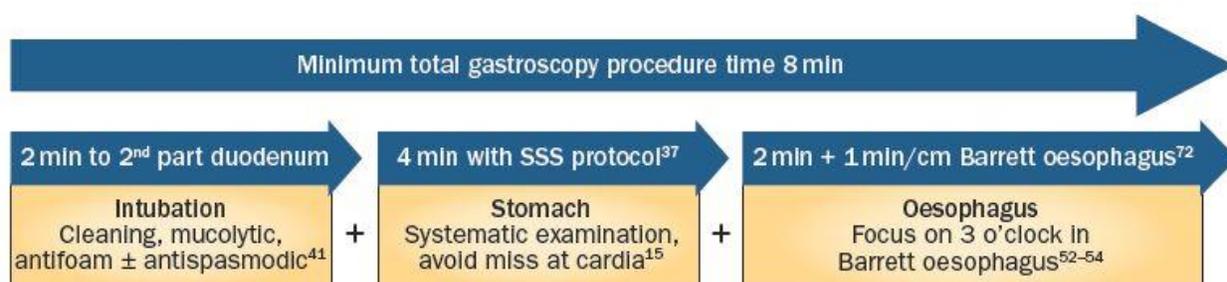


Figure 4 | Algorithm for the systematic examination of the upper gastrointestinal tract at endoscopy. Abbreviation: SSS, systematic screening protocol for the stomach.

We can start by raising awareness about this and the importance of implementing the various guidelines that have been established by the various societies. We can give modules and have an exam at the end for them to pass these modules. This will be part of their licensing for endoscopy.

I have started the process of raising awareness a few years back and have given my Power Point talk about: ***Optimizing early UGI cancer detection at endoscopy*** (please see attached in the email the power point presentation) to many groups and I will continue to do this.

I hope this provided a summary and I am ready to help the (WEO) in any way I can.

Thank you,

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