Qualification System for Trauma Experts in Japan

Akio Kimura* MD, PhD.

Hiroaki Watanabe** MD, PhD.

Former* and Present** Chairman of the Executive Board

On behalf of members of

the Japanese Association for the Surgery of Trauma

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The Japanese Association for the Surgery of Trauma (JAST)

- JAST is an association primarily for medical doctors. It has been working to help Japanese citizens maintain good health and save their lives, while contributing to the progress and development of traumatology and related fields by collecting, providing, and exchanging information on traumatology.
- It was established in 1986.
- There are about 2,000 members.

Main Activities of JAST

Since its establishment, we have been engaged in a variety of committee activities, as follows:

- hosting **annual academic conferences and general meetings**
- issuing the web-based **Journal of the Japanese Association for the Surgery of Trauma**
- planning and revising **organ injury classifications**
- designing and promoting the Japan Trauma Data Bank (**JTDB**)
- supporting **multi-institutional research**
- editing and revising Japan Advanced Trauma Evaluation and Care (**JATEC**) guidelines and Japan Expert Trauma Evaluation and Care (**JETEC**) guidelines, together with their training courses
- maintaining a **trauma expert certification** system

Development of Trauma Experts & Competency Goals

A JAST trauma expert is defined as a subspecialty-certified physician who takes a leadership role in the management of severe trauma and coordinates a variety of specialists, mainly emergency physicians and several surgical specialists.

Trauma experts must acquire the following 4 competencies:

1) Competency for **decision making**

2) Competency for performing **advanced techniques** necessary for resuscitation

3) Competency for **team coordination**

4) Competency for **total management**.

In addition, acquisition of the latest knowledge and techniques, and maintenance of the 4 competencies are necessary.

254 trauma experts and 108 training facilities have been certified by JAST (2024)

Competencies for Decision Making

- **Knowledge of management strategies from lifesaving to returning to society,** and **the acquisition of practical decision-making ability are required.**
- Understanding of the necessary resuscitation methodologies is essential.
- For example, treatment strategies include judgment on operative and non-operative management, selection of definitive or damage control surgery, and decision on the order of **priority** of interventions.
- To achieve the optimum functional outcome, a strategy to return to society, including rehabilitation from the acute phase, is also

Performances of Advanced Techniques Necessary for Resuscitation

- Regarding advanced techniques necessary for resuscitation, the ability to perform cricothyroidotomy is required for patients needing difficult airway management.
- Regarding techniques for abnormal circulation, the ability to rapidly perform pericardiocentesis and pericardial window to treat cardiac tamponade, the ability to perform resuscitative aortic occlusion with REBOA, and resuscitative thoracotomy are necessary.
- Furthermore, hemostasis must be carried out rapidly as a part of resuscitation. The hemostatic method selected depends on the status of the patient. Damage control strategies are selected for many unstable cases to prevent the lethal triad of trauma. The ability to perform damage control resuscitation is required, including implementation of a massive transfusion protocol and abbreviated surgery. In addition, prevention of hypothermia is important throughout the process.
- For life-threatening traumatic brain injury, appropriate management of the intracranial pressure and body temperature is needed.

Competencies for Team Coordination

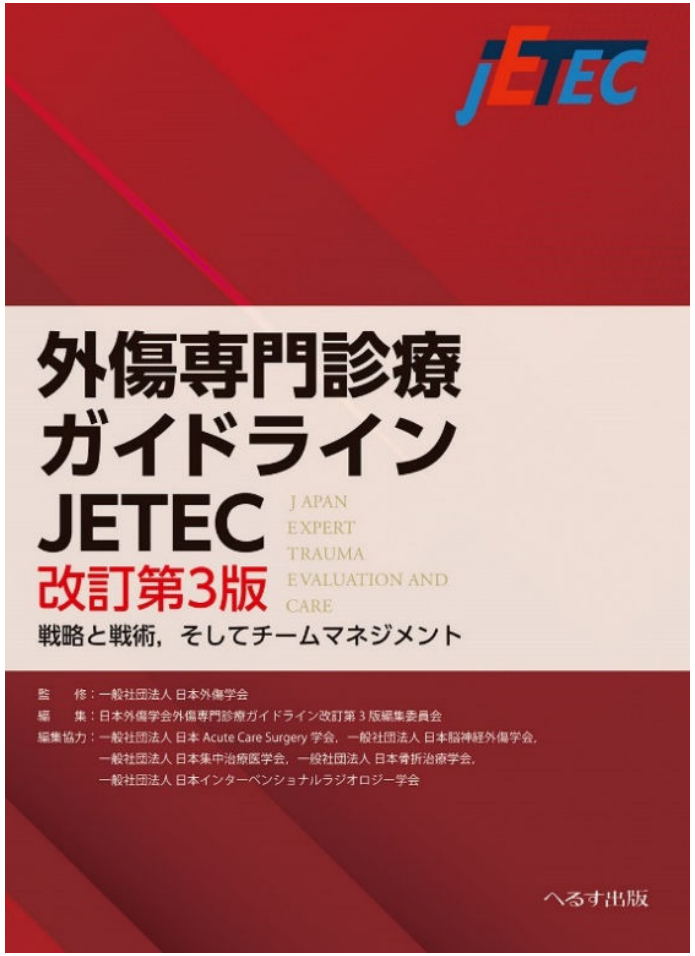
- **Trauma management requires a team approach, and effective teamwork improves the outcome of severe trauma patients.**
- In trauma management, many decisions must be made under uncertain conditions.
- For teamwork building under such conditions, '**clarification of the treatment goal and strategy**', '**team leadership**', and '**clear and effective communication**' are important.
- As a team leader, a trauma expert needs to have team coordination abilities to improve teamwork by establishing a chain of command and assigning members to appropriate positions.

Competencies for Total Management

- The ability to provide total management through cooperation is also an important requirement of trauma experts.
- To ensure the survival of trauma patients and their return to society, **the chain of trauma care** from prehospital care to initial management, definitive treatment, intensive care, and rehabilitation must be seamlessly provided under the leadership of trauma experts.

JETEC – Japan Expert Trauma Evaluation and Care

- Japanese Expert Trauma Clinical Guidelines
- Trauma Care System Theory
- Team-Based Approach
- Trauma Treatment Strategies and Tactics
- Acute-Phase Rehabilitation and Social Reintegration Strategies
- Off-the-Job Training



Components of the Curriculum for JAST Trauma Experts

- **A sufficient number of case experiences with life-threatening trauma**

- **A sufficient number of basic and some advanced skills for life-threatening trauma**

- **Off-the-job training courses**
  - ✓ **JATEC**/ATLS course, **JETEC** course, and AIS coding lectures are essential.
  - ✓ At least one more course from the 10 existing trauma-related courses is required.

Trauma Care Training in Japan

- **JATEC™** (ATLS equivalent)
  - **Training for physicians in in-hospital trauma care**
- **JPTEC™ (Pre-hospital TLC)**
  - **Training for emergency medical technicians in pre-hospital care**
- **JNTEC™**
  - **Training for nurses**
- **JETEC™**
  - **Training for the development of trauma experts**

Concept & Overview of JETEC

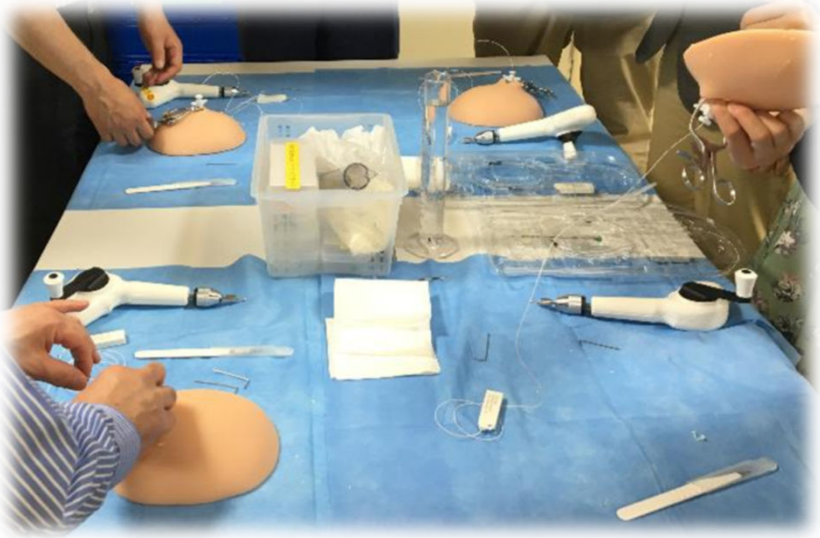
- Japan Expert Trauma Evaluation and Care (**JETEC**) is an original training system developed by JAST for qualified trauma experts and candidates, providing a guideline textbook and training courses.
  - 24 participants in four groups (A, B, C, D) of six trainees
  - Held four times a year
  - The contents are updated regularly

Time Schedule of JETEC course

Time	min	Contents			
9:00 - 9:10	10	Introduction			
9:10 - 9:40	30	Overview of damage control strategy and tactics (lecture & interactive discussion)			
9:40 - 10:30	40	Team approach and management (lecture & interactive discussion)			
	10	Break			
		Small group interactive lectures & Hands-on sessions			
		Head Trauma	Orthopedic trauma	Trauma IVR (REBOA)	Torso trauma
10:40 -11:40	60	A	B	C	D
	5	Small break			
11:45 - 12:45	60	B	C	D	A
	30	Lunch time			
13:15 - 14:15	40	C	D	A	B
	5	Small break			
14:20 -	60	D	A	B	C
	10	Break			
15:30 -16:20	60	Workshop for decision making （Blunt multi-system injury）			
	5	Small break			
16:25 -17:15	60	Workshop for decision making （multi-casualty incident of stab wounds）			
17:15 -17:30	30	Closing ceremony			

Hands-on training in the JETEC course

A



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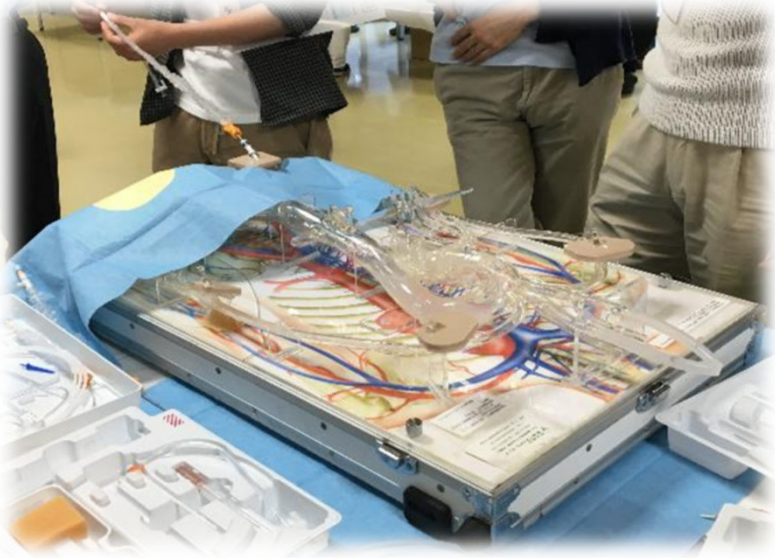

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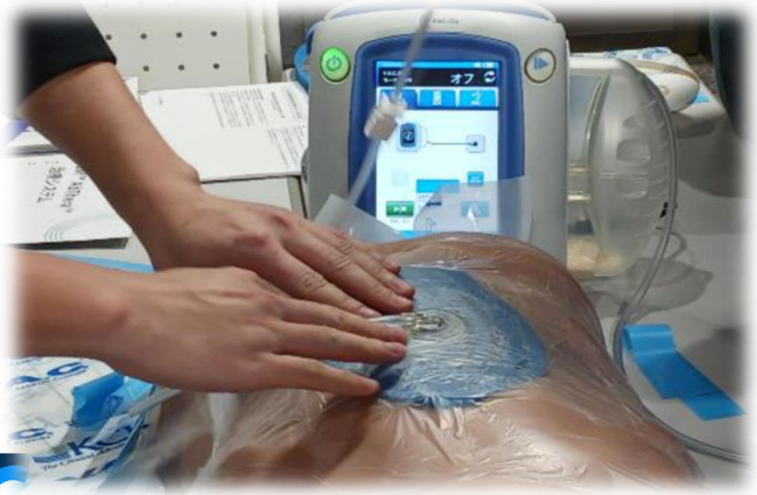

Future Perspective of JAST

- Revision of JETEC through the Development of an Evidence-Based Japanese Trauma Guideline
- Development of a Decision-Making Simulation for Advanced Trauma Treatment Based on JETEC
- Trauma Care Level Improvement Program through the Trauma Facility Accreditation System

Trauma Facility Evaluation System

- Creation of Quality Assessment Indicators (Achievement Indicators)
- Aiming to evaluate trauma care facilities in Japan (current status assessment and improvement)
- Facilities that meet certain standards in quality evaluation shall be reviewed and accredited by the Society

Trauma Facility Evaluation System

Establishment of Target
Indicators for Ideal Trauma Care

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Evaluation and Accreditation

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Reevaluation

Quality Evaluation Indicators – Four Main Categories

- 1. Assessment of Trauma Care System
- 2. Evaluation of Trauma Care Quality in JTDB and Other Databases
- 3. Evaluation of Community Contribution in Trauma Care
- 4. Assessment of Self-Evaluation Practices

- Indicators were developed in consultation with the Ministry of Health, Labour and Welfare
- These are the first items presented by the Society that outline the requirements for trauma care facilities in Japan