

# Core Training Curriculum for Allergy Specialty by the Japanese Society of Allergology

## Two-storied medical specialty systems in Japan

Two-storied medical specialty systems have been proposed since 1981 and finally established under the guidance and supervision by the Japanese Board of Medical Specialties in 2003 .

The first story is composed of the fundamental medical societies such as internal medicine, pediatrics, ENT, dermatology, ophthalmology, surgery, orthopedics and so on. The second story is composed of the societies with subspecialty in allergology, rheumatology, pneumonology, hematology, thoracic surgery, cardiovascular surgery and so forth. Applicants for the allergy specialty board examination must pass the relevant board examination held by the fundamental societies with three to five year training experiences in the specific field. Furthermore, those applicants are required to get at least three-year training in allergology at the educational hospital(s) certified by the Japanese Society of Allergology. Minimum requirement for taking the allergy specialty board examination is therefore six year clinical experience. For instance, a medical doctor must pass the examination and get the certification from the board of internal medicine three years prior to applying for the allergy specialty board examination.

## Purpose of the allergy specialty board

Allergy specialists must have enough knowledge and experiences related to their field and implement them in the fundamental specialties such as internal medicine, pediatrics, ENT, dermatology, and so forth. The specialists are expected to offer adequate treatment for patients suffering from allergic diseases as well as immunologic diseases.

The allergy specialty board controlled by the Japanese Society of Allergology is organized to accomplish this purpose, to provide the training guidelines and to hold the certification examination for the society members.

## Allergy specialty board examination

### 1. Qualifications

- Applicants
- are medical doctors who have successfully passed the Japanese national board exam
  - have been a member of the Japanese Society of Allergology for five years or longer
  - must submit the following documents:
    - \*a list of 40 allergic patients
    - \*admission tickets for the Japanese Society of Allergology meetings
    - \*copies of published papers relating to the fields of allergy and immunology

\*at least three-year training in allergology at the educational hospital(s) certified by the Japanese Society of Allergology.

## 2. Board examination

The allergy specialty board written examination is held once a year. All applicants must show the defined level of knowledge in the fields of basic and clinical allergy as well as immunology and have enough clinical experiences in the both fields.

The details described in the core training curriculum are evaluated in the exam.

## 3. The core training curriculum

### Recommendations for Allergy Specialists in JSA

A : First-Level Knowledge

This level includes recommendations for the knowledge and skills in allergy required for general practitioners, internists, and pediatricians.

B : Primary-Level Knowledge

To have the knowledge in allergy required for general practitioners, internists, and pediatricians.

| General Knowledge   | Internal Medicine | Pediatrics | Otorhino-laryngology | Derma-tology | Ophthal-mology |
|---|-------------------|------------|----------------------|--------------|----------------|
| <b>I .Allergic reactions</b>  |                   |            |                      |              |                |
| 1. Gell and Coombs classified hypersensitivity reactions                  | A                 | A          | A                    | A            | A              |
| 2. Allergen   |                   |            |                      |              |                |
| 1) inhaled allergens  | A                 | A          | A                    | A            | A              |
| 2) food allergens   | A                 | A          | A                    | A            | A              |
| 3) contact allergens  | A                 | A          | A                    | A            | A              |
| 4) drug allergens   | A                 | A          | A                    | A            | A              |
| 5) insect allergens   | A                 | A          | A                    | A            | A              |
| 6) vaccine, gelatin   | A                 | A          | A                    | A            | A              |
| 7) latex, occupational allergens  | A                 | A          | A                    | A            | A              |
| <b>II . Immunology</b>  |                   |            |                      |              |                |
| 1. Immune system  |                   |            |                      |              |                |
| 1) helper T cell subsets (Th1 cells, Th2 cells, Th17 cells) and cytokines | A                 | A          | A                    | A            | A              |
| 2) regulatory T cells   | A                 | A          | A                    | A            | A              |
| 3) B cells and immunoglobulins  | A                 | A          | A                    | A            | A              |
| 4) dendritic cells and antigen presentation                               | A                 | A          | A                    | A            | A              |
| 5) Toll-like receptors  | A                 | A          | A                    | A            | A              |

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| 2. Immunogenetics  |   |   |   |   |   |
| 1) genetic polymorphism (HLA, SNP, etc)                        | A | A | A | A | A |
| 2) gene-environment interaction                                | A | A | A | A | A |
| 3. Transplantation immunity                                    | A | A | A | A | A |
| 4. Immunodeficiency  |   |   |   |   |   |
| 1) humoral immunodeficiency                                    | A | A | A | A | A |
| 2) cellular immunodeficiency, common variable immunodeficiency | A | A | A | A | A |
| <b>III. Allergic inflammation</b>                              |   |   |   |   |   |
| 1. Chemical mediators  | A | A | A | A | A |
| 2. Inflammatory cells  | A | A | A | A | A |
| 3. Cytokines and chemokines                                    | A | A | A | A | A |
| 4. Neuropeptide  | A | A | A | A | A |
| 5. Acute inflammation and chronic inflammation                 | A | A | A | A | A |
| <b>IV. Environmental factor</b>                                |   |   |   |   |   |
| 1. Air pollution   | A | A | A | A | A |
| 2. Indoor air pollution  | A | A | A | A | A |
| <b>V. Infection</b>  |   |   |   |   |   |
| 1. Innate immunity and acquired immunity                       | A | A | A | A | A |
| 2. Immunological test  | A | A | A | A | A |
| 3. Vaccination   | A | A | A | A | A |
| 4. Antiserum, immune globulin therapy                          | A | A | A | A | A |
| 5. Structure and function of related organs                    | A | A | A | A | A |
| 6. Psychosomatic medicine (method of examination and therapy)  | A | A | A | A | A |
| <b>VI. Laboratory examination</b>                              |   |   |   |   |   |
| 1. Allergen skin test  | A | A | A | A | A |
| 2. Allergen-specific IgE                                       | A | A | A | A | A |
| 3. Antigen-specific IgG  | A | A | A | A | A |
| 4. Cellular immunity   | A | A | A | A | A |
| 5. Antigen provocation test                                    | A | A | A | A | A |
| <b>VII. Treatment</b>  |   |   |   |   |   |
| 1. Allergen recognition by history taking                      | A | A | A | A | A |
| 2. Allergen avoidance  | A | A | A | A | A |
| 3. Allergen-specific immunotherapy(applications)               | A | A | A | A | A |
| 4. Pharmacological approach                                    | A | A | A | A | A |

|  |   |   |   |   |   |
|--|---|---|---|---|---|
| 5. side effects of corticosteroids                 | A | A | A | A | A |
| 6. Anti-IgE therapy, cytokine-modulating therapies | A | A | A | A | B |

**A : Third-Level Care**

Third-level specialists are fully trained in allergy, having spent 2 or 3 years in training beyond either internal medicine or pediatric training. Such specialists will be expected to have a full knowledge and complete set of skills relating to all allergic diseases, and the competence to diagnose and treat in all areas.

**B : Second-Level Care**

Recommendations for key competencies at the second level of care apply to organ-based physicians such as those in dermatology, pulmonology, gastroenterology, otorhinolaryngology, and rheumatology, who see allergy patients or act as allergy specialists, receiving referrals of allergy patients for diagnosis and management.

**C : First-Level Care**

This level includes recommendations for the knowledge in allergy required for general practitioners, internists, and pediatricians.

| <b>[Practice levels]</b>  |                          |                   |                            |                    |                      |
|---|--------------------------|-------------------|----------------------------|--------------------|----------------------|
| <b>I For All Allergists</b>   | <b>Internal Medicine</b> | <b>Pediatrics</b> | <b>Otorhinolaryngology</b> | <b>Dermatology</b> | <b>Ophthalmology</b> |
| 1. Anaphylaxis (diagnosis and treatment including self-injection)                                     | A                        | A                 | A                          | A                  | A                    |
| 2. Bronchial asthma (peak expiratory flow-guided management and education of inhaled corticosteroids) | A                        | A                 | B                          | B                  | B                    |
| 3. Pollinosis   | A                        | A                 | A                          | A                  | A                    |
| 4. Oral allergy syndrome  | A                        | A                 | A                          | A                  | A                    |
| 5. Allergic rhinoconjunctivitis   | A                        | A                 | A                          | A                  | A                    |
| 6. Atopic dermatitis  | A                        | A                 | A                          | A                  | A                    |
| 7. Food allergy   | A                        | A                 | A                          | A                  | A                    |
| 8. Drug allergy   | A                        | A                 | A                          | A                  | A                    |
| 9. Urticaria and angioedema   | A                        | A                 | A                          | A                  | A                    |
| 10. Insect allergy  | B                        | B                 | B                          | A                  | B                    |
| 11. Latex allergy and occupational allergy  | B                        | B                 | B                          | A                  | B                    |
| 12. Allergic skin test  |                          |                   |                            |                    |                      |
| 1) prick test and scratch test  | A                        | A                 | A                          | A                  | A                    |
| 2) patch test   | A                        | A                 | A                          | A                  | B                    |
| 13. Education of allergen avoidance   | A                        | A                 | A                          | A                  | A                    |

|   |                              |                   |                                  |                          |                            |
|---|------------------------------|-------------------|----------------------------------|--------------------------|----------------------------|
| 14. Allergen immunotherapy  | A                            | A                 | A                                | A                        | A                          |
| <b>II Internal Medicine</b>   | <b>Internal<br/>Medicine</b> | <b>Pediatrics</b> | <b>Otorhino-<br/>laryngology</b> | <b>Derma-<br/>tology</b> | <b>Ophthal-<br/>mology</b> |
| 1. Various types of asthma  |                              |                   |                                  |                          |                            |
| 1) intractable asthma   | A                            | A                 | C                                | C                        | C                          |
| 2) adolescent asthma  | A                            | A                 | C                                | C                        | C                          |
| 3) elderly asthma   | A                            | C                 | C                                | C                        | C                          |
| 4) occupational asthma  | A                            | C                 | C                                | C                        | C                          |
| 5) asthma in pregnancy  | A                            | C                 | C                                | C                        | C                          |
| 6) aspirin-induced asthma   | A                            | B                 | B                                | C                        | C                          |
| 7) exercise-induced asthma  | A                            | A                 | C                                | C                        | C                          |
| 8) status asthmaticus   | A                            | A                 | C                                | C                        | C                          |
| 9) Cough-variant asthma, chronic cough  | A                            | A                 | B                                | C                        | C                          |
| 2. Various types of respiratory diseases  |                              |                   |                                  |                          |                            |
| 1) allergic bronchopulmonary mycosis  | A                            | C                 | C                                | C                        | C                          |
| 2) interstitial pneumonia   | A                            | B                 | C                                | C                        | C                          |
| 3) acute/chronic eosinophilic pneumonia   | A                            | C                 | C                                | C                        | C                          |
| 3. Hyper eosinophilic syndrome (allergic granuomatosis etc.)                        | A                            | C                 | B                                | B                        | C                          |
| 4. Hyper IgE syndrome   | C                            | C                 | C                                | B                        | C                          |
| 5. Diagnosis for NSAID-intolerance  | B                            | C                 | C                                | B                        | C                          |
| 6. Diagnosis for airway hypersensitivity and reversibility                          | A                            | A                 | C                                | C                        | C                          |
| 7. Bronchial allergen challenge test  | B                            | B                 | C                                | C                        | C                          |
| 8. Induced sputum or bronchial alveolar lavage for assesment of airway inflammation | A                            | B                 | C                                | C                        | C                          |
| 9. Antibody examination for environmental fungi                                     | A                            | C                 | C                                | C                        | C                          |
| <b>III Pediatrics</b>   | <b>Internal<br/>Medicine</b> | <b>Pediatrics</b> | <b>Otorhino-<br/>laryngology</b> | <b>Derma-<br/>tology</b> | <b>Ophthal-<br/>mology</b> |
| 1. Preventive care based on developmental immunology                                | C                            | A                 | B                                | B                        | C                          |
| 2. Infantile atopc dermatitis   | C                            | A                 | C                                | A                        | B                          |
| 3. Infantile asthma   | C                            | A                 | C                                | C                        | C                          |
| 4. Adolescent asthma  | A                            | A                 | C                                | C                        | C                          |
| 5. Exercise-induced asthma  | A                            | A                 | C                                | C                        | C                          |
| 6. Definitive diagnosis of food allergy and   |                              |                   |                                  |                          |                            |

|   |                          |                   |                            |                    |                      |
|---|--------------------------|-------------------|----------------------------|--------------------|----------------------|
| long-term treatment   |                          |                   |                            |                    |                      |
|   | A                        | A                 | B                          | B                  | C                    |
| 7. Food-dependent, exercise-induced anaphylaxis   | A                        | A                 | C                          | A                  | C                    |
| 8. advice about asthma in school and nursery  | B                        | A                 | C                          | C                  | C                    |
| 9. Primary immunodeficient disorders: Diagnosis and treatment                               | C                        | B                 | C                          | C                  | C                    |
| <b>IV. Otorhinolaryngology field</b>  | <b>Internal Medicine</b> | <b>Pediatrics</b> | <b>Otorhinolaryngology</b> | <b>Dermatology</b> | <b>Ophthalmology</b> |
| 1. Differential diagnosis of nasal hypersensitivity   | C                        | C                 | A                          | C                  | B                    |
| 2. Diagnosis and treatment of perennial allergic rhinitis and pollenosis                    | A                        | A                 | A                          | C                  | A                    |
| 3. Chronic persistent cough and foreign body sensation in the throat                        | A                        | C                 | A                          | C                  | C                    |
| 4. Autoimmune disorders ( Wegener's granulomatosis, etc.)                                   | C                        | C                 | A                          | C                  | C                    |
| 5. Multiple chemical sensitivity  | B                        | B                 | B                          | B                  | B                    |
| 6. Metal allergy  | B                        | B                 | B                          | A                  | C                    |
| <b>V.Dermatology</b>  | <b>Internal Medicine</b> | <b>Pediatrics</b> | <b>Otorhinolaryngology</b> | <b>Dermatology</b> | <b>Ophthalmology</b> |
| 1.Allergic Skin Diseases  |                          |                   |                            |                    |                      |
| 1) contact dermatitis   | B                        | A                 | C                          | A                  | C                    |
| 2) intractable atopic dermatitis  | B                        | B                 | C                          | A                  | C                    |
| 3) intractable urticaria/angioedema   | B                        | B                 | C                          | A                  | C                    |
| 4) prurigo  | B                        | C                 | C                          | A                  | C                    |
| 5) drug eruption  | B                        | B                 | C                          | A                  | C                    |
| 2.Pemphigus and autoimmune skin diseases  | C                        | C                 | B                          | A                  | C                    |
| 3.Differential diagnosis on skin diseases from collagen diseases such as SLE at early stage | B                        | C                 | C                          | A                  | C                    |
| 4.Differential diagnosis on skin diseases from hypereosinophilic diseases                   | A                        | B                 | B                          | A                  | C                    |
| 5.Photosensitive dermatoses   | C                        | C                 | C                          | A                  | C                    |
| 6. Metal allergy  | B                        | B                 | B                          | A                  | C                    |
| <b>VI.Ophthalmology</b>   | <b>Internal Medicine</b> | <b>Pediatrics</b> | <b>Otorhinolaryngology</b> | <b>Dermatology</b> | <b>Ophthalmology</b> |

|   |                          |                   |                             |                     |                       |
|---|--------------------------|-------------------|-----------------------------|---------------------|-----------------------|
| 1. Classification and different diagnosis of allergic conjunctival diseases and the other keratoconjunctival diseases | C                        | C                 | C                           | C                   | A                     |
| 2. Different diagnosis of phlyctenular keratoconjunctivitis and the other keratoconjunctival diseases                 | C                        | C                 | C                           | C                   | A                     |
| 3. Vernal keratoconjunctivitis (VKC)  | C                        | C                 | C                           | C                   | A                     |
| 4. Atopic blepharitis   | C                        | C                 | C                           | B                   | A                     |
| 5. Atopic cataract, atopic retinal detachment   | B                        | C                 | C                           | C                   | A                     |
| 6. Compression ophthalmoscopy   | C                        | C                 | C                           | C                   | A                     |
| <b>VII. Collagen vascular diseases and related illnesses</b>  | <b>Internal Medicine</b> | <b>Pediatrics</b> | <b>Otorhino-laryngology</b> | <b>Derma-tology</b> | <b>Ophthal-mology</b> |
| 1. Systemic lupus erythematosus   | B                        | B                 | C                           | A                   | B                     |
| 2. Systemic sclerosis   | B                        | C                 | C                           | A                   | B                     |
| 3. Dermatomyositis, polymyositis  | B                        | B                 | C                           | A                   | B                     |
| 4. Polyarteritis nodosa, necrotizing angiitis   | B                        | C                 | C                           | A                   | B                     |
| 5. Rheumatoid arthritis   | B                        | B                 | C                           | C                   | B                     |
| 6. Rheumatic fever  | C                        | C                 | C                           | C                   | C                     |
| 7. Mixed connective tissue disease  | B                        | C                 | C                           | A                   | B                     |
| 8. Sjögren's syndrome   | B                        | B                 | A                           | A                   | A                     |
| 9. Behçet's syndrome  | B                        | C                 | A                           | A                   | A                     |
| 10. Kawasaki disease  | C                        | A                 | C                           | C                   | B                     |
| <b>VIII. Immunodeficiencies</b>   | <b>Internal Medicine</b> | <b>Pediatrics</b> | <b>Otorhino-laryngology</b> | <b>Derma-tology</b> | <b>Ophthal-mology</b> |
| 1. Primary immunodeficiencies   |                          |                   |                             |                     |                       |
| 1) X-linked agammaglobulinemia  | C                        | B                 | C                           | C                   | C                     |
| 2) common variable immunodeficiency   | C                        | B                 | C                           | C                   | C                     |
| 3) hyper IgM syndrome   | C                        | C                 | C                           | C                   | C                     |
| 4) selective IgA·IgG subclass deficiency  | C                        | B                 | C                           | C                   | C                     |
| 5) thymic hypoplasia (DiGeorge syndrome)  | C                        | C                 | C                           | C                   | C                     |
| 6) ataxia telangiectasia  | C                        | C                 | C                           | C                   | C                     |
| 7) Wiskott-Aldrich syndrome   | C                        | C                 | C                           | C                   | C                     |
| 8) combined immunodeficiency  | C                        | C                 | C                           | C                   | C                     |
| 9) defects of neutrophil function   | C                        | C                 | C                           | C                   | C                     |
| 10) others  | C                        | C                 | C                           | C                   | C                     |
| 2. Secondary immunodeficiencies   | B                        | B                 | C                           | C                   | C                     |
| 3. Acquired immunodeficiency syndrome   | B                        | B                 | C                           | C                   | C                     |

