STUDENT ADMISSION INFORMATION
FOR 2018

DOCTORAL PROGRAM
(GRADUATE SCHOOL OF MEDICINE)
MEDICAL SCIENCES

<table>
<thead>
<tr>
<th>Application period</th>
<th>June 8 (Thu), 2017—June 15 (Thu), 2017</th>
<th>prescreening</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>July 14(Fri), 2017—July 28(Fri), 2017</td>
<td></td>
</tr>
<tr>
<td>Entrance examination</td>
<td>August 24(Thu), 2017</td>
<td></td>
</tr>
<tr>
<td>Announcement of successful applicants</td>
<td>September 7(Thu), 2017</td>
<td></td>
</tr>
<tr>
<td>Registration for admission</td>
<td>April 1, 2018</td>
<td></td>
</tr>
</tbody>
</table>

TOHOKU UNIVERSITY
GRADUATE SCHOOL OF MEDICINE

May 2017
Guidelines for the Doctoral Program in the Graduate School of Medical Sciences at the Tohoku University School of Medicine are as follows (including special admission quota for the working adults program):

1. **Number of Openings for Students:** 130
   (including the Molecular Imaging Course, Tumor Specialists Training Course, and Medical Physics Course, Comprehensive Medicine Course, Network Medical Course)

2. **MAJOR MEDICAL SCIENCES**
   *For offered fields (education and research field), please refer to the Tohoku University Graduate School of Medicine website “Laboratory Introduction 2017”.
   http://www.med.tohoku.ac.jp/english/about/lab-int/index.html

3. **ADMISSION REQUIREMENTS**
   Applicants for the doctoral program (School of Medicine) must satisfy one of the following conditions:
   
   (1) Those who have graduated from a school of medicine, dentistry, pharmacology, or veterinary medicine (including those who are expected to graduate by March 2018).
   
   (2) Those who have completed 18 years of education in a foreign country (including those who are expected to complete such education before March 2018).
   
   (3) Those who are specified by the Ministry of Education, Culture, Sports, Science and Technology (Ordinance of the Ministry of Education, No. 39 of March 8, 1955), such as those who have obtained or are expected to obtain by March 2018 a degree equivalent to a master’s degree, first-stage doctoral degree (2-year program), or professional degree after completing the necessary coursework, and are recognized to have academic abilities equivalent to persons who have graduated from an undergraduate school of medicine, dentistry, pharmacology, or veterinary medicine by this graduate school, or who will obtain such recognition by March 2018.
   
   (4) Those who have completed 18 years of education in a foreign country through correspondence courses provided in Japan by a foreign school of said country or who are expected to complete said courses by March 2018.
   
   (5) Those who have completed or are expected to complete by March 2018 a program in an educational facility in Japan designated separately by the Ministry of Education, Culture, Sports, Science and Technology that provides courses from a foreign university within the school system of a foreign country (This applies solely to those who have completed 18 years of education in said foreign country).
   
   (6) Students who have been conferred a degree equivalent to a bachelor's degree upon completion of a curriculum that has a course term of five years or longer at a university or other school (limited to schools whose overall educational and research activities have been evaluated by the relevant country's government or a government-approved individual, or are designated separately as having met this requirement by the Minister of Education) in a foreign country (including cases in which the student completed the curriculum by taking subjects conducted by said school via distance learning while the student resided in Japan, and cases in which the student has completed a curriculum at an educational facility that is positioned within that country's educational system as per the previous item) (including those who are expected to acquire a Bachelor degree by March 2018).
   
   (7) Those who have been enrolled in a university’s medical, dental, pharmaceutical, or veterinary medicine course for more than four years, those who have completed 16 years of formal education (limited to those that included a medical, dental, pharmaceutical, or veterinary science course; hereafter, the same shall apply in this item), those who have completed 16 years of education in a foreign country through correspondence courses provided in Japan by a foreign school of said country, or those who have completed a program in an educational facility in Japan designated separately by the Ministry of Education, Culture, Sports, Science and Technology that provides courses from a foreign
university within the school education system of a foreign country (this applies solely to those who have completed 16 years of education in said foreign country) and who have been recognized by this graduate school as having acquired the specified credits with outstanding performance by March 2018.

(8) Those who entered another graduate school (school of medicine, dentistry, pharmacology, or veterinary medicine) in compliance with the provisions of Article 102, Paragraph 2 of the Law and who are recognized by this graduate school as having academic ability appropriate for receiving postgraduate education.

(9) Those over 24 years old by March 2018 whom this graduate school has authorized, through individual screening of entrance qualifications, as having abilities that are at least equivalent to those who have graduated from a university.

(EXPLANATORY REMARKS)
Before application, prospective students should first find a prospective supervisor. Find one professor in the field of your interest, contact and then obtain consent of acceptance to the laboratory.

A university mentioned in item (1), (7) and (9) refers to a 6-year university in Japan.

A “master’s degree, doctoral degree (first two years of the doctoral program, i.e., master’s program) or professional degree” mentioned in item (3) above refers to a Japanese university master’s degree, doctoral degree (first two years of the doctoral program, i.e., master’s program) or professional degree.

Applicants who satisfy the conditions for items (6), (7), (8) or (9), must pass the preliminary screening for admissions.

a. Application Period for preliminary screening
   June 8 (Thu), 2017—June 15 (Thu), 2017

b. Those who are interested in taking the preliminary screening should contact the Registrar’s Office Graduate School of Medicine Academic Affairs Section before applying.

* Refer the Tohoku University Graduate School of Medicine website "Concerning the Application for Examination of Qualifications for Admission".

About screening for special admission quota
Candidates can choose the screening for special admission quota when they meet the following requirements.

① Candidates who graduated from a school of medicine or completed the master’s degree, doctoral degree (first 2 years of the doctoral program, i.e., master’s program) or professional degree.

② Candidates who have job experience of 2 years or more after they completed when they apply at the application.

*Candidates who completed the master’s degree, doctoral degree (first 2 years of the doctoral program, i.e., master’s program) or professional degree in this university hope to take the entrance examination of this course next can’t choose the screening for special admission quota.

4. APPLICATION PROCEDURE
The applicants shall prepare the documentation specified in the following Section (3) and submit it within the application period.

They shall sufficiently understand the contents of studies in the “prospective department,” directly contact the prospective professors about their examination applications prior to submission of the application forms, and receive approval.

Because candidates who want to screen for special admission quota need to submit a
“letter of acceptance from a professor who is expected to be in charge of the applicant”, you pay attention, please.

(1) Application period is from July 14 (Fri), 2017 to July 28 (Fri), 2017 (application must reach the office due NLT 17:00(Japanese Standard Time), July 28 (Fri), 2017). Please use the prescribed application envelope and send by registered and express delivery. Some application forms may reach the admission office on July 31 (Mon), 2017 or later. In this case, those postmarked on and before July 28 (Fri), 2017 shall be regarded as valid.

(2) Applications should be addressed to:
Graduate Academic Affairs Section, Academic Affairs Office
Tohoku University Graduate School of Medicine
2-1 Seiryo-machi, Aoba-ku, Sendai
980-8575 Japan
Tel: (+81) (0)22-717-8010

(3) APPLICATION DOCUMENTS

<table>
<thead>
<tr>
<th>DOCUMENTS</th>
<th>PARTICULARS</th>
<th>*Screening: A General, B Special admission quota for working adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLICATION FORM/ RESUME</td>
<td>①A Graduate School prescribed application form, with a recently taken photo affixed. ②See “6 Screening” on “Selection”, and mark the applicable box. ③Contact prospective Professor and obtain consent of acceptance to the laboratory, and tick the box of 「了承を得た」</td>
<td>○ ○</td>
</tr>
<tr>
<td>ASPIRATIONS, MOTIVES, REASONS AND AMBITIONS</td>
<td>On a Graduate School prescribed application form (approximately 500 words long)</td>
<td>○ ○</td>
</tr>
<tr>
<td>EXAM ADMISSION TICKET / PHOTO ID TICKET</td>
<td>Affix a photo to each of the prescribed application form and the photo ID ticket.</td>
<td>○ ○</td>
</tr>
<tr>
<td>ENVELOPE FOR MAILING EXAM ADMISSION TICKET</td>
<td>Enclose the prescribed, return-addressed stamped envelope. The office will send the admission ticket in this envelope so it should clearly bear your name, return address and postal code.</td>
<td>○ ○</td>
</tr>
<tr>
<td>TRANSCRIPT OF ACADEMIC RECORDS</td>
<td>Submit an official transcript of academic records issued by the dean of your graduating university with the appropriate official seal. Those who have a master’s degree, doctoral degree (first two years of the doctoral program, i.e., master’s program) or professional degree are required to submit the transcript of academic records issued by the dean of your graduating university(s) (both undergraduate school and graduate school) with the appropriate official seal(not required for graduates of Tohoku University School of Medicine).</td>
<td>○ ○</td>
</tr>
<tr>
<td>CERTIFICATE OF GRADUATION/DIPLOMA (expected graduation) or CERTIFICATE OF COMPLETION (expected completion)</td>
<td>Graduates of Tohoku University School of Medicine are not required to submit this form.</td>
<td>○ ○</td>
</tr>
<tr>
<td>A COPY OF RESIDENT’S CARD (ONLY STUDENT STUDYING ABROAD)</td>
<td>Candidates who stay in Japan (whose stay is over 90 days) must submit your copy of certificate of alien registration or resident’s card (both front and back) at the application.</td>
<td>○ ○</td>
</tr>
<tr>
<td>EXAMINATION PERMIT</td>
<td>Any arbitrary form signed by their immediate superior at work.</td>
<td>○</td>
</tr>
</tbody>
</table>
LETTER OF ACCEPTANCE FROM A PROFESSOR WHO IS EXPECTED TO BE IN CHARGE OF THE APPLICANT

Use the form prescribed by the Graduate School of Medicine (please download from the website).

APPLICATION FEE, ¥30,000

① The application fee is ¥30,000. Send it by postal remittance (do not fill in the space for the recipient).
② Applicants who expect to complete the master’s degree, doctoral degree (first two years of the doctoral program, i.e., master’s program) or professional degree at Tohoku University in March 2018 are exempt.
③ MEXT Scholarship students are not required to pay the application fee.

FEE PAYMENT SLIP

① Applicant’s name should be entered on the slip (in two places).
② MEXT Scholarship students are not required to submit the fee payment slip.

RETURN ENVELOPE FOR RECEIVING PASS/FAIL NOTICE AND ADMISSION DOCUMENTS

Enclose the prescribed, return-addressed stamped envelope for receiving the pass/fail notice. Also enclose the prescribed, return-addressed envelope for receiving admission procedure documents. The return address should be the address as of around early March 2018 (postage is not necessary).

Note: In addition to the above application-related documents items, please submit a photocopy of a score sheet from the external test of English language (TOEFL, TOEIC, etc.) as a reference if the applicant has such a score (the score does not affect the admission).

TOEFL, TOEFL iBT, TOEFL ITP and TOEIC are registered trademarks of Educational Testing Service (ETS).

5. SCREENING

(1) Applicants those who go on to school will be selected based on a comprehensive review of the results of the entrance examination (written) and interview as well as the information given in the submitted application documents.

(2) Entrance examination date/ time & subjects

<table>
<thead>
<tr>
<th>DATE</th>
<th>METHOD OF SCREENING</th>
<th>TYPE OF TEST</th>
<th>TIME</th>
<th>SUBJECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 24 (Thu), 2017</td>
<td>General screening</td>
<td>Written examination</td>
<td>10:00 to 12:00</td>
<td>Language (English)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13:00 to 14:30</td>
<td>Field of specialty (core and elective subjects)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interview</td>
<td>From 15:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Screening for special admission quota</td>
<td>Written examination</td>
<td>10:00 to 12:00</td>
<td>Language (English)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13:00 to 14:30</td>
<td>Field of specialty (core subject)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interview</td>
<td>From 15:00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Examinees are not allowed to bring their dictionaries (including electronic dictionaries and translation machines) into the classrooms while they are taking the foreign language (English) and special examinations.
(3) One core subject is selected from the subjects in the fields of specialty shown below (subject number from 1-5) as designated in the Student Admission Information “List of Division and Department”.

- Subject with No. for the examination of the field of specialty


(4) The elective subject should be one other than the core subject at the application (no changes are allowed after the application has been submitted).

*Applicants for the special admission quota for the working adults program are exempted from the requirement to take an elective subject.

6. EXAMINATION LOCATION

Tohoku University Graduate School of Medicine
Further information will be provided with the examination admission ticket.

7. ANNOUNCEMENT OF SUCCESSFUL APPLICANTS & PROCEDURE FOR ADMISSION

(1) The identification numbers of the successful applicants will be posted at the entrance lobby of Bldg. No. 1 of the School of Medicine at 10:00 on September 7 (Thu), 2017, and also published on the website. For the results of examination, please check the “Notification” which will be mailed later. We cannot answer the examination result on the phone or via email.

(2) Admission documents will be mailed to successful applicants around early March 2018.

(3) Fees for admission are as follows:
① Admission Fees: ¥282,000 (expected amount)
② First Semester Tuition: ¥267,900 (Annual Tuition: ¥535,800) (expected)

Explanatory Remarks
1. The amounts mentioned above may change if fees are revised at school entry or during the period of the applicant’s enrollment, in which case the new amount is effective at the time of change.
2. Information on exemptions for admission or tuition fees or deferment of fees will be included in the admission procedure document packet that is sent after the announcement of successful applicants.
3. Successful applicants who expect to complete the master’s degree, doctoral degree (first two years of the doctoral program, i.e., master’s program) or professional degree at Tohoku University are exempt from paying the admission fee.

4) Applicants who are employed at the time of admission must submit a letter of consent from their immediate superior at work during the admission procedure.
5) The date of registration for admission is April 1, 2018.

8. OTHER INFORMATION
(1) Handling of personal information
1) Personal information collected during the application procedure is used only for the following purposes: admission-screening procedure, admission procedure as well as, after entrance, scholarship/student welfare and study guidance. Personal information is used for no other purpose.
2) Individual information collected during the admission procedure is strictly handled, based on the “Personal Information Protection Regulations of Tohoku University.” Personal information will not be disclosed or offered to a third party without specific prior written approval.
3) Applicants to the Tohoku University Graduate School of Medicine are understood to be in agreement with the content of the statement above.
(2) Applicants requiring special care during the examination procedures and subsequent schooling should request advice in advance by contacting the Registrar’s Office Graduate School of Medicine Academic Affairs Section. Please submit your “special care” requirement with prescribed form to Academic Affairs Section before June 15, 2017.

May 2017

TOHOKU UNIVERSITY GRADUATE SCHOOL OF MEDICINE
Graduate Academic Affairs Section
2-1 Seiryo-machi, Aoba-ku, Sendai
980-8575 Japan
Tel: (+81) (0)22-717-8010
Email Address: m-daigakuin@grp.tohoku.ac.jp

This application information can be viewed at the following website:

http://www.med.tohoku.ac.jp/english/admissions/admissions/apply/
DESCRIPTION OF GRADUATE SCHOOL PROGRAM

1. OBJECTIVE AND MISSION

The main objective of our Graduate School is to train medical researchers to achieve a high standard of independent research activities. With their acquisition of superior research skills and the necessary fundamental knowledge, they will eventually be able to contribute to the development of medicine and improve the welfare of society.

2. COURSE OF STUDY AND CURRICULUM

To complete a course of study at our graduate school, students must be enrolled for at least four years and attain 30 or more credits in fundamental knowledge lecture courses, training courses in experimental skills and advanced lecture courses. Also, students will receive the necessary research guidance so that they may complete a doctoral dissertation and successfully pass the review and final examination.

However, students who have acquired the necessary credits and been highly evaluated for their achievements by the Graduate Research Review Committee may complete the course in three or more years.

3. RESEARCH SUPERVISION

All students who are admitted into the graduate program will be given research guidance in accordance with the research themes of the departments the students belong to.

Please refer to the Tohoku University Graduate School of Medicine website “Laboratory Introduction 2017”.

http://www.med.tohoku.ac.jp/english/about/lab-int/index.html

(Explanatory Note)

① Research themes indicated with a ※ have not been finalized, so for up-to-date information, please address enquiries to:
   Graduate Academic Affairs Section
   Tohoku University School of Medicine
   2-1 Seiryo-machi, Aoba-ku, Sendai 980-8575
   Tel: (+81) (0)22-717-8010
   Email Address: m-daigakuin@grp.tohoku.ac.jp

② Subjects of examination in specialist fields

③ Note
   A: Candidates who have completed medical internship are preferred.
   B: Only candidates who have completed medical internship are eligible.
   C: Those who have not completed medical internship are eligible.
4. ADMISSION FEE/TUITION EXEMPTIONS

(1) Exemption of Admission Fee
Students recognized as being in severe financial difficulties are eligible to apply for exemption from payment of the admission fee (complete exemption or 50% exemption).

(2) Exemption of Tuition
Students recognized as being in severe financial difficulties are eligible to apply for tuition exemption (complete, 50%, or 1/3 exemption) if they have an excellent academic record.

*Please refer to the Tohoku University website “The application for admission fee waiver” and “The application for tuition fee waiver”.
http://www2.he.tohoku.ac.jp/menjo/
5. INTRODUCTION OF THE PROGRAMS

(1) General Course

(2) Molecular Imaging Course

Molecular imaging examines behaviors of in-vivo biological systems including genes and proteins. It is involved with new boundary/interdisciplinary areas of medicine, pharmaceutical sciences and engineering. Molecular imaging uses positron emission tomography (PET), magnetic resonance imaging (MRI), optical imaging, etc. Molecular imaging allows viewing changes of biological systems on a molecular base and understanding them dynamically and quantitatively. It is anticipated as a measure to diagnose cancer and dementia such as Alzheimer’s disease in a very early stage.

To establish an extremely early diagnosis method based on molecular imaging, there are various technological challenges, e.g., developing equipment and devices in an engineering area, molecular probes in an area of pharmaceutical sciences, and diagnostic modalities in areas of medicine and dentistry.

The course on "molecular imaging" deals with research and education relating to molecular imaging. It targets developing advanced diagnostic modalities by integrating molecular imaging with up-to-date science and technology through not only advanced medicine including radiology, nuclear medicine, pharmacology, oncology, psychiatry, etc., but also through interdisciplinary approaches in the fields of pharmaceutical sciences, engineering and dentistry.

Some programs of this course are conducted in collaboration with the National Institute of Radiological Sciences (NIRS).

<table>
<thead>
<tr>
<th>Domain</th>
<th>Area</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiological Sciences</td>
<td>Pharmacology</td>
<td>Kazuhiko Yanai</td>
</tr>
<tr>
<td>Internal Medicine</td>
<td>Radiation Oncology</td>
<td>Keiichi Jingu</td>
</tr>
<tr>
<td>Neuroscience and Sensory Organs</td>
<td>Psychiatry</td>
<td>Hiroo Matsuoka</td>
</tr>
<tr>
<td>Institute of Development, Aging and Cancer Brain Sciences</td>
<td>Nuclear Medicine and Radiology</td>
<td>Yasuyuki Taki</td>
</tr>
<tr>
<td>Cyclotron and Radioisotope Center</td>
<td>Cyclotron Nuclear Medicine</td>
<td>Manabu Tashiro</td>
</tr>
<tr>
<td>(Collaborative Institute with Tohoku University Graduate School of Medicine)</td>
<td>Molecular Neuroimaging</td>
<td>Tetsuya Suhara</td>
</tr>
</tbody>
</table>

(3) Tumor Training Course

A malignant tumor, cancer, is the most common cause of death in Japan. One half of patients have cancer. Moreover, one third of the patients die from it. Our objective in this course is to train a specialist. The tumor training course is divided into four, i.e., radiation oncology, medical oncology, palliative medicine and surgical oncology. All students study clinical oncology from the general to the particular in lecture classes. They accumulate practical clinical experiences on
radiation oncology, medical oncology and palliative medicine at a training class for a regular period. Further, students write research papers relating to clinical oncology. In addition, they deepen their knowledge about up-to-date cancer therapy through a cancer professional joint seminar of the advanced lecture class.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Area Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Medicine</td>
<td>Radiation Oncology</td>
</tr>
<tr>
<td></td>
<td>Keiichi Jingu</td>
</tr>
<tr>
<td>Institute of Development, Aging</td>
<td>Medical Oncology</td>
</tr>
<tr>
<td>Cancer Control</td>
<td>Chikashi Ishioka</td>
</tr>
<tr>
<td></td>
<td>(Clinical Oncology)</td>
</tr>
<tr>
<td>Institute of Development, Aging</td>
<td>Medical Oncology</td>
</tr>
<tr>
<td>Cancer Control</td>
<td>Chikashi Ishioka</td>
</tr>
<tr>
<td></td>
<td>(Clinical Oncology)</td>
</tr>
<tr>
<td>Gynecologic oncology</td>
<td>Disaster Obstetrics and Gynecology</td>
</tr>
<tr>
<td></td>
<td>Kiyoshi Ito</td>
</tr>
<tr>
<td>Gynecologic oncology</td>
<td>Disaster Obstetrics and Gynecology</td>
</tr>
<tr>
<td></td>
<td>Kiyoshi Ito</td>
</tr>
<tr>
<td>Surgical Oncology</td>
<td>Breast and Endocrine Surgical Oncology</td>
</tr>
<tr>
<td></td>
<td>Takanori Ishida</td>
</tr>
<tr>
<td>Surgery</td>
<td>Palliative Medicine</td>
</tr>
<tr>
<td></td>
<td>Akira Inoue</td>
</tr>
</tbody>
</table>

(4) Medical Physicists Training Course

Advanced large medical machines are used in areas of diagnostic radiology and radiation therapy. Medical physicists are involved in the development of new instrumentation and technology for use in such fields and in the accurate measurement of the radiation output from radiation sources employed in cancer therapy to contribute clinical and scientific advice and resources to solve the numerous and diverse problems that arise continually in many specialized medical areas. Medical physicists are required to get credits in medicine, physics and clinical experience. Graduates of the Department of Radiation Technology in the Health Science Course and those of the Physical or Engineering Faculty are entered into this course. Medical physicists trained in research, education and medical treatment as team members with other medical specialists are trained.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Area Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Medicine</td>
<td>Radiation Oncology</td>
</tr>
<tr>
<td></td>
<td>Keiichi Jingu</td>
</tr>
</tbody>
</table>

(5) Comprehensive Medicine Course

<table>
<thead>
<tr>
<th>Domain</th>
<th>Area Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Medicine</td>
<td>Comprehensive Medicine</td>
</tr>
<tr>
<td></td>
<td>Tadashi Ishii</td>
</tr>
</tbody>
</table>

(6) Network Medicine Course

Teaching based on the New Medical Research Paradigm of Network Medicine Network Medicine is a new medical research paradigm advocated by research groups working at Tohoku University, led by the Graduate School of Medicine. The aim of this novel approach is to develop innovative diagnostic, treatment and
prevention strategies based on signal transduction networks and to promote the
development of teaching and research applicable to different diseases and areas.
Network Medicine has been designated as one of Tohoku University’s Global
Center of Excellence (COE) programs. The Network Medicine Course offers
students the opportunity to be taught in English based on results from this latest
frontier of medical research.