

Chapter 24

Methods of Ascertainment of Personal Damage in Japan

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Abstract The chapter illustrates the historical, judicial, and juridical framework of personal injury assessment and compensation in Japan, describing the expert's qualification and competences and detailing the ascertainment methodology and criteria of evaluation utilized for identifying, describing, and estimating any personal injury, its temporary and permanent consequences, and the causal value/link between the event and the injury and between the injury and the impairment/disability.

24.1 Historical, Judicial, and Juridical Overview

The Japanese Research Association of Compensation Medicine was established in 1982 in Japan. It was renamed as the Japanese Society of Compensation Medicine in 1984 and was further renamed as the Japanese Society of Compensation Science in 1997. It was registered under the Section 2 Social Law of the Science Council of Japan in 2000.

The purpose of the Society is to “academically study various problems in relation to compensation for damage from both the medical and juristic aspects in order to contribute to the certification of personal injury as well as to a justification of civil liability.” A fairly substantial number of members of the Society are practitioners, such as professionals of forensic medicine and clinical medicine. This includes emergency medicine as well as healthcare professionals in the area of medicine and attorneys of civil law, insurance law, etc., in the areas of jurisprudence, while many are in teaching and research positions at universities. Both medical and legal professionals have reviewed and discussed the same subject over several years as CS (projects of compensation science) in the Society. It aims, particularly, at scientific contribution in the area of compensation law by

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emphasizing practical experience in jurisprudence and medicine, without being biased only by logic.

The Society is considered as targeting knowledge in the field wider than general civil forensic medicine.

The boundary region of medicine and jurisprudence is targeted in order to handle problems mainly on occurrence of compensation for damage, indemnity, etc., to use medical and scientific knowledge for their interpretation and to achieve appropriate civil liability in personal injury.

In particular, the following have been identified as *areas of compensation problems* that require medical knowledge:

- Dispute on malpractice
- Traffic accident
- Occupational injury and illness
- Pollution
- Chemical injury

Furthermore, the following have been identified as *themes common to each of the above problem areas*:

- Etiology
- Aftereffect
- Feigned illness and whiplash
- Method to prepare clinical charts and medical certificates
- Method to prepare expert opinions as well as expert opinions in writing
- Standardization of criteria for treatment and judgment (preparation of soft laws, such as guidelines, EBM, etc.)

24.2 Legal Aspects of Tort Law Under Civil Laws

The legal basis of compensation science is mainly the tort law in Articles 709–724 of the Civil Code of Japan.

Torts are acts that infringe on the rights of others in the relation to personal life and are evaluated as bearing on prohibitive rules and orders established under the law to protect such rights, where such infringement of rights is within the purpose of protection of prohibitive rules and orders. In this case the victim, whose rights are infringed, is given a method to receive relief from the assailant (the person who commits the act of infringement) in regard to the disadvantage that occurs as a result of infringement of rights [1].

In other words, the role of tort law is fair distribution of damage between the victim and assailant to protect the victim. Fair distribution of damage in this case means fair distribution with society as the standard, rather than individual rights as the standard in the case of individualism.

Tort law under the Civil Code of Japan is characterized as follows, in comparison with various countries:

- Article 709: Under a relatively broad concept of rights, benefits worthy for legal protection (legal benefits) are covered, requiring infringement on such broad rights (concept of rights has a wider definition than Germany).
- Article 709: The fault liability principle (Verschuldensprinzip), i.e., “no fault, no liability,” was adopted to compensate for free actions by a performer (influenced by the tort law on the European Continent).
- Exceptions to (2) include employer liability in Article 715 of the Civil Code and product liability in Article 3 of the Product Liability Act, which justify reasons of compensation for damage based on the principles of hazard liability and compensation liability.

Contractual obligations may or may not be consistent with due diligence under tort law. The cases are consistent when a contractor is required to take reasonable actions according to the effect of a contract such as obligation of means, obligation of diligence, and obligation of best efforts; however, they are inconsistent when the realization of specific results are not guaranteed by contract as contractual obligations, such as obligation of results.

The principle of relief is monetary compensation based on an actual cost principle or actual loss principle, while restoration to the status quo is only allowed in the case of defamation.

Tort law under Articles 709–724 of the Civil Code of Japan can be classified into:

- Torts in general
- Special torts: the burden to prove fault is converted (Articles 714, 715, and 717: occupiers’ liability and Article 718) and no-fault liability (Article 717: owner liability).

Furthermore, related special laws under the Civil Code include the Automobile Accident Compensation Act and the Product Liability Act.

Four conditions need to be met for a tort to come into effect and liability for damage to occur as follows:

- A wrongful act exists. Negligence or deliberation exists in the wrongful act.
- A damage (bodily damage = economic damage + noneconomic damage; property damage) exists.
- Causality exists between the wrongful act and damage (the damage is the result of a wrongful act).
- The scope of damage to be compensated is limited to the case where causality with the wrongful act exists.

Causality under the Civil Code is considered as adequate causality, meaning that the occurrence of such results from a certain act is empirically common. Causality can be explained with its high probability. Highly probable causality means that it can be proven to the extent that it is impossible to interpolate reasonable doubts.

24.3 Extrajudicial Efforts to Resolve Disputes

Here we report specific examples mainly with a Consulting Business such as Counselling Waseda University Legal Clinic. The Legal Clinic is a course for clinical legal education at the Waseda Law School where law school students meet actual clients and learn through cases under the direction and supervision of a teacher qualified as a practicing attorney at the law firm associated with Waseda University. There are two types, including free legal consultation as a course at the Clinic (for education) and request/consultation as a normal law firm for profit. The former offers free legal consultation by a teacher with qualification of a practicing attorney and student of the Waseda Law School as part of courses at the Waseda Law School, established to develop legal professionals. The following include the areas covered:

- Consultation on civil and domestic affairs.
- Consultation for consumers such as consumer damage, consultation on conflicts over an apartment complex, and consultation for foreigners are also available.

Japan Legal Support Center

The Japan Legal Support Center (JLSC) was established as the central organization to provide legal assistance to citizens, based on the goal to “realize a society where legal information and services are accessible anywhere in the country.” The JLSC constitutes one of the three pillars of Japan’s “judicial reform.” The JLSC is a public corporation established according to the frameworks of Incorporated Administrative Agencies under the Comprehensive Legal Support Act. The mission of the JLSC is to promptly and properly implement operations related to comprehensive legal support.

With the aim of creating a society where necessary information and services for legal solutions of disputes on both civil and criminal are universally available throughout Japan, the JLSC facilitates the use of the court and legal system for the legal resolution of disputes and promptly, properly, and effectively manages operations that provide comprehensive assistance for citizens to readily access services offered by attorneys at law, legal professional corporations, and judicial scriveners as well as other related legal experts and specialists (parties or persons who are not attorneys at law or legal professional corporations, but who are authorized to engage in the practice of handling other persons’ legal affairs based on laws). The contents of its business are information services, civil legal aid, services for areas with insufficient legal services, crime victim support, services related to court-appointed defense counsel, and entrusted operations.

Briefing Sessions

Briefing sessions are held and may be publicly transmitted, in some cases, as a method for organizations and agencies as parties at fault, such as hospitals, railway companies, airline companies, etc., to communicate with sincerity with victims who have suffered personal injury and damage and in order to make efforts to shed lights on the facts.

Medical Safety Support Centers

Medical safety support centers have been established in each prefecture as well as cities or special wards where health centers were established around 2003. They have been legislated with revision of the Medical Service Act in 2006 and further established in the secondary medical district as well. There are approximately 400 centers nationwide. Medical safety support centers provide consultation on complaints, inquiries, and questions of patients in regard to medical care and at the same time provide information and advice.

Extrajudicial Agencies and Systems to Resolve Disputes for Each Type of Personal Injury and Damage Mediation of Civil Affairs

It is a method to mediate conciliation so as to attempt resolution based on agreement by the parties.

Arbitration and Mediation System by a Bar Association

Arbitration is a method for both parties to entrust dispute resolution to the judgment of an arbitrator to resolve disputes at the discretion of the arbitrator. Each bar association has been implementing a dispute resolution center. ADR (alternative dispute resolution) has also been implemented in accordance with the Act on Promotion of Use of Alternative Dispute Resolution (ADR Act). They are mediation/intermediation centers certified by the Minister of Justice, and one or more attorneys undertake discussions. Examination lasts several months and ends earlier than lawsuits, and the costs are also low, which are advantageous to the victim. This path is frequently used for medical disputes in particular. Even in the case that the dispute does not ultimately reach resolution, it often concludes in a favorable manner by organizing the points in dispute. For example, medical ADR comprised of three bar associations in Tokyo does not address cases in bitter disputes, where the point in dispute is the existence of consideration, but only handles cases where the amount of damage is alone under dispute and quick resolution is the aim.

Ombudsman

Bridge between an assailant and victim; however its limitation has been pointed out.

Dispute Settlement System within an Assailant Organization

Some kind of neutral settlement committee has been established by each prefectural medical association in regard to dispute on malpractice, while disadvantages include difficulties in obtaining consent from the patient (joining a medical association is optional in Japan).

Obstetric Care Compensation System

To tackle the problem of insufficiency in the number of obstetricians and ensure a system that provides basic obstetric care, the obstetric care compensation system was established as part of a drive toward environmental maintenance so as to ensure proper obstetric care. There are three objectives, as follows. Financial burdens due to children with severe brain paralysis, occurring in relation to childbirth, and borne by their families, are promptly compensated. Causes of onset of brain paralysis are

analyzed to provide information to serve as prevention of similar cases. Attempts are made for dispute prevention, early resolution, and quality improvement of obstetric care based on the above.

The Japan Council for Quality Health Care, being the organization in charge of this system, handles the enrolment childbirth facilities in the system, the insurance subscription, the collection of premiums, the certification of eligible compensation, the long-term payment of compensation money (insurance claim procedure), the cause analysis and recurrence prevention, etc. Childbirth facilities enrolled in this system promise compensation for all childbirths they manage after the beginning date of compensation. Childbirth facilities also report the number of childbirths they handle to the management organization and pay the relevant premiums. When eligible compensation is certified by the managing organization, the insurance company pays the insurance to the guardian of the child in the form of monetary compensation. This is a system that childbirth facilities enroll in, and premiums for compensation are paid by childbirth facilities.

Compensation is paid in the case that all of the following standards are met. Applicable standards are as follows, to be claimed when the child reaches 5 years of age.

If the birth weight is 1400 g or more and the gestational age is 32 weeks or longer, or the gestational age is 28 weeks or longer, then (1) or (2) in the following is relevant.

- Metabolic acidosis (acidemia) is recognized in umbilical arterial blood due to sustenance of a hypoxic condition (pH value is <7.1).
- A hypoxic condition is caused due to placental abruption, cord prolapse, uterus rupture, eclampsia, fetal-maternal transfusion syndrome, bleeding from placenta previa, sudden onset of twin-to-twin transfusion syndrome, etc., that subsequently accompany one of the following findings from (i) to (chi):
 - (i) Idiopathic and persistent bradycardia.
 - (ro) Late deceleration that appears in 50 % or more of contraction.
 - (ha) Variable deceleration that appears in 50 % or more of contraction.
 - (ni) Loss of heart rate—baseline variability.
 - (ho) Severe bradycardia that accompanies decrease in heart rate—baseline variability.
 - (he) Sinusoidal pattern.
 - (to) 1-min Apgar score is 3 or less.
 - (chi) Blood gas analysis value for a child within one hour after birth (pH value is <7.0).

The following standards are not eligible for compensation:

- Brain paralysis not caused by any one of the following:
 - Innate factors (such as genetic abnormality)
 - Factors during the neonatal period (such as infectious disease after childbirth)

Willful or material negligence of a pregnant woman during pregnancy or childbirth

- Natural disasters including earthquake, eruption, and tsunami as well as emergencies, such as war and riot. Death within 6 months after birth is not eligible for compensation.
- In addition, the standard of severity needs to be available, and brain paralysis equivalent to grades 1 or 2 of the disability level, for physically disabled people, needs to be certified, according to the standard of disability level for severe brain paralysis stipulated by the management organization.

Pharmaceuticals and Medical Devices Agency

Pharmaceuticals and Medical Devices Agency (PMDA) is a Japanese regulatory agency, working together with the Ministry of Health, Labour and Welfare. Its obligation is to protect public health by ensuring safety, efficacy, and quality of pharmaceuticals and medical devices.

It conducts scientific reviews of marketing authorization application of pharmaceuticals and medical devices, monitoring their post-marketing safety. It is also responsible for providing relief compensation for sufferers of adverse drug reaction and infections from pharmaceuticals or biological products.

Following the Reorganization and Rationalization Plan for Special Public Corporations that was approved in a Cabinet meeting in 2001, the PMDA was established and came into service on April 1, 2004, under the Law for the Pharmaceuticals and Medical Devices Agency.

Their contents of services are:

- Drug and medical device reviews
- Post-marketing safety
- Relief services for adverse health effects
- International programs
- Promotion of regulatory science

Although utilized very frequently, difficult problems on the patient's part can remain, including the case where a lawsuit and a claim to the Council progress in parallel, beside the response, to a physician in the case of inappropriate use of drugs.

Business to Report Accident Investigation

A business to investigate medical accidents is organized in regard to medical accidents.

When a medical accident/damage occurs, the patient desires a sincere response and explanation from the medical provider to help the decision-making of the patient him-/herself. Investigations of medical accidents are conducted by the medical accident investigation committee within the medical facility where the accident occurs in the form of joint efforts with a third-party agency, external professional, and patient/family, in principle. A business to collect reports on

medical accidents began in 2004 under the Enforcement Regulation of Medical Service Act, to examine measures to prevent recurrence discussed by the institutional committee in accordance with investigation results of the accident for effective utilization in the future. National medical institutions, university hospitals, advanced treatment hospitals, etc., report accident information to the Council for Quality Health Care within 2 weeks. Factors of accident occurrence, factors relating to the patient, emergency treatment, causes of the accident, the situation of accident verification, improvement measures, etc., are to be reported. A hospital accredited by the Council must report improvement measures within 45 days after the accident.

Other Third-Party Agencies that Will Be Needed in the Future

Two parties have already been suggested as follows in regard to the subject matter:

- Third-party agency that takes care of prompt and simplified procedures for compensation to victims
- Third-party agency that conducts forensic autopsy as requested by a bereaved family or a medical institution upon consent from a bereaved family in relation to medical care-related death and reports autopsy results to both parties, both the patient and medical provider

Regarding the latter, a model project has been implemented by the Ministry of Health, Labour and Welfare as the foundation of such third-party agency, and a model project for research and analysis of death relating to a medical act has been implemented by the Japanese Society of Internal Medicine as the operating body since September, 2005. Their purpose is to enhance the quality and safety of medical care, ensure transparency of medical care through notification of autopsy results, and ensure reliability. An autopsy is conducted in the presence of each coroner of forensic medicine and pathology as well as a clinician. A case is reviewed after autopsy by a local evaluation committee comprised of a clinical specialist, a planning nurse, and a lawyer; and a report of evaluation results is prepared within approximately 6 months after first acceptance. The determination rate of the actual cause of death is reported to be approximately 10%.

24.4 Identification and Description of Medicolegal Expert's Qualifications

As a premise, forensic medicine is defined by the Japanese Society of Legal Medicine as follows.

The purpose of forensic medicine is to contribute to the protection of the basic human rights of individuals, to a safe society, and maintenance of welfare by making scientific and fair medical decisions in regard to legal cases and matters that require medical interpretation and advice.

A member of the Japanese Society of Legal Medicine would state an expert opinion in relation to forensic medicine under this definition. However, a system of clinical forensic medicine has not been established in Japan and a considerable number of members of the Japanese Society of Legal Medicine do not have a medical qualification. Each of them states his/her opinion as a professional, or private clinicians suitable for respective cases state their opinions in some cases. There are also cases where professionals who belong to the National Research Institute of Police Science, the Metropolitan Police Department in Tokyo, or crime laboratories at prefectural police stations in each local government retire and open a laboratory to specialize in expert opinions privately provided for profit.

Systems of medical specialists in the Japanese Society of Legal Medicine include the system to certify doctors of forensic medicine and the examination doctor system of forensic medicine.

These systems began from 2009, and supervising doctors of forensic medicine are certified by accredited doctors of forensic medicine when the Society affirms that they have reached the goals of the Society in terms of acquisition and practice of knowledge, skills, and capacity to train and guide certified doctors of forensic medicine (Article 5 of the regulation on the system for certifying doctors by the Japanese Society of Legal Medicine). There is also a system to certify honorable forensic doctors.

The above includes all systems for professionals in the Japanese Society of Legal Medicine, and there is no training of professionals or issuance of specific qualifications for personal damage in particular or depending on specific extrajudicial or judicial objectives.

On-site visits are accepted, and training is provided at the Medical Examiner's Office (Tokyo, Osaka, and Kobe) as necessary in regard to administrative external examination and administrative autopsy, and training is also provided to staff at a forensic class of a medical school at each university.

24.4.1 Association of Medical and Medicolegal Experts in both Extrajudicial and Judicial Contexts

Involvement by Stating Verbal Opinions

Professional members are court personnel with tenure of 2 years whose task is to explain about general matters with professional knowledge. They are different from experts, in the sense that their opinions do not become part of judicial materials or simplified expert opinions.

In the case of attempting conciliation, the professional member system and professional mediator system are often utilized if medical experts are needed in the attempt to proceed to a process of resolution by agreement.

Professional members can be utilized to listen to explanations based on professional knowledge also in the case of reconciliation.

Professional members were essentially implemented in the system in order to provide medical knowledge for the solid organization of points in dispute, the organization of evidence, and the procedure for investigating evidence in general.

Consent from parties in a lawsuit is also required, in the case of lawsuits involving professional members, for them to ask questions for investigation of evidence and to be involved in conciliation. In addition, a court utilizes professional members who are doctors as general advisors or to help representatives of the patient (victim) with extremely poor professional medical knowledge. There are also cases where the representatives of healthcare providers indicate doubts as to the involvement of professional members who are doctors. It is common for professional members who are doctors to respond by answering questions presented by parties in advance, upon organization of the points in dispute.

If the content stated by a professional member in the judicial system as a judicial material is to be made use of, a literature or statement by a cooperating doctor is newly submitted.

A person registered as a professional member often stands in a courtroom as an expert witness by submitting an expert opinion in writing in the role of an expert in the judicial system or otherwise states verbal opinions as a cooperating doctor for similar or related cases in the extrajudicial system.

In the extrajudicial system, a cooperating doctor verbally states professional knowledge, or a person registered as a professional member often gives verbal opinions as a cooperating doctor for similar or related cases in the extrajudicial system.

Involvement as a Preparer of a Private Opinion in Writing

Both sides, namely, the patient (victim) and medical care provider (assailant), are able to submit private opinions in writing by a medical expert, describing professional medical findings.

Private opinions in writing by doctors can be submitted from the early stage in both cases through extrajudicial system and judicial system, while it is effective to submit them when points in dispute regarding liability and causality are clarified to some extent.

Private opinions in writing are often considered, such as documents prepared by a doctor who provides favorable opinions in relation to a fee-paying party, and it is important to consider to what extent materials, etc., are reviewed. It is possible, in the context of the judicial system, to submit private opinions in writing in parallel to expert opinions in writing. However, supplemental opinions by experts are often attached.

24.4.2 Association of Medical and Medicolegal Experts in Extrajudicial Context

Mediators can be doctors or other medical experts in the case of civil mediation.

24.4.3 Association of Medical and Medicolegal Experts in Judicial Contexts

Professional Lay Judge System

When professional knowledge on medicine is supplemented, a system utilizing professionals such as doctors who participate as legal professionals in lawsuits, in addition to judges, is adopted in Japan, instead of appointing a judge with medical qualifications. A department that specializes in cases relating to medical affairs is established in major district courts, to which professionals such as doctors are assigned [2].

Involvement as an Expert

It is considered possible to maintain neutrality of experts in the procedure of expert opinions conducted by a court (Articles 214, 216, and 201-1 of the Code of Civil Procedure). A court stipulates matters for expert opinions (Regulation 129 of the Code of Civil Procedure). An expert opinion is only one of the methods of evidence, and evaluation or adoption of the results of an expert opinion is under free evaluation of evidence by a court [3].

Questioning of an expert currently begins with a statement of verbal opinions by the expert, followed by questioning on the order of the judge, the party requesting the expert opinion, and the other party. The content of questions is limited to clarification of the expert's opinion and confirmation of the grounds only (Regulation 132-4-1 of the Code of Civil Procedure).

Pool of Experts in the Medical Malpractice Litigation Committee

The medical malpractice litigation committee (comprised of doctors and legal professionals) was organized within the Supreme Court in 2001, and candidates of appropriate experts have been recommended by each academic society. Furthermore, an extensive network has been incorporated between the Supreme Court and District Court in order to recommend experts.

Method of Expert Opinions

In the past, an expert opinion was limited to one expert only, and multiple experts were selected only when revising expert opinions.

There is currently a method to select multiple experts from the beginning and order an expert opinion from each of them as well as a method for multiple experts to verbally present expert opinions in a roundtable courtroom.

Even when multiple experts are simultaneously selected in the case of (a), expert opinions can be verbal or in writing.

24.5 Ascertainment Methodology

A medicolegal system of clinical forensic medicine to evaluate personal injury and damage has not been established in Japan. People who are engaged in forensic medicine individually come to ascertainment through their own examination activities as police surgeons or medical examiners, or in the practice of four types of forensic autopsy, including administrative autopsy, forensic consent autopsy, new law autopsy, and judicial autopsy.

Clinical forensic medicine in Japan has usually been handled by police surgeons as well as clinicians requested by the police. The former normally execute a contract with the police to manage people in the custody of police which is also utilized for examination. Although the ascertainment methodology used by clinicians is not always reflected in the calculation of compensation for damage or indemnity in the case of civil lawsuits, it is internationally used, including one of the examples below. Other than protocols commonly used by coroners and clinicians or routine methods to obtain general findings, those which are deeply related to personal injury and damage and are likely to be reflected in compensation for damage, as well as in indemnity and security in the future, are particularly noted.

24.5.1 *International Classification of Functioning, Disability, and Health*

The “International Classification of Functioning, Disability, and Health” (ICF) was adopted as a revision of ICIDH at the 54th WHO general meeting in 2001 when the existing classification of ICD with etiology → pathology → manifestation (disease) was considered as insufficient and the need to analyze manifestation → impairment → disability → handicap was indicated [4]. With the ICF, positive aspects of disability are emphasized and understood at three levels of “functional and structural impairments,” “activity restrictions,” and “participation restrictions.”

Medical professionals engaging in rehabilitation, such as occupational therapists (OT) and physiological therapists (PT), are not allowed to run independent medical practices in Japan; they therefore practice medical care under the instruction of doctors. Medical accidents in this type of occupation are rare, and ICF used by OT and PT as the index of injury is infrequently reflected in compensation for damage in civil cases of medical accidents in the area involving rehabilitation medicine. ICF as the guidepost of injury is referenced upon creating a treatment menu of

rehabilitation, while many doctors seem to consider that it is not fully effective for direct determination of disability level. In the area of rehabilitation medicine, ICF is considered as a concept that is likely to be linked with social security rather than compensation for damage.

ICF relates to compensation for damage in the area of care welfare, welfare for the disabled, etc., and may be applied when compensation is necessary as a result of providing welfare services. In addition, the disability grade in the event that the Automobile Liability Security Act is applied to disability and residual disability resulting from accidents during transport, as well as the disability grade in physical disability, intellectual disability, and mental disability under the public pension system, is not consistent in Japan. In order to avoid unfair opinions due to such inconsistent disability grades, ICF could be used as a standard scale.

24.5.2 Collection of Concrete Data for Personal Injury

In order to determine damage suffered as a result of a traffic accident or medical error, various types of clinicians are involved in each case, most often to collect clinical data. Usually patients with personal damage are carried to hospitals by ambulances, and it is possible that provision is made in Japan for a medical examination for personal injury ascertainment via special medical certificates for aftereffects of the accident made by clinicians. Here, medicolegal doctors are generally not included among these clinicians.

To issue medical certificates concerning possible aftereffects of the accident, the following medical information is required:

- Name, sex, date of birth, age, address, and occupation of patient
- Date and time of the accident
- Date and time without possibility for improvement of symptoms by any medical treatment
- Period under medical treatment with and without hospitalization and/or attending outpatient clinic
- Name of damage and disease, case, or medical history
- Subjective symptoms
- Aftereffects at each area

Neurological and mental symptoms (objective symptoms and results of medical tests) including neurological findings (perception, reflexes, muscular atrophy, etc.); results of mental tests including intelligence test and psychological test; results of X-ray, CT, and EEG; and disturbance of the eye, ear, and limbs

Disturbance of internal organs of the chest, abdomen, and urogenital area including degree of function disorder and concrete symptoms with biochemical test tables and blood test tables

Disturbance of eyes and eyelids including acuity, visual adjustment function, visual field defects with visual field table, diplopia, eye movement

- (disturbance of eye attention), deficit of eyelid with figures, baldness of eyelashes, disturbance in closing of eyes, and causes of eye symptoms
- Disturbance of ears and auricle with audiogram, including hard of hearing, level of auditory capacity, defect of auricle with figures, and tinnitus
- Disturbance of nose including deficit of nasal cartilage, difficulty of nasal respiration, and deficit or decrease in sense of smell
- Disturbance of chewing and language disorder, including causes and degree
- Poor general condition, including appearance, limbs, face, neck, etc., with figures
- Disturbance of the vertebra including pressure fracture and dislocation with or without vertebrectomy, laminectomy, spinal fusion, and fixation, disturbance of movement of cervical vertebrae and chest/abdominal vertebrae with angles and directions, and disturbance of load function with or without necessity of corset
- Deformation of the body trunk including the clavicle, limbs, face bones, cervical vertebrae, etc.
- Disturbance of limbs and fingers including shortening of lower limbs, causes, sites, deformation of long bones including callus and malunion with X-ray film and sites
- Deficit of limbs and fingers with site description
- Disturbance of joint function including name of joints, kinds of movements, subjective findings, and objective findings
- Outlook in terms of worsening and improvement

As general physical examinations, the following are measured and investigated, but are not decided upon officially and depend on each clinician:

- Range of motion (ROM)
- Length of limbs including spinal malleolar distance (SMD)
- Length of circumference of limbs and comparison between right side and left side
- Manual muscle testing (MMT) with five levels
- Perception examination including two-point discrimination
- Test of reflex including deep tendon reflex, superficial reflex, and pathological reflex

As the locoregional examination, the following are performed, but these are not decided officially and depend on each clinician.

For functional disturbance:

- Range of motion (ROM)
- Manual muscle testing (MMT)
- Brunnstrom recovery stages (BS or BRS)
- Modified Ashworth Scale
- Stroke Impairment Assessment Set (SIAS)
- Visual analogue scale (VAS)
- Ratings of Perceived Exertion (RPE)

For functional restriction:

- Functional Reach (FR)
- Functional Balance Scale (FBS)
- Timed “Up and Go” (TUG) test
- Manual Function Test (MFT)
- Simple Test for Evaluating Hand Function (STEF)
- Maximum walking speed (MWS)
- 6-min walking distance (6MD)
- Physiological Cost Index (PCI)
- Incremental shuttle walking test (ISWT)
- Motor Assessment Scale (MAS)

For activities of daily living (ADL):

- Barthel Index (BI)
- Functional Independence Measure (FIM)
- TMIG Index of Competence
- Instrumental activities of daily living (IADL)

These examinations are structured with visual examination, palpation, image diagnosis, laboratory tests, biopsy, and physiological tests.

24.5.3 Clinical Visit and Flow for Authorization of Classified Degree of Physical Impediment

In the process of compensation of damage, the separate claim is needed before and after the date and time without possibility for the improvement of symptoms by any medical treatment.

After the accident has occurred and before the date and time without possibility for improvement of symptoms by any medical treatment, payment for medical treatments, traffic costs, nursery costs, costs for hospitalization, direct business interruption coverage, and mental compensation for hospitalization and admission to outpatients clinic can be paid. After the date and time without possibility for the improvement of symptoms by any medical treatment, compensation for imputed loss of income, mental compensation for physical impediments, care fee, etc., can be paid. Different claims are needed by claimants (sufferers) in relation to both.

In both processes, clinical visits are required prior to the claim.

Claimants (sufferers) must send the aforementioned medical certificate for physical impediments to an insurance company, which sends said information, including a medical certificate, to the Non-Life Insurance Rating Organization of Japan (nonprofit organization). The Non-Life Insurance Rating Organization of Japan sends the result of investigation to the insurance company, which sends the

claimants the authorized result regarding the classified degree of physical impediment.

Before and after the date and time when no improvement of the symptoms is possible, clinical visits are required. Also in the case that sufferers cannot obtain an authorized result of a classified degree of physical impediment, clinical visits are also needed.

As for the tables of national references, the following exist:

- Table of degree classifications, containing each of the physical impediments with loss rates of working ability
- Abridged time table
- Table of annuity value with Leibniz's rule and new Hoffman's rule
- Cost sheet with Leibniz's rule and new Hoffman's rule
- Wages Census with annual exempt amount

24.5.4 Trials of the Japanese Association for the Surgery of Trauma

The Japanese Association for the Surgery of Trauma is operating for the purpose of “contributing to the progress and development of traumatology and related areas and at the same time to preserving the lives and health of Japanese people, through collection, provision, and exchange of information on traumatology.”

The trauma registry handled by the Association was explained in the above, and other categories include the following. (The Japan Society of Neurotraumatology is operating the databank of head injuries as a similar attempt.)

A. Classification of organ damage

One of the following is described for the site of each organ, in order to describe organ damage. Each site is stipulated depending on the organ.

- Type I: Subcapsular injury
 - (a) Subcapsular hematoma
 - (b) Intraparenchymal hematoma
- Type II: Superficial injury
- Type III: Deep injury
 - (a) Simple deep injury
 - (b) Complex deep injury

B. Classification of head injury

It was developed as a common language in the place of joint treatment for a trauma surgeon in charge of primary care, an emergency doctor, and a neurosurgeon upon visit by emergency patients with head injury. It was prepared

mainly with clinical symptoms and findings from image tests such as CT, x-rays, etc., in the acute stage, based on the Gennarelli classification. Minor cases include hospital admission for observation, and moderate cases include admission followed by follow-up observation under strict control, or a condition to consider a preventive surgical procedure and intracranial pressure monitor. Serious cases include a situation on the premise of intensive treatment, such as a surgical procedure and intracranial pressure monitor. Serious cases are promptly examined by a neurosurgeon. For local brain injury, in this classification, external force affecting a specific site of the cranium becomes the basis of neurologic symptoms, including cerebral contusion, acute extradural hematoma, acute subdural hematoma, and intracerebral hematoma. For diffuse brain injury, primary brain injury and secondary brain injury due to rotating external force or acceleration become the basis of neurologic symptoms, including diffuse brain injury, subarachnoid bleeding, and diffuse brain swelling. Diffuse brain injury is mainly due to primary brain injury.

A thickness of at least 1 cm, at least 20 mL on the tentorium, hematoma with at least 3 cm diameter, broad contusion edema, and loss of basal cistern or perimesencephalic cistern are evaluated from CT findings in order to determine need for surgery.

- Psychic
- Osteoarticular and musculoskeletal
- Specific (local examination of the injured area/areas)
- Additional investigations

Trauma Scores: Prediction of Severity and Prognosis in the Case of Trauma

AIS (Abbreviated Injury Scale)

It is designed in the United States for the purpose of utilization as an extensive database on automobile accidents and was published in 1971. The AIS expresses types of trauma and anatomical severity with codes, which is evaluated in six stages (Fig. 24.1).

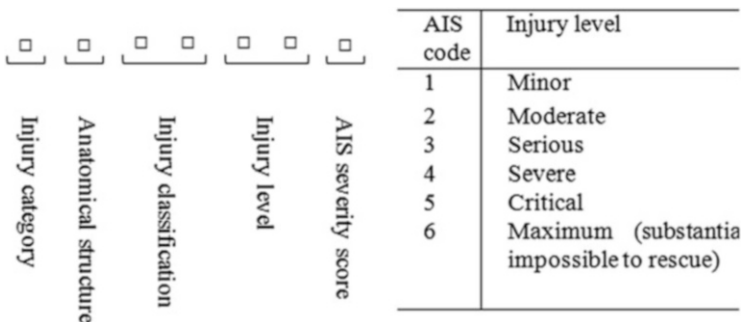


Fig. 24.1 Abbreviated Injury Scale (AIS)

ISS (Injury Severity Score)

Severity of multiple injuries is evaluated on the basis of the AIS, and the injured sites are divided into six categories including the (1) head and neck, (2) face, (3) chest, (4) abdomen and pelvic organ, (5) limbs and pelvis, and (6) body surface. The three highest AIS severity scores for each site are extracted and each of them is squared and added for evaluation. The highest value is 75 points.

- ISS 15 or higher indicates serious or increasing severity, and inpatient treatment and follow-up observation is necessary.
- ISS 25–34 indicates higher than 30 % mortality, and it is reported that mortality exceeds 50 % in the case of ISS > 35.

Only anatomical evaluation is conducted with the ISS, and physiological evaluation such as vital signs is not included; therefore, it cannot be used for severity determination prior to hospitalization. (A patient who is already in a state of shock at the time of the visit cannot be distinguished from a patient whose blood pressure is maintained.)

Physiological Indices

RTS (Revised Trauma Score)

While AIS/ISS are indices based on the anatomical morphology of injury, severity based on physiological indices is evaluated with the RTS. The most critical score is 0 and the best score is 7.84 (Fig. 24.2).

Possibility of Rescue

TRISS (Trauma and Injury Severity Score)

Probability of survival (Ps) is calculated with the TRISS by adding physiological severity, anatomical severity, and age factor. Death with Ps > 0.5 is considered as

Code (score)	Awareness level (GCS)	Systolic blood pressure	Respiratory rate
4	13 – 15	90 or higher	10 – 29
3	9 – 12	76 – 89	30 or higher
2	6 – 8	50 – 75	6 – 9
1	4 – 5	1 – 49	1 – 5
0	3	0	0

RTS = 0.9368 x GCS score + 0.7326 x score of systolic blood pressure + 0.2908 x score of respiratory rate

Fig. 24.2 Revised Trauma Score (RTS)

$$Ps = 1 / (1 + e^{-b})$$

$$b = b_0 + b_1 \times RTS + b_2 \times ISS + b_3 \times \text{age score}$$

	b0 (Constant)	b1 (RTS)	b2 (ISS)	b3 (Age)
Blunt trauma	-0.4499	0.8085	-0.0835	-1.7430
Penetrating trauma	-2.5355	0.9934	-0.0651	-1.1360

Fig. 24.3 Trauma and Injury Severity Score (TRISS)

Activity	Action	Score
Eye opening	Spontaneous	E4
	To speech	3
	To pain	2
	Nil	1
Verbal response	Oriented	V1
	Confused	2
	Inappropriate word	3
	Incomprehensible sound	4
	Nil	5
Best motor response	Obeys order	M6
	Localizes the painful site	5
	Bends the limbs	
	Withdraws	4
	Abnormal flexion	3
	Extends the limbs	2
	Nil	1

Fig. 24.4 Glasgow Coma Scale (GCS)

preventable death, $0.25 \leq P_s \leq 0.5$ is considered as preventable trauma death (PTD), and $P_s < 0.25$ is considered as non-preventable death (Fig. 24.3).

GCS (Glasgow Coma Scale)

Response is categorized into three factors: eye opening, verbal response, and motor response. Each category is scored and the total sum is called the Glasgow Coma Scale. In the event of severity of head injury, 3–8 points are categorized into serious injury, 9–13 points are categorized into moderate injury, and 14–15 points are categorized into mild injury (Fig. 24.4).

24.6 Evaluation Criteria

24.6.1 *Psychic and Somatic State Prior to the Event/Injury*

When a victim claims that only an organic mental disorder existed prior to the event/injury and the court has an impression that the cause is a nonorganic mental disorder, possible certification of nonorganic mental disorder is positively interpreted, which is being recognized by more and more courts. It is difficult to determine causality between the event/injury and nonorganic mental disorder in this case; however, comprehensive determination is considered to be important by investigating the relation between the event/injury and onset as an objective factual relationship, including situation of the accident, confirmation of situation of injury and time of onset of mental symptoms, history prior to the visit to the psychiatric specialist, psychiatric diagnosis, stress factors other than the accident, medical

history, etc. Furthermore, in the case that symptoms existed prior to the event/injury and still remain after the event/injury, both the influence of event/injury to the course of treatment after onset or to persistent symptoms and the influence of factors other than the event/injury are investigated for comprehensive evaluation, to determine causality with persistent symptoms.

The onset time of mental symptoms can be confirmed with the “certification standards for mental disorder from psychological burdens” [5], announced by the Bureau of Labor Standards, Ministry of Health, Labour and Welfare, on December 26, 2011.

Another issue is at what stage symptoms are considered as fixed (healed) to determine the disability grade in the case of nonorganic mental disorder. It is stipulated in the Rosai (2011) Mental Disorder Certification Standards as follows: “If medical rehabilitation was performed, this period is considered as the treatment period. At the point of completion, symptoms are normally considered as fixed (healed). Furthermore, in the case that remission is diagnosed indicating that symptoms of mental disorder do not appear or are stable under the condition that routine work is possible, it is normally considered as healed (fixed symptoms) even though medication is still continuing.”

In addition, the rate/period of losing labor ability is definitively certified in many cases, since nonorganic mental disorder could be healed.

Furthermore, nonorganic mental disorder could be subject to proportional conclusion that offsets reduction in the amount due to predisposition. However, there is room for consideration in the case that involvement or nonorganic mental disorder prior to onset of the event/injury led to occurrence and expansion of the event/injury and there are competing mental factors, such as mental weakness, stress factors, etc., that exceed individual differences. In this case, factors to consider in the case of resolution with proportional offsetting include personality and character, social adequacy, stress resistance, medical history, occurrence of another mental disorder after the accident, psychogenesis, contribution level as the cause of accident, stress factors other than the accident, etc.

Cases where proportional reduction and offsetting is significant are characterized by the following:

- The damage itself is large, but the contribution level as the cause of accident is low.
- Previous mental illness is involved.
- Stress factors after the accident are involved.

The method to certify a specific disability grade includes the following:

1. *Understanding of mental symptoms*

Disabilities remain, such as depressed state, anxious state, low motivation, chronic hallucination and delusion, disorder of memory and intelligent ability, indefinite complaints, impulsivity, etc.

2. *Evaluation criteria on abilities*

The disability level in regard to eight abilities including personal daily activities, positive attitude in work and life, compliance with commuting and

work hours, sustained work, communication with others, interpersonal relationship and cooperativeness, maintenance of personal safety, and risk avoidance as well as handling of difficulty and failure is reviewed with “unable,” “needs frequent advice and assistance,” and “appropriate or able in general.”

Based on the evaluation results, the disability grade is certified with three stages:

- Grade 9: “Frequent advice and assistance” is required for four or more evaluation items.
- Grade 12: “Occasional advice and assistance” is required for four or more evaluation items.
- Grade 14: “Occasional advice and assistance” is required for one or more evaluation items.

24.6.2 Reconstruction of the Event/Injury

The trauma registry by the Japanese Association for the Surgery of Trauma in the above is a kind of reconstruction of the event/injury, while it is exceptionally used as the evidence data in civil lawsuits for parties. Reconstruction of the event/injury for each patient is handled by a police officer, judicial police personnel, coroner, clinician, or crime lab technician who witnesses the scene. It is essential to clarify the mechanism of injury for reconstruction of the event/injury.

The developmental mechanism of injury can be assumed by clarifying the following: action of kinetic energy to the body (weight and speed, active area, etc.), action of force and damage mode (direct damage or indirect damage, original site of load of stretching, negative or positive action of acceleration, action angle, existence of contrecoup occurrence from cavitation and suction distortion, diffusion of internal pressure, etc.), classification of injury (blunt trauma or penetrating trauma; cause and method such as traffic injury, industrial accident, athletic injury, battle injury, etc.; cause of injury such as an accident caused by a second party, self-inflicted accident, unexpected accident, etc.; open injury or closed injury; single injury or multiple injuries; superficial injury, head injury, facial injury, chest injury, abdominal injury, limb/pelvic injury, or spinal injury; in the case of traffic accident, whether in a vehicle, thrown out of the car, injury from the air bag, motorcycle driver’s accident, or pedestrian’s accident; head-on collision, offset collision [= head-on collision where the collided part in front of the vehicle is not 100 %], side-on collision, or rear-end collision [= bump from behind]; injury from fall; height of fall, description of point of fall, first contact point with the ground, and existence of structure during fall; and whether puncture wound, bullet wound, impalement injury, explosion injury, or compression injury), fastening or unfastening the seatbelt, etc.

Refer to the Japan Advanced Trauma Evaluation and Care JATECTM and Japan Prehospital Trauma Evaluation and Care JPTECTM (http://www.jtcr-jatec.org/index_jatec.html) published by the Japanese Association for the Surgery of Trauma in regard to symptoms and treatment (primary survey, secondary survey, curative

treatment, complications to be concerned, and response to preventable trauma death).

24.6.3 Personal Injury and Personal Damage Quantification

Trauma scores as evaluation indices are described in section Ascertainment Methodology, where qualification is also explained. Direct evaluation methods to determine whether the injury is temporary or permanent, or to test separately, were not found in relation to the Japanese Association for the Surgery of Trauma, while ACS COT: Resources for Optimal Care of the Injured Patient 1999 was referenced to indicate cases where transfer to a tertiary emergency medical care facility was determined. This is not an absolute standard, and flexible application is suggested in accordance with medical care capacity of the destination hospital.

Tertiary emergency medical facilities in Japan are equipped with an advanced medical examination system to accept all severe emergency patients (head injury, cardiac infarction, stroke, etc.) who cannot be handled by the secondary emergency system or across multiple clinical departments around the clock, and tertiary emergency medical facilities requested by a prefecture upon approval of the Ministry of Health, Labour and Welfare are called critical care centers. They are required to be equipped with ICU (intensive care unit), CCU (coronary care unit), etc.

Various **evaluation methods** are used in regard to disability in the area of rehabilitation.

- Manual muscle testing (MMT).
- Modified Ashworth Scale: Increased muscle stress is important to predict occurrence of joint contracture in the area of rehabilitation. Contracture can be considered as chronic (permanent) disability.
- Brunnstrom Approach to spastic hemiplegia: Comprehensive evaluation is possible with 12 stages.
- Milani-Comparetti Motor Development Screening Test for evaluation of developmental diagnosis for brain paralysis.
- Glasgow Coma Scale (GCS) and Japan Coma Scale (3-3-9 method) for disturbed consciousness.
- ADL evaluation table, ADL disability evaluation table, revised Barthel Index, and Functional Independence Measure (FIM) by the State University of New York Research Foundation as evaluation methods of daily living.
- Evaluation criteria for the degree of independence in everyday life (degree of the bedridden) for the elderly with disability as a method to evaluate chronic (permanent) disability = activities of daily living evaluation.
- SIAS (Stroke Impairment Assessment Set) for stroke.
- ASIA Impairment Scale (in the international standards booklet for neurological and functional classification of spinal cord injury) for spinal cord injury.

24.6.4 *Causal Value/Link*

The legal process when civil liability is called into question, with regard to personal injury and damage, includes tort structure and default structure. In the case of medical malpractice, violation against general obligations of due diligence of a doctor as a professional who treats personal injury and damage is called into question in terms of tort structure, and breach of the duty of care (Article 644 of the Civil Code) by a doctor as mandatory of a medical care agreement (quasi-engagement agreement) between the doctor and patient is called into question in terms of default structure.

From the viewpoint of bearing the burden to prove violation against the obligations of due diligence (fault), the claimant has the burden of proving the change of rights as tort liability. The burden to prove the change of rights owed by the claimant in this case is to clarify the reasons as the basis of such change of rights, i.e., fault, since payment of damages is requested. As for default liability, a creditor is in the position to expect the debtor's performance and is certainly able to pursue default liability to the debtor; therefore, the fact of default needs to be proven. In the case of default liability, the medical provider is responsible to prove the nonexistence of fault, and the patient (claimant/creditor) has to prove existence of default.

Liability in the case of default means both the obligation of results (impossibility of performance; presumption of default is acceptable if the results of the performance are not visible) and the obligation of means (specific difficulty in provision as the contractual purpose; incomplete performance; incomplete performance needs to be proven). Lawsuits are often structured by both tort and default in recent cases.

The statute of limitations is 3 years after damage/attack occurs or 20 years after the time of tort in the case of the right to seek compensation due to a tort (Article 724 of the Civil Code) and 10 years after the time when the right can be executed (Article 166 Section 1 of the Civil Code) in the case of the right to seek compensation due to default (Article 167 Section 1 of the Civil Code). There are multiple points of time in the case of tort, such as the time of accident occurrence, time to claim for damage, time of definite diagnosis, and time to deliver a sentence. The "time when damage and attack is known" is not the time when a tort is known, but the time when the causality between the attack and damage is known, which is adjusted with both objective factors and subjective factors based on recognition of the victim. In the case of default, the "time when the right can be executed" is the time when there is no legal barrier against execution of the right, and it does not matter if the creditor is aware of it or not.

The main body of civil liability is the contracting party on the side of the medical provider, i.e., the proprietor of the hospital (national/local government, corporation, etc.), and doctors in private practice in the case of medical malpractice if the lawsuit is structured with default, and hospital doctors and medical assistants are considered as assistants of performance. In the case of structuring a lawsuit with a tort, joint tort by a doctor, medical assistant, proprietor of the hospital, etc. (Article 719 of the Civil Code) or employer's liability (Article 715 of the Civil Code) is called into question.

Theory of the Condition Sine Qua Non

In the above, requirements of tort liability occurrence (Article 709 of the Civil Code) include existence of deliberation or negligence, illegality, or infringement of victim's right or legal benefits, resulting in causality or damage. Requirements of default liability occurrence (Article 415 of the Civil Code) include existence of performance not in compliance with the purpose of liability, fault (deliberation or negligence of a debtor or reasons that should be identified as the same in accordance with the doctrine of good faith), causality, and damage occurrence.

Causality can be sufficiently proven by clarifying high probability in both tort liability and default. It is considered as difficult for the patient to prove causality to the extent of clarifying high probability in the case of medical malpractice; therefore, estimation of causality is considered as sufficient by alleviating the level of proof.

But-for Cause

Causality is necessary between the action of the assailant and the right of the victim as well as between the action by the assailant and the damage of the victim (Article 709 of the Civil Code).

Etiology includes three types: factual causality (*sine qua non*), adequate causality, and proportional causality. Generally speaking, factual causality is adopted by the Penal Code, adequate causality is adopted by the theory of judicial precedents in the Civil Code, and proportional causality is adopted in the area of forensic medicine and compensation science in Japan. In the case of adequate causality, however, liability for damage and the scope of compensation for damage are determined on the premise of existence of factual causality.

Sine qua non is the premise for both factual causality and adequate causality; therefore, causality does not occur without a cause, and claim for damage cannot be approved.

From a legal standpoint, claim for damage is possible only with existence of adequate causality.

Regarding a tort by omission, the obligation to act takes precedence in order to evaluate the legal value of the tort by omission and determine the extent of omission of not doing certain acts in the case of breach of the obligation to act. Determination of the obligation to act in the case of prioritizing the obligation to act is consistent with the determination on the obligation to avoid risks in the case of fault (Y. Shiomi: Tort Law I, P. 347, Shinzansha, 2011). Thus, when a fault (obligation to act and its breach) is determined and a certain act is ordered as a standard, omission by the assailant is evaluated according to the breach of the standard.

From the viewpoint of legal professionals, it is often considered that filing an action should be avoided in general, if the cause is unknown. When the cause is unknown in the beginning of an investigation, evidence may be preserved in any case. Reasons of an unknown cause and the degree also become the issue and expert opinions may be requested after filing an action; however, development of the lawsuit may not be expected in many cases.

Equivalence Theory of Causes

Table 24.1 Criteria for the contribution level of accidents with Watanabe method (revised in 1984)

Classification/ sign	Degree of determination	Explanation	Contribution level of the accident (%)
A	Stage 0	Judgment on illness or injury that exists irrelevant to the accident and on illness or injury due to the accident coexists, and it is certain that the former consists of the cause of death (or injury/residual disability)	0
B	Stage 1	Illness is induced by the accident, and death is provoked within a short time after the accident	10
C	Stage 2	Death (or injury/residual disability) where the cause of illness or injury could be the accident is inferior to other causes	20
D	Stage 3	Death (or injury/residual disability) where the main cause of illness or injury could be the accident is inferior to other causes	30
E	Stage 4	Death (or injury/residual disability) where the definite cause of illness or injury could be the accident is inferior to other causes	40
F	Stage 5	Illness or injury that exists irrelevant to the accident competes with illness or injury due to the accident, and death (or injury/residual disability) is possibly not provoked only with one of them	50
	Stage 6	Illness or injury that exists irrelevant to the accident competes with illness or injury due to the accident, and death (or injury/residual disability) is probably provoked with either one of them	60
H	Stage 7	Death (or injury/residual disability) where the cause of illness or injury is probably the accident is superior to other causes	70
I	Stage 8	Death (or injury/residual disability) where the main cause of illness or injury is probably the accident is superior to other causes	80
J	Stage 9	Death (or injury/residual disability) where the definite cause of illness or injury is probably the accident is superior to other causes	90
K	Stage 10	Judgment on illness or injury that exists irrelevant to the accident and on illness or injury due to the accident coexists, and it is certain that the latter consists of the cause of death (or injury/residual disability)	100

Table 24.2 Criteria for the involvement level of external factors

Classification		Explanation	Involvement level of external factors	
			Medical judgment	Determination
Normal pattern	A	It is judged as certain that existing physical/mental disorder or death is based on the direct action of the relevant external factor as well as on its secondary illness or complications. Even if “previous illness” exists, it is not necessary to consider their influence at all	Almost overall	100 %
	B	Although existing physical/mental disorder or death is mainly based on the direct action or the relevant external factor as well as on its secondary illness or complications, it is judged as impossible to completely deny involvement of “previous illness, etc.,” either. In other words, unless “previous illness, etc.,” exists, it is determined that severe disability that currently remains would not occur, that death would not result, or that a long time would have been required before death	Approximately 3/4	75 %
	C	It is judged that existing physical/mental disability or death occurs with the involvement of both the direct action of external factor as well as its secondary illness or complications and “previous illness, etc.,” at the same level	Approximately 1/2	50 %
	D	Although existing physical/mental disorder or death is mainly based on the “previous illness, etc.,” it is judged as impossible to completely deny involvement of the direct action of the relevant external factor as well as either its secondary illness or complications. In other words, unless the direct action of the external factor as well as its secondary illness or complications exists, it is determined that severe disability that	Approximately 1/4	25 %

(continued)

Table 24.2 (continued)

Classification	Explanation	Involvement level of external factors	
		Medical judgment	Determination
	currently remains would not occur, that death would not result, or that a long time would have been required before death		
	E It is judged as certain that existing physical/mental disorders or death are based on the “previous illness, etc.,” The influence of the direct action of the relevant external factor as well as its secondary illness or complications does not need to be considered at all	Almost none	0%
Special pattern	F An external factor occurs due to the existing illness or injury and its secondary illness or complications (previous illness), and it is determined that such an external factor causes the existing physical/mental disorder or death	The cause is previous illness and the relevant external factor is the secondary illness	Separate judgment
	G Existing illness or injury and its secondary illness or complications (previous illness) cause death, followed by accident occurrence	None	0%

When multiple causes compete and lead to one result in the case of proportional causality, the level of influence by each of the multiple causes to the result is considered and quantified depending on the level of contribution. Quantification uses the standards in Tables 24.1 and 24.2. The idea of proportional causality is to bear liability for damage according to the level of contribution of each performer or predisposition, in the case that there are multiple performers or competing predispositions, which relates to the idea of compensation science in Japan as well as the idea of medicolegal experts.

Adequate Causality

Requirements of adequate causality include existence of a cause, result, and causality between the cause and result.

If existence of causality cannot be proven in the cases relating to medical care, the theory of infringing the expectancy right, theory of infringing the legal right to the benefit of life extension, and the theory of losing a treatment opportunity are developed. These three theories are explained in the damage theory later. A theory of affirming claim for damage in certain cases (theory of infringing a certain level of possibility) is observed.

In the case of proportional causality, adequate causality is considered as adequate when the level of contribution is high.

Under the laws of Japan, claim for damage is possible only when adequate causality exists. Existence of factual causality becomes the point in dispute as the premise of adequate causality in the courtroom of medical malpractice. In the case of damage with factual causality, adequate causality is recognized and damage can be claimed only when the circumstances of damage occurrence are successfully predicted in regard to the damage that should normally occur or occurred under special circumstances (Study Group of Medical Malpractice Problems: Good Handling of Disputes on Medical Accidents, P. 304, Study Group of Civil Laws, 2010). Requirements of adequate causality include the following.

To adequately prove causality in a courtroom, it is necessary to specifically claim and prove the existence of the above factual (conditional) causality between the fault/accident and damage as well as the facts to substantiate that adequate causality is within the scope of appropriateness. In the case of medical malpractice, adequate causality is proven by comprehensively determining the existence of inefficiency in the medical act, temporal proximity between the medical act and results, general or statistical probability of similar results occurring from the same type of medical acts, quantity and content of the medical act as well as the occurrence rate of the results, biological relevance between the medical act and vital reaction, peculiarity of the patient, existence and level of possible intervention of other causes, force majeure, etc.

Chronology/Continuity of Event and Permanent Event

When a traffic accident and medical accident occur continuously or when one patient visits a previous doctor and subsequent doctor, causality where multiple causes act chronologically is prioritized by the time of occurrence according to the medical viewpoint in WHO's principle of underlying cause of death, and multiple factors are considered to have continuous causality. Legally speaking, a factor with a higher level of contribution or a factor that occurs temporally close to the event/injury is weighed heavily and at the same time causality among multiple factors is considered as separate. Damages are generally established for each factor that is weighed heavily from a legal standpoint. When multiple factors occur temporally, this kind of difference exists between medical causality and legal causality.

In regard to residual disability, the time or situation when the improving effects of treatment can be no longer expected in relation to a symptom occurring due to a certain cause after proper medical treatment for a certain period is called the fixed symptom, and the symptom of the patient in this situation is a fixed symptom. A fixed symptom is not a medical term but can be interpreted as permanent or semipermanent. In Japan, monetary damages are paid to the damage determined as the fixed symptom which cannot return to the original state (*mutatis mutandis* application of Articles 722 and 417 of the Civil Code). A medical certificate on this fixed symptom is medical but retrospective, and in many cases it is difficult to medically assume the extent of total healing or medical causality between the patient's symptom and event/injury at the time of preparation by a person in charge

of diagnosis. In regard to higher brain dysfunction, after injury, for example, neuropsychological testing and behavior observation such as ICF are required every 6 months; therefore, medical causality seems to be replaced with the existence of adequate causality that can be explained with high probability in this case.

24.6.5 *Personal Damage Quantification*

24.6.5.1 **General Matters**

Compensation is approved when causality between breach of duty and results is recognized in the case of claim for damage under the Civil Code. This principle is equal to claims in the case of torts, such as traffic accidents as well as claims accompanying damage as a result of death and injury due to medical malpractice. The following should be noted as peculiarities in the damage theory relating to medical malpractice litigation.

A. *Fault on the side of medical providers is evident.*

Causality between the doctor's act and fault on the patient's part is not observed (infringement of the benefit of life extension, infringement of the expectancy right, loss of a treatment opportunity).

Causality is considered in the case that high probability existing at the time of death is recognized, and the subsequent extent of probability is handled as the problem for calculation of damage. If a certain level of possibility to avoid the results can be recognized, claim for compensation is approved in regard to infringement of the possibility, even though there is no high probability. The borderline of the above two is not clear, while the amount of consolation money is evidently in the low trend for the latter.

- A doctor neglected the obligation to explain. Even without causality between a doctor's breach of duty to explain and damage, including death payment of compensation is approved on the basis that the opportunity to choose treatment is deprived = infringement of the right of self-determination.
- Autopsy was not recommended. In the case that a doctor does not give an explanation or recommendation on autopsy to clarify the cause of death, payment of compensation is approved on the basis of infringement of the expectancy right to medical care on the part of the patient.

B. *Comparative fault (Articles 418 and 722 of the Civil Code).*

A patient and doctor are in a relationship of quasi-engagement agreement under the Civil Code of Japan. The system for attempting a reduction in the compensation amount due from the assailant, for the purpose of fairness between contractual parties, is called comparative fault.

The victim (patient) did not communicate or insufficiently explained matters that would influence the medical examination by the doctor, did not obey the doctor's instructions, was late for visits, or did not visit on a continuous basis.

Even when comparative fault is not relevant, the compensation amount is also reduced when there are negative causes of action on the patient's part.

In the case that mental damage (falsification of medical charts by a medical institution, inappropriate explanation, etc.) occurs in addition to economic damage, the compensation amount is increased.

Determination of the adjusted amount of consolation money is at the discretion of the judge.

C. *Fetal death.*

Claim for damage is approved only in the form of consolation money claimed by an expectant mother and her husband in the case of fetal death as well. Loss of profits is not approved in the case of fetus.

D. *Compensation for damage.*

Damage occurrence and the amount of damage need to be proven by the patient. However, certification by a court is possible in the case that providing such proof is extremely difficult under Article 248 of the Code of Civil Procedure. Compensation by regular payment of a fixed amount is also approved, instead of compensation by lump-sum payment.

E. *Problems with this type of damage theory.*

The following issues have arisen in relation to the subject matter.

- Damage exists as a fact; however, monetary evaluation as the compensation amount is too low or monetary evaluation significantly varies depending on cases. Variation in monetary evaluation occurs due to the fact that what is included in the factual damage varies depending on cases.
- If the cases under the extrajudicial relief system are included, variation in the amount of monetary compensation by case is even larger.
- Possibility to comprehensively calculate damages in relation to medical accidents in a uniform manner needs to be considered.
- There is room to consider whether or not to include economic damage in legal benefits, such as infringement of the benefit of life extension, infringement of the expectancy right, loss of a treatment opportunity, etc.

24.6.5.2 Economic Damage

Economic damage means the actual cost paid or to be payable by the victim (patient).

Active damage includes medical examination expense, admission/attendance expense, visit/attendance expense, care expense in the future, miscellaneous hospitalization expense, transportation expense for visits, attorney expense, appliance/apparatus expense, modification expense of house and automobile, funeral-related expense, gratuity to a doctor, etc.

Passive damage includes loss of profits, such as damage due to taking leave of absence from work, death, and residual disability.

There are strong aspects as a subject of legal study in regard to active damage as well as to damage due to absence from work as passive damage. Loss of profits and compensation due to death and residual disability as passive damage are based on ICF described in the above and have strong aspects as a subject of academic study.

24.6.5.3 Noneconomic Damage

Noneconomic damage means mental damage (pain) suffered by a victim, and relevant compensation includes consolation money for death, residual disability, and injury and compensation for close relatives.

Criteria for the contribution level of accidents (Table 24.1) and for the involvement level of external factors (Table 24.2) are briefly summarized.

24.6.5.4 Payment Standards of Automobile Liability Insurance

Payment standards of automobile liability insurance are stipulated by damage. Both injury and residual disability can be claimed in the case of injury resulting in residual disability, and both injury and death can be claimed in the case of injury resulting in death.

Damage Due to Injury

Maximum amount: 1,200,000 yen (Table 24.3).

Damage Due to Residual Disability

Maximum amount: in accordance with the grade (Table 24.4).

Loss of Profits in the Case of Residual Disability

A. Calculation formula

Result = Basic income amount \times Loss rate of labor ability \times Leibniz coefficient corresponding to the loss rate of labour ability (Table 24.5)

B. Basic income (Table 24.6)

The Wage Census is a basic statistical survey on wage structure by the Ministry of Health, Labour and Welfare and used as a guideline of annual income by gender, age, and academic history.

Loss rate of labor ability (Table 24.7)

Table 24.3 Damage due to injury

Expense item	Definition/explanation	Payment standard
Treatment expense	First aid, medical examination, hospitalization, medication, surgical procedures, etc.	Necessary and reasonable amount
Care expense	Care during hospitalization A close relative attends a child at age 12 and under	4100 yen per day
	Home care or ambulatory care A close relative attends a child at age 12 and under Need of care is recognized by a doctor	Necessary and reasonable amount; 2050 yen per day in the case of close relative
Transportation expense for visits	Transportation required for visits	Necessary and reasonable amount
Miscellaneous expense	Miscellaneous expense during hospitalization	1100 yen per day of hospitalization
Expense for artificial limbs, etc.	Artificial limbs, dental prosthesis, artificial eyes, hearing aid, crutches, etc.	Actual amount recognized as necessary and reasonable by a doctor
Expense for medical certificates, etc.	Publication of medical certificates, medical fee bills, etc.	Necessary and reasonable amount
Documentation expense	Certificate of traffic accident, seal certificate, etc.	Necessary and reasonable amount
Damage due to taking leave of absence from work	Income decrease due to injury from accident	5700–19,000 yen per day
Consolation money	Indemnity of mental and physical pain	4200 yen per day of hospitalization or visit [to be calculated with the less of actual days of treatment \times 2 or treatment period]

Table 24.4 Damage due to residual disability

Damage	Definition/explanation
Loss of profits	Income decrease to occur over the future as a result of residual disability to the body leading to decreased labor ability
Consolation money for residual disability	Indemnity toward mental and physical pain as a result of traffic accident

Table 24.5 Loss of profits in the case of residual disability

Definitions	
Basic income amount	Annual income that becomes the basis of calculation
Loss rate of labor ability	Proportion of labor ability lost due to residual disability; stipulated by grade
Loss period of labor ability	Period of lost labor ability as a result of residual disability; normally calculated up to age 67 In the case of whiplash, the period is limited to 10 years or less for Grade 12 and 5 years or less for Grade 14 in many cases
Leibniz coefficient	The interest portion (statutory interest: 5%) that arises by receiving the lump-sum amount of compensation including the future portion is deducted using the coefficient

Table 24.6 Basic income

Standard of automobile liability
<i>Employed people</i> Principle: Higher of 1-year income prior to the accident or the average annual income by age based on the Wage Census <ul style="list-style-type: none"> • Younger than age 35 and can prove 1-year income prior to the accident → Higher of the annual income, the average annual income for all ages on the <i>Wage Census</i>, or the annual income by age • Difficult to prove the annual income prior to the accident → In the case of younger than age 35, higher of the average annual income for all ages on the <i>Wage Census</i> or the annual income by age → In the case of age 35 or older, the annual income by age on the <i>Wage Census</i> • Unemployed people within 1 year after resignation → <i>Mutatis mutandis</i> application of the above standard
<i>Babies, children, pupils, students, and homemakers</i> Average annual income for all ages on the <i>Wage Census</i> ; however, in the case that the average annual income by age is lower than the average income for all ages for people age 58 or older, average annual income by age
<i>Other people who have the will and ability to work</i> Average annual income by age on the <i>Wage Census</i> ; limited to the average annual income for all ages

Damage Due to Death

Maximum amount: 30,000,000 yen (Table 24.8).

Loss of Profits in the Case of Death

A. *Calculation formula*

$$\text{Result} = \text{Basic income amount} \times (1 - \text{Living cost of the individual}) \times \text{Leibniz coefficient corresponding to years of possible working duration}$$

Years of possible working duration is the period from the age of death to age 67 (Table 24.9).

B. **Basic income** (Table 24.10)

C. **Standard for deduction of living expense** (Table 24.11)

Table 24.7 Loss rate of labor ability

Grade	Maximum amount of payment	Consolation money	Loss rate of labor ability (%)
Care grade 1	40,000,000 yen	16,000,000 yen	100
Care grade 1	30,000,000 yen	11,630,000 yen	100
Grade 1	30,000,000 yen	11,000,000 yen	100
Grade 2	25,900,000 yen	9,580,000 yen	100
Grade 3	22,190,000 yen	8,290,000 yen	100
Grade 4	18,890,000 yen	7,120,000 yen	92
Grade 5	15,740,000 yen	5,990,000 yen	79
Grade 6	12,960,000 yen	4,980,000 yen	67
Grade 7	10,510,000 yen	4,090,000 yen	56
Grade 8	8,190,000 yen	3,240,000 yen	45
Grade 9	6,160,000 yen	2,450,000 yen	35
Grade 10	4,610,000 yen	1,870,000 yen	27
Grade 11	3,310,000 yen	1,350,000 yen	20
Grade 12	2,240,000 yen	930,000 yen	14
Grade 13	1,390,000 yen	570,000 yen	9
Grade 14	750,000 yen	320,000 yen	5

Table 24.8 Damage due to death

Type of damage	Definition	Amount
Funeral expense	Altar, burial, thank-you letters to attendees, etc.	600,000 yen (in principle)
Loss of profits	Calculated by subtracting the living expense of the individual from the income that could have been acquired unless the victim died	Refer to the following figure
Consolation money	Individual	3,500,000 yen
	Consolation money for the bereaved family (father, mother, spouse, and child of the victim)	1 claimant → 5,500,000 yen 2 claimants → 6,500,000 yen 3 claimants → 7,500,000 yen When the victim has dependents → add 2,000,000 yen

Table 24.9 Damage due to death

Definitions	
Basic income amount	Annual income on the basis of calculation
Deduction of living expense	The living expense that ceases to occur due to death is subtracted from the basic income
Years of possible working duration	Period when income could have been earned from working without death; normally calculated up to age 67
Leibniz coefficient	The interest portion (statutory interest: 5%) that arises by receiving the lump-sum amount of compensation including the future portion is deducted using the coefficient

Table 24.10 Basic income

Standard of automobile liability
<i>Employed people</i> Principle: Higher of 1-year income prior to the accident or the average annual income by age based on the <i>Wage Census</i> at the age of death <ul style="list-style-type: none"> • <i>Younger than age 35 and can prove 1-year income prior to the accident</i> → Higher of the annual income, the average annual income for all ages on the <i>Wage Census</i>, or the annual income by age • <i>Difficult to prove the annual income prior to the accident</i> → In the case of younger than age 35, higher of the average annual income for all ages on the <i>Wage Census</i> or the annual income by age → In the case of age 35 or older, the annual income by age on the <i>Wage Census</i> • <i>Unemployed people within 1 year after resignation</i> → <i>Mutatis mutandis</i> application of the above standard
<i>Babies, children, pupils, students, and homemakers</i> Average annual income for all ages on the <i>Wage Census</i> ; however, in the case that the average annual income by age is lower than the average income for all ages for people age 58 or older, average annual income by age
<i>Recipients of pension</i> Annual income
<i>Other people who has the will and ability to work</i> Average annual income by age on the <i>Wage Census</i> ; limited to the average annual income for all ages

Table 24.11 Standard for deduction of living expense

Standard of automobile liability
<i>The living expense for the individual is subtracted</i>
There is a provider → 35 %
There is no dependent → 50 %

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