

Narrow band imaging for upper gastrointestinal disease

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With the increasing concern regarding morbidity and mortality associated with gastrointestinal diseases, the need for an effective and efficient diagnostic method is increasing. The current standard of care is an examination using conventional white light endoscopy, however this may occasionally overlook areas exhibiting a subtle mucosal abnormality including premalignant disease. Narrow band imaging (NBI) is the most prominent method and the most commonly used image enhanced method in the diagnosis of malignant, pre-malignant and chronic inflammatory conditions of the upper gastrointestinal tract. NBI enables us to evaluate detailed characteristics of surface structure and vascular architecture of the superficial mucosa. The new generation image enhanced endoscopy such as Blue laser Imaging or iScan Optical Enhancement follow the same principle. NBI enables us to clearly differentiate normal and abnormal mucosal patterns of the esophagus, stomach and small intestine. It must be stressed that NBI should be used in combination with a good-quality white light endoscopy to acquire maximal benefit. Although the need for further randomized controlled studies is acknowledged, significant research in this field has provided promising results. Further clarification with regards to a simplified classification system is warranted to ensure this modality can be applied in the community. Training and education of gastroenterologists and endoscopists remains a challenge that should be addressed. The technology may prove to be a cost-saving tool that could reduce numbers of biopsy in a significant proportion of patients in the future.