

Reply to comments on “*Robotic Assisted Right Middle Lobectomy*”: incision positions, approaches and other problems

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We appreciate the thoughtful and constructive comments by Dr. Waël C. Hanna from Canada (1) and Dr. Abbas E. Abbas from America (2) on our article “*Robotic Assisted Right Middle Lobectomy*”. In this article, we described our experience with robotic assisted right middle lobectomy through a specific case (3). As both Dr. Hanna and Dr. Abbas mentioned in their insightful comments, they preferred to line up all of the robotic ports in the same intercostal space (8th intercostal space) to minimize postoperative pain. In robot-assisted thoracic surgery, the incision positions are flexible and their placement primarily depends on the practice and preference of the surgeon. Many surgeons place the ports in multiple locations in the intercostal space (4–6). Another important factor that we could not ignore is racial difference. Caucasians have wider chests than Chinese; the Chinese chest surface is 93% of the chest surface of Caucasians (7). Thus, if we place four ports in the same intercostal space in a Chinese patient, especially in a female Chinese patient, there may not be adequate distances between the ports, which may lead to interference between the robotic arms. We have attempted various port placements and finally selected the incision locations described in our manuscript as part of our routine procedure. Dr. Hanna stated that they started every robotic case with a posterior mediastinal incision, and this information was useful and we agree with this approach. In fact, we perform many of our robotic assisted

lung surgeries via the posterior approach (8) or via a combined anterior and posterior approach (9).

Dr. Abbas reviewed the development of lung surgery in detail from thoracotomy to video-assisted thoracic surgery and to the recently developed robotic surgery, and he described the advantages of the newest Xi robot, which is not yet available in China. For the detection of small, deep, or sub-solid nodules, Dr. Abbas described a useful navigational technology, and we agree that these kinds of technology are necessary. Because of the frequent use of low-dose computed tomography (CT) and other methods of examination (10), an increasing number of patients with lung cancer have been observed to have small nodules or ground-glass opacities, which are not palpable during surgery and are difficult for pathologists to find. In our center, we always perform pre-operative percutaneous CT-guided Hook Wire localization (11) in these cases. Dr. Abbas also provided us with a set of processes to deal with an emergency. Here, we include a list of instruments that we prepare for open surgery in our center (*Table 1*) (12).

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Table 1 Instruments prepared for open surgery

Routine instruments

Routine thoracic instruments for open pulmonary surgeries

Retractors (auto-retractors for small incisions or crossed retractors)

Handles for shadowless lamp

Measuring cylinder

Special instruments for esophageal surgery

Disposable instruments

Yankauer suction tip

Extension for electric scalpels

Trocars

2/0 Sutures, 0 sutures, 3/0 prolene sutures, 4/0 prolene sutures, 5/0 prolene sutures

Ultrasonic knives

Gauzes, 20 or 25 cm wound dressings

Spherical irrigator

Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

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