Format for ANSWERING REVIEWERS

Feb 3, 2015

Dear Editor,

Please find enclosed the edited manuscript in Word format (file name: KGH-PNUH_2.doc).

Title: Learning models for endoscopic ultrasonography

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The manuscript has been improved according to the suggestions of reviewers:
1. Format has been updated
2. Revision has been made according to the suggestions of the reviewer
    (1) Answers to Reviewer 1
        This is a well-written review of learning models of EUS.
        1. The comparison of various learning models in Table 1 is the key in this paper. Therefore, the table should be more descriptive. The advantage and disadvantage should be described more clearly.
        ✓ We have revised Table 1 according to Reviewer 1's suggestion.

Table 1 Advantages and disadvantages of learning models for EUS and EUS-FNA

	Advantages	Disadvantages
Computer-based simulator	Easy to use	High startup cost
	Reusable	Not realistic for anatomy
	Feedback and alert function	Not realistic for needle manipulation
	Various EUS tasks possible	
Phantom	Simple, easy to use and transport	Not actual *in vivo* anatomy or conditions
	Minimal preparation	Not realistic for scope manipulation
	Reusable	
	Various EUS models possible	
Ex vivo model	Realistic	Lengthy preparation
	Low cost	No vital tissue characteristics
	Some interventional EUS procedures possible	
Live animal model	Most realistic	High cost
	Closest resemblance to human structure	Ethical problem about animals
	Realistic for scope and needle manipulation	Needs special facilities and equipment
	Interventional EUS procedures possible	

2. The learning model should be different between the basic visualization, EUS-FNA and

advanced interventional EUS. Therefore, discussion in "Which model is more appropriate?" should be described in this context.

✓ We agree with Reviewer 1's suggestion. However, it is impossible for a trainee to learn EUS-FNA without learning EUS, especially linear EUS. Therefore, it is difficult to state the order of learning models separately according to the procedures. Taking into account these situations, we have already indicated this in the following sentences. Please understand our situation.

"EUS Mentor was recommended highest when "doing EUS without FNA", followed by "before starting EUS fellowship", whereas the EUS RK model and phantom was recommended most in "just before starting EUS-FNA". The animal model was recommended throughout the training process."

3. Recently, a new paper by Dhir et al. "Novel ex vivo model for hands-on teaching of and training in EUS-guided biliary drainage: creation of "Mumbai EUS" stereolithography/3D printing bile duct prototype." was published in Gastrointestinal Endoscopy. Please add discussion on this paper.

✓ We have added the following sentences in the Ex Vivo Animal Models section.

Development in three-dimensional printing (3D) technology has enabled bioprinting of numerous human body parts for a wide range of medical conditions. Recently, a 3D printing bile duct prototype model, which was incorporated into pig/goat liver, was developed for training in EUS-guided biliary drainage[26]. Studies with a large number of trainees are required to determine the usefulness of a 3D printing bile duct prototype model; however, further development in EUS training models using 3D printing technology could be used in the near future

(2) Answers to Reviewer 2
1. Authors suggested a learning pyramid for stepwise clinical training using learning models as Figure 8. However, it is hard to agree that all learning models should be used in stepwise fashion for EUS training course. It would be better to omit Figure 8.

✓ We have deleted Figure 8 according to Reviewer 2's suggestion.

2. Authors wrote acknowledgment regarding the images used in this paper. Copyright statement should be written to each figure.

✓ We have added the copyright statement for the 3 Figures provided by 3 doctors. The other figures provided by companies, and so it is thought that there is no need to add the copyright statement.

We sincerely thank Dr. Eike Burmester (Sana Kliniken Luebeck), Dr. Mitsuhiro Kida (Kitasato University East Hospital), Dr. Koji Matsuda (Yokohama City Seibu Hospital), Simbionix Corporation, and Olympus Medical Corporation for providing images of the models.

Figure 6 EUS RK model (permitted by Dr. Koji Matsuda).

3. Typesetting were corrected

4. This manuscript was proofread several times by a native speaker of English, Joo Ha Hwang (a coauthor) who is a Professor at Washington University. As a result, the language evaluation levels suggested by 2 reviewers are Grade A. Therefore, we think that there is no additional need for proofreading.

Thank you again for publishing our manuscript in the *World Journal of Gastroenterology.*

Sincerely yours,

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