

Social significance of diagnostic pathology as a role of pathology clinic

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Abstract

The proper and effective implementation of a Diagnostic Clinic in Japan has been possible since April 2008, when the Japanese Government began allowing advertising. Pathologists that work in this centre should be able to guide patients throughout the complete arc of a disease, from diagnosis to treatment or ultimately to death. At each step, pathologists should be knowledgeable in the care of the patient and be able to impart information that the patient or the patient's family can fully understand. This new center should be able to run independently in a hospital, but also benefit from the other departments therein, such as a pathology clinic and nursing staff. With proper diagnosis and treatment, the work of the clinic will gain social significance and be seen as a useful tool throughout the course of an illness. Diagnostic Pathology should be the baseline for performing integrated and sophisticated medicine, especially for neoplastic lesions, while the Pathology Clinic can be a focal point where patients can consult pathologists directly. Herein we describe the proper setup and roles for pathologists in a diagnostic clinic.

Keywords: *pathology clinic, pathologists, patients, cancer, explanation, compliance*

1. Introduction

In April 2008, the Diagnostic Pathology was allowed to advertise its name by Japanese Government, as stipulated by the Medical Service Law. Based on the concept of the Medical Service Law and the Medical Practitioners Law, pathologists must immediately write their pathological and cytological diagnoses in the medical record, and provide patients with direct, easy to understand explanations if demanded. (Taniyama, 2006a; 2008a). However, only a few pathologists have started to perform the direct explanation in Japan.

Kiyomi Taniyama, the lead author of this paper (Taniyama, 1997), started a Pathology Clinic in 1996 because he felt strong sympathy for the patients' families keen interest therein not because of the law. Since then, he hopes that many pathologists would become aware of the importance of direct explanation, and would begin a direct dialogue with the patients. In recent years, some Pathology Clinics in Japan have put this dialogue into practice, and we look forward to further developments. In this report we will look at the social significance of providing this service by Diagnostic Pathology and the role of the Pathology Clinic.

2. Work of the diagnostic pathology

The work of Diagnostic Pathology includes pathological diagnosis of biopsied

specimens and surgically removed organs, cytological diagnosis and diagnosis of the autopsy cases, as well as research. Recently, nationwide changes in Japan show a decreased number of autopsies, and an increase in the number of pathological and cytological diagnoses of samples obtained from living patients (Taniyama, 2006b). At general hospitals in Japan, the chief role of pathologists consists of pathological and cytological diagnosis. Even in situations where only one pathologist works at a general hospital (Taniyama, 2006c); a pathologist should consider research as well as diagnostic services to improve their work. Pathologists must perform pathological and cytological diagnoses with the highest quality because they are considered medical practices.

The Medical Service Law in Japan is defined as follows: "Medical doctors, dentists, pharmacists, nurses and other persons in charge of medical care, must provide appropriate explanations when providing medical care, and must try to obtain the understanding of the person who is receiving medical care." Further, the Diagnostic Pathology is required to establish a Pathology Clinic that provides direct explanations on pathological diagnoses (Figure 1).

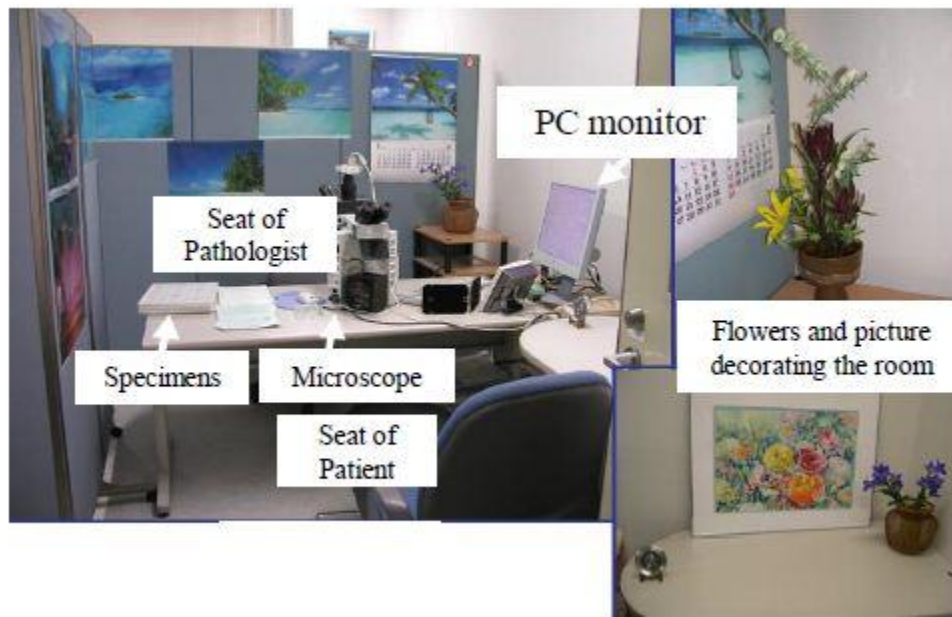


Figure 1 Room for Pathology Clinic at the Kure Medical Centre and Chugoku Cancer Centre. Previous room for pathology diagnosis was rearranged, and converted into a room of Pathology Clinic. The pathologist and the patient sit face to face, and the accompanying family sits beside the patient. Specimens, medical chart paper, and a microscope are placed in front of the pathologist, and an electronic medical chart terminal and PC monitor are installed besides the pathologist. The pathologist enters outpatient information in the electronic medical chart by referring to the electronic chart and medical chart paper, when necessary. Explanations are given to the patient by showing images that are entered into a digital camera installed on the microscope, and by virtual slides that were entered earlier on a PC monitor. The differences between normal and abnormal condition are shown for comparison.

The Medical Practitioners Law proclaims: “Medical doctors who engage in medical examination may not refuse to provide medical examination and treatment when asked for without a justifiable reason.” Therefore when requested, the pathologist may not refuse to provide an explanation of a pathological diagnosis without a justifiable reason in the Pathology Clinic. For general clinicians, there are three justifiable reasons to refuse the medical procedure: i) It is outside their specialty, ii) It was asked for after working hours, iii) the patients do not pay their bills chronically, despite having the financial ability to do so (Taniyama, 2008a). Currently, it is not clear which reasons may allow a Pathology Clinic pathologist to refuse a diagnostic explanation to the patient. However, the latter two points above-mentioned likely fall into this category. On the other hand, pathologists do not actually have an obligation to explain fully their

pathological diagnosis. Both morally and according to the Medical Service Law, all clinicians who perform direct medical intervention on the patient’s body are required to give an appropriate explanation of all procedures. Although the pathological and cytological diagnoses made by pathologists are closely related to the direct medical intervention of the clinicians on the patient’s body, the pathological diagnosis itself is indirect for the patients. Therefore, the explanation can be given better by the intervening clinicians despite the rule that all medical performances be directly explained to the patients by the medical doctor of record. Explanation of pathological and cytological diagnoses by a clinician who is not in charge of the pathological diagnosis to the patient is permitted because it is socially acceptable and results in no actual damage (Taniyama, 2008a). The correct action of the pathologist, who has performed the pathological

and cytological diagnosis, and explains their diagnosis directly to patients, is considered to exceed their responsibility in practice. A practice in which the pathologist gives face-to-face explanations to patients, is clearly a medical intervention, and part of the benefits package of health care insurance (Taniyama, 2008a).

While rare, if the practice of receiving an explanation from the pathologist were to become widely known, and many patients wished such an explanation, then it might become common practice.

3. Provision of the Department of Diagnostic Pathology

The department of diagnostic pathology, a part of the clinical internal medicine group, was established within the department of clinical laboratory at the Kure Medical Centre & Chugoku Cancer Centre (here after known as "the centre"). The centre welcomed the creation of this new department allowing advertisement to commence. The practical role of this new independent department is pathological diagnosis and research even though there is an existing Pathology Clinic. This is a common scenario among other hospitals, however there continues to be confusion over the roles of the diagnostic department and the pathology clinic.

Part of this confusion stems from the fact that the economic advantages of an independent department of diagnostic pathology are not well defined. In 2008 the National Health Insurance points for pathological diagnosis were separated from the previous Part 3 Examination, and integrated into Part 13 Pathological Diagnosis. This and the advertisement of the department of diagnostic pathology are largely recognized as evidence that the practice of pathological diagnosis is socially acknowledged. However, as it remains unclear how to allocate the portion of specimens collection between the pathology department and the general clinical department, as well as how to calculate expenses in the pathology field that are included in the comprehensive medical care fees, the calculation of the real expenses of the department of diagnostic pathology remains difficult. However, as the ambiguity of accounting with respect to health care insurance also exists in the case of the general clinical department, this is not a real hindrance to the provision of a department of diagnostic pathology. The

placement of the department of diagnostic pathology as an independent department must be understood as a natural outcome of the pathology work actually done.

4. The Pathology Clinic

Structurally, the Department of Diagnostic Pathology should be independently positioned within the clinical group, and its medical accounting must be done by the department independently. However, given that few patients visit the Pathology Clinic, to make swift provision of various pathological documents possible it will be necessary to use the existing pathology division as an outpatient location. In this centre, the Pathology Clinic uses the room for routine daily work of pathological and cytological diagnosis against specimens obtained. Furthermore, inside the centre, its location is shown throughout the outpatient wing to enable easy visitation by patients and their families. In addition, the names of pathologists and written explanations of the Pathology Clinic are displayed in the outpatient wing and the general reception, not within the Department of Diagnostic Pathology.

The Pathology Clinic pathologist requires thirty minutes per case for a direct explanation (Taniyama, 2006a). When this department first started, to ensure the effective performance of the administrative procedures and pathological practice, only eight cases per a week were handled. Afterwards, however, due to the varying availability of patients and the irregular working pattern of the pathologists, the schedule was changed to enable outpatient cases to be handled at optional times. More specifically, the in-house clinician makes an appointment via the patient presentation system within the electronic medical chart, and an appointment for a second opinion from outside the hospital is made via an office known as the community health care coordination unit.

All information in the Pathology Clinic is stated in the electronic medical chart, and information on the second opinion is also provided in the electronic medical chart, and a letter, etc., for the referring physician is prepared in accordance with the in-hospital regulations. Paperwork regarding the consultation fee and expenses for the second opinion are handled in the same way as in other departments. Taking the case of a patient with breast cancer as an example, the contents of

the pathologist's explanation will mainly be 1) an explanation of the disease, which focuses on showing the cancer and normal cells comparatively on the monitor; 2) an explanation of the presence or absence of lymph node metastasis; and 3) an assessment of resection margins, etc. After that, patients frequently ask for an assessment of the current medical treatment. At the Pathology Clinic, microscopic findings are always shown on the monitor. However, as some patients and families do not like to see macroscopic pictures of removed organs, it is preferable to explain the contents of the micrographs and the macroscopic pictures beforehand, and to obtain agreement before visiting the Pathology Clinic. Also, it is a technique to start the explanation at the Pathology Clinic, by identifying the patient's name, and by making the patient speak about what they want to know, and what they already know about their pathological condition. The pathologists' explanations may relate to "cancer" or an "unfavourable pathological condition," so it is necessary for pathologists to learn communication techniques such as "SPIKES (Baile, 2000)" or "SHARE (Fujimori, 2007)" to convey bad information. However, the actual conversation is more often within a reasonable scope for medical professionals, and does not create a heavy burden for the pathologist. The Pathology Clinic is a place where pathologists directly explain their own pathological diagnosis, and it is not rare for patients to inquire about areas outside a particular pathologist's specialty, such as medical treatment. If the pathologist is asked something outside of their specialty, they may say frankly that this is outside of their field in pathology or medicine. The Pathology Clinic in general and a specific pathologist should not be rejected because of questions outside of a particular field of study. Useful medical information can still be imparted based on basic knowledge the medical professional possesses; no criticism should be given by patients because of this.

On the other hand, in the case of autopsies the bereaved family wants a correct diagnosis (clarification of the cause of death), a contribution to medical science, and a comprehensible explanation (Taniyama, 2006d). At this centre, when the consent of the bereaved family is obtained for an autopsy, the clinician checks the requests of the bereaved family for the explanation

of the results of the autopsy. An optional meeting is then held, following a request by the bereaved family for an explanation of the diagnosis of the autopsy. There are comparatively few cases (approximately 10%) in which the pathologist is asked directly to give an explanation of the final autopsy diagnosis, regardless of whether there are great differences between the gross pathology report after the autopsy and the final autopsy medical certificate. For the most part, the explanatory meeting is finished within one hour. Officials, nurses, clinicians, risk managers, etc., attend the explanatory meeting, and the time of the pathologist's actual explanation is in the range of 15 to 30 min, and thus no great burden. After the explanatory meeting, the bereaved family often expresses its gratitude to the pathologist who conducted the autopsy, and to the clinician in charge (Taniyama, 2006d, 2006e, 2009a).

5. Characteristics of the Pathology Clinic

At present, the importance of pathological diagnosis has not yet gained ground among patients and their families in Japan. Because of that, and under the condition of the shortening of the hospitalisation period, few people visit the Pathology Clinic by themselves. Until 2008, many of the patients who came to visit the Pathology Clinic were cancer patients. Many of them had accumulated medical knowledge related to their condition (Taniyama, 1998, 2006a, 2008b), and relatively frequently would want to know such things as the grade of breast cancer cells or the efficacy of the present medical treatment method. It has been pointed out that such patients have a high tendency for anxiety (Nishimaki, 2010). However, since 2009, patients who receive advice from a clinician or a psychologist have increased, but the percentage of patients with no specific questions has also increased. Currently the psychological background of these patients is being examined, and this may reflect a keen interest in obtaining information on medical care that has been aroused by various media outlets. The psychologist who is examining the patient before and after the consultation in the Pathology Clinic may have found some increase of fighting spirit scores of patients against their diseases after the consultation. Further, as the duration of hospital stays is being reduced, recent inpatients consult the Pathology Clinic after they are discharged from the hospital.

In addition, the frequency of patients from other hospitals visiting the Pathology Clinic seeking a second opinion on pathological diagnosis is low. A recent example is a patient who was informed by a private practice doctor about the malignant outcome of a digestive tract biopsy, and consulted the Pathology Clinic of this centre voluntarily, in order to verify the authenticity of this analysis. In many such cases, the patient and their family often feel fear and distrust regarding the verification of the pathological diagnosis and the proscribed medical treatment, but the details vary.

The following four points form the basis of the explanation given by the pathologist to patients who visit the Pathology Clinic.

- 1) Explanations are given in accordance with the wishes of patients and their families.
- 2) Explanations are given by showing micrographs shortly after the physician in charge has disclosed the name of the disease.
- 3) Standard time for one meeting is about 30 minutes. It is important to explain what the patient and their family wants to know, not what the pathologist wants to say. Excessive information leads to confusion.
- 4) When being asked for general information about the disease or an evaluation of current medical treatment strategies, a pathological explanation of the condition should be given followed by an explanation based on basic knowledge of the pathologist as a medical professional.

The pathologist must pay attention to the following three points.

1. An information exchange beforehand with the physician in charge, focusing on medical treatment strategy, is essential, and a confidential relationship with the physician in charge is important.
2. Therefore, an ex post facto report on outpatient details addressed to the physician in charge as well as related clinicians is also important.
3. In cases where psychological or psychiatric support is considered necessary, these will be actively introduced.

Furthermore, there are some important points in the Pathology Clinic for the bereaved

family in cases of autopsy. Patients and their families (bereaved families) have various personalities and behavioral traits, so the medical doctor should not handle these cases uniformly without understanding this. Although pathologists are required to have competence to handle these cases appropriately, in the case of complications due to conflict of emotions between patients, their family and the medical care side, there is a limit to the pathologist in charge handling this case alone. In such a case, an intervention by well-qualified people such as risk managers, who know of calm and quiet methods for handling such cases, must be demanded, and the pathologist should not act as a substitute.

6. Anticipated effects

Visit of a hypothetical breast cancer patient to the Pathology Clinic is described in the part below, with the anticipated effects shown in bold. The background of the explanation is described following this text.

The patient enters the room with her daughter. The patient is a woman in her 70s and her daughter is in her 40s.

Patient: Is this the Pathology Clinic?

Pathologist: Yes. Welcome. Please have a seat. (To the daughter) Please take a seat next to her/to the patient. This is a routine question, but could you tell me your name?

(Prevention of mistaking the identity of patients)

Pathologist: Regarding your illness, what do you understand about it? Could you tell me the name of your disease?

(Acknowledge the patient's awareness of their disease and at the same time conjecture the patient's level of understanding concerning the pathologist's explanation)

Patient's talk follows.

Pathologist: What kind of explanation were you given by Dr. ZZZ?

(Verification of the content of the explanation provided by the clinician)

Patient's talk follows.

Pathologist: Okay. By the way, is there anything that you felt that you wanted to ask on your visit to the Pathology Clinic?

(Verification of the patient's intentions and objectives for visiting the clinic)

Patient's talk follows.

Pathologist starts an explanation by showing the macroscopic figures of resected tissue (Fig. 2) as well as the microscopic figures of normal and malignant tumor cells (Fig.3). (The patient concretely recognizes their disease and the pathologist gains the trust of the patient and their family by showing the attitude that everything is being told and nothing is being held back about the report) (Interactive explanation allows enhanced understanding of the patient and prevents the pathologist from taking on an oratorical tone)

Pathologist also explains carefully about hormone receptors, Ki67 index, TOPO II- α index (Taniyama, 2011), Hercep score (Taniyama, 2008-3), HER-2/TOPO II- α gene amplification etc. whilst showing the patient microscopic images and printed FISH [fluorescence in situ] images.

Pathologist: Although it is unfortunate that you contracted cancer, that cancer has already been removed and your future treatment is set to be conducted based upon the evidence we spoke about today. Although cancer cells are a formidable opponent to fight against, as you saw with your own eyes, you now understand their appearance and the approach to be taken against this opponent. We will support you as a team, so don't worry about things yourself. Please voice your thoughts to a range of people.

Patient, daughter: Thank you very much. (They lower their heads deeply, and then exit the room.)

(Conversion of the vague uneasiness, introspective, and introverted awareness into progressive, extroverted awareness. Effects supporting the patient's recovery, calm interaction, and motivation for medical treatment can be anticipated).

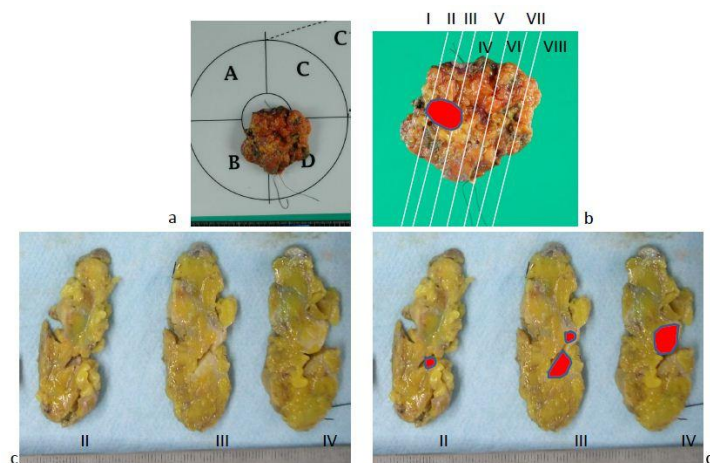


Figure 2 Macroscopic pictures taken after resection showing the location of the tissue removed (a), cutting lines and location of the tumor (red-colored area in b), cut surfaces of sections II, III, and IV (c), and tumor distribution on the sections (d).

Removed left breast tissue measuring about 5 cm in size was placed on a figure of left breast (a). Tumor tissue measured 1.8 x 1.5 cm and it was revealed to be taken out completely in pictures b and d.

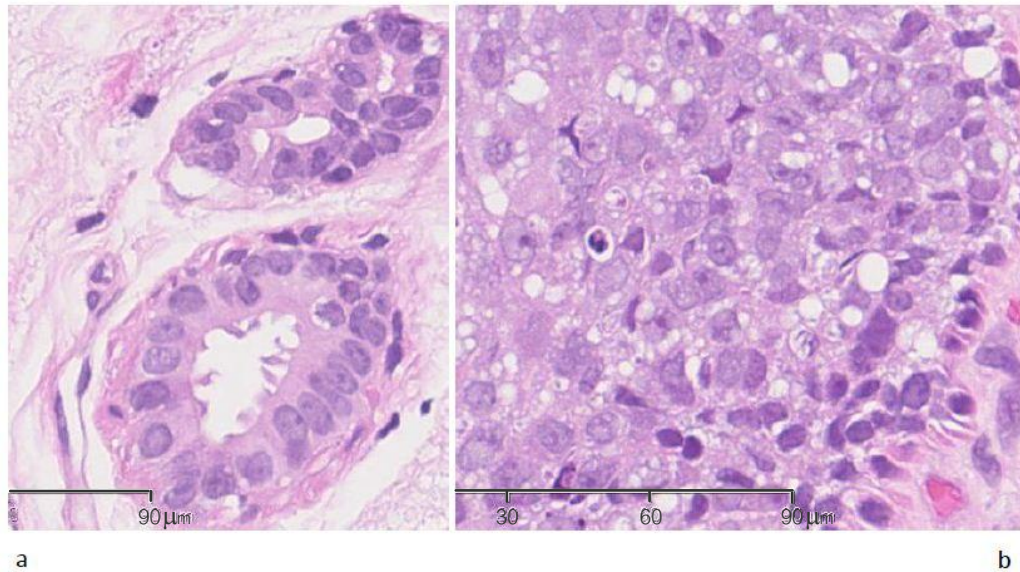


Figure 3 Microscopic findings of breast sections showing normal lactiferous ducts (a) and cancer cells (b). Normal lactiferous ducts shows double layer of lining cells and their nuclei are interpreted as normal countenance. Cancer cells show bad countenance which indicates severe atypism.

7. Background of the explanation

The pathologist sits facing the patient and their family with a desk placed between them. Materials including a microscope, patient's specimens, a full set of patient's reports and paper medical chart (even if it is an electronic medical chart, copies of materials given to the patient such as explanatory notes and their clinical pass are kept in the paper medical chart) are kept on the desk. These materials have been prepared and placed there by hospital staff (Figure 2). Showing the patient many specimens surprises them and also makes them realize that the medical staff is treating them sympathetically. The microscope on the desk has a digital camera fixed onto it and the microscopic images are displayed on a large monitor. All people attending the Pathology Clinic are able to see the same monitor. Furthermore, the pathologist uses illustrated reference books for their explanation while drawing simple pictures on the extra pages in the medical chart. Here, the pathologists are careful in showing the difference between normal and abnormal specimens and not to speak too rapidly. Patients often harbor vague doubts such as whether they really have cancer, and question why they were given that specific diagnosis. Therefore, by explaining the shape of cells, shape of nuclei, and

the word atypism while a suitable written explanation for the patient and their family is present before them; also their recognition can be clarified. The trust of the patient and their family will increase in response to a doctor who explains things carefully.

Currently, a mental care nurse is present with the pathologist, the patient, and their family as a rule, but clinicians who wish to observe and therapists who wish to conduct research have been informed to attend such visits. If this is the case, they have to seek permission from the patient. In addition, when the Pathology Clinic was not well known as a facility, the clinician or nurses in charge would also attend to the patients. The application statement written by the physician in charge is often brief. For example, "The patient would like to attend the Pathology Clinic. Thank you." Therefore, in cases where the clinician's actions are unclear, a phone call is made to the clinic on receiving an application for a visit to the Pathology Clinic in order to ask about the treatment strategy, the content of the disease notification being considered by the clinician and the reasons behind these.

When a pathological diagnosis is conducted postoperatively at this center, clinicians obtain the patient's consent prior to surgery for

taking the macroscopic photography of extracted organs, formalin fixation, storage and cremation, and use for research. Although macroscopic photography is often presented at postoperative explanations by clinicians, there are many cases where it is not done, and sometimes the family members present were not interested when the pictures were being shown. The family of the patient usually shows interest in the removed organs, but there are times where they refuse because they do not want to see them, so it is important to obtain prior confirmation from them (Taniyama, 2008b).

When visits to the Pathology Clinic are conducted in this way, the patient and their family are often completely satisfied with the clear explanation they have been given and express their gratitude.

8. The involvement of other departments including nurses

In addition to clinicians, the cooperation of nurses, laboratory technicians, and clerical staff is important for the Pathology Clinic to function effectively. Pathologists who are unfamiliar with the Pathology Clinic often worry about how their own outpatient care will affect the patients. For inexperienced pathologists, it is necessary that they get the attending staff to attend visits and listen to their evaluation, so that they can carry out self-learning. Nurses have been asked to administer a questionnaire to patients in the hospital ward who have finished their visit to the Pathology Clinic. The high evaluation of the Pathology Clinic from nurses as well as patients (Taniyama, 2006a) has given the clinic great encouragement. The Pathology Clinic differs from general clinical outpatient visits since the doctor only meets the patient once. As it is difficult to measure what kind of impact the Pathology Clinic has on patients, getting feedback in this way from clinicians and nurses from the patient is very important and it allows the clinic to learn outpatient techniques such as the sharing of bad news. Conducting a wide-range of activities as a member of the medical team of Department of Diagnostic Pathology leads to gaining support from both patients and medical staff (Taniyama, 1998) with high added value. Furthermore, the cooperation of the aforementioned staff is also essential for the Pathology Clinic visits of bereaved families of autopsy patients (Taniyama, 2006d, 2006e, 2008d).

9. Effects of the Pathology Clinic

It has not been determined when patients and their family consult the Pathology Clinic. However, in cases when they voluntarily come for consultation, it is often after they were informed about the cancer and want to come to terms with their own feelings, or want to know more about their disease (Taniyama, 1998). This action of consulting the Pathology Clinic after initially being informed about the name of the disease is related to changes in the state of mind of the patient notified about the cancer. More specifically, such patients consult the Pathology Clinic when they begin to adapt after a period of temporary denial and distress. It is also hoped that the consultation with the Pathology Clinic at such a stage has a supportive effect on the cancer patient, making it possible for the patients to pull themselves together, accept this situation in a self-composed manner, and to be willing to receive medical treatment. Furthermore, it is expected that this support is also relevant to improving the prognosis of the patient (Taniyama, 2006a). On the other hand, if such support is disconnected from the primary goal of the Pathology Clinic - to correctly coordinate medical knowledge, focusing on the pathological diagnosis - the response of the patient at the Pathology Clinic tends to reveal a state of psychological confusion, at which point it is possible to introduce psychological treatment. The Pathology Clinic and the subsequent psychological treatment provide a new form of medical care service that did not exist before (Figure 4). At present, the mental care nurse who attends the Pathology Clinic is taking care of patient's psychological condition in this centre.

There is also possible a pattern in which the pathologist is the first to inform the patient of the name of the disease. However, the pathologist, unlike the general clinician, who meets the patient frequently, generally meets the patient only once, and cannot follow up the stages of the patient's denial and distress. Sometimes the patient is too confused to remember the given information and further notifications by the pathologist will only add to this confusion. To assist the patient in coming to terms with this situation, it is better for the patient to be first informed by the clinician in the usual way, and then, after a while, the pathologist gives the direct explanation of the pathological and cytological diagnosis. Also, by using this approach, the characteristics of the pathologies can be fully displayed.

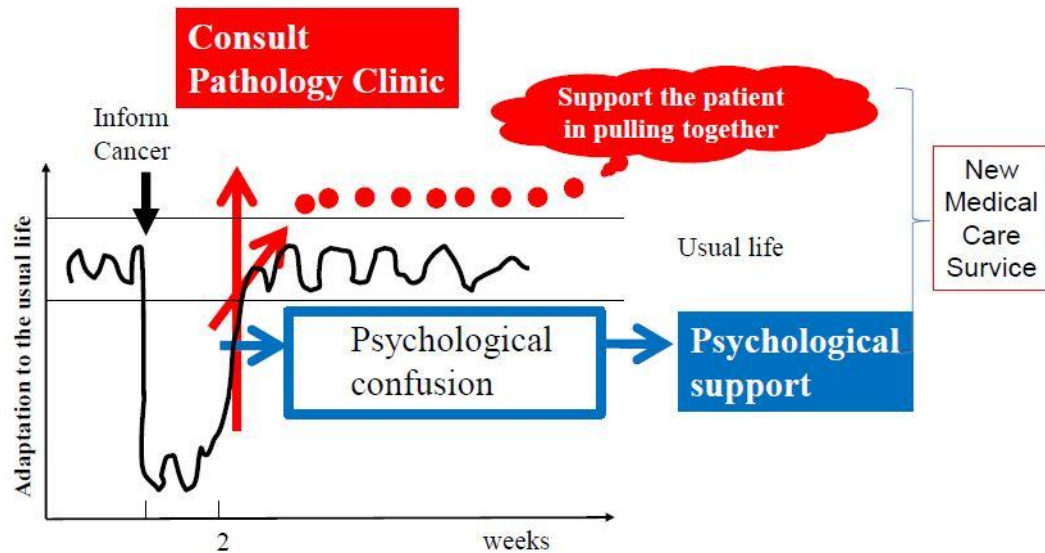


Figure 4 Sequential change of the psychological state of the patient, after being informed about having cancer, with a relation to the consulting Pathology Clinic. The patient consults the Pathology Clinic when he or she is starting to recover from denial and confusion, after having been informed about having cancer. It is hoped that consulting with the Pathology Clinic supports the patient in pulling themselves together. Furthermore, it is also possible to conduct psychological medical treatment if it is found that the patient is in a state of psychological confusion. The Pathology Clinic, which is followed by psychological medical treatment, provides a new medical care service.

As mentioned before, to engage in an appropriate conversation at the Pathology Clinic, the pathologist needs to learn techniques similar to those used by general clinicians, such as how to prevent patient misunderstandings, and how to convey unpleasant information. From the conversation (see above), the pathologist can ascertain the patient's consciousness and knowledge of the disease. Also, the pathologist must gain the confidence of the patient by talking openly about the subject matter of the pathological diagnosis report and responding to all questions. In this regard, interactive explanations using open-minded (Not just yes/no) questions (Hashimoto, 2002) promote the understanding of the patient, and also prevent the pathology specialist's explanations becoming oratorical. The patient and their family are often grateful when they fully understand the clear explanations. A positive attitude towards the future medical treatment can then be elicited. In this regard, it is important to use words that support the feelings of the patient.

The effect of the Pathology Clinic may alleviate and diminish distrust from bereaved families who have an autopsy. In cases where the bereaved family harbours extreme distrust towards the medical care side, the pathologist of the facility in question will also be looked at with disbelief. Although in such circumstances when an autopsy performed by a third institution becomes necessary, the third party pathologist takes the role of the supervisor of the medical care of the facility in question. Therefore, if the pathologist can give an explanation calmly in the Pathology Clinic, this tends to have a strong persuasive effect on the bereaved family. Even if the bereaved family is skeptical of medical care, such an explanation by the pathologist may prevent this disbelief from growing, or even reduce it. Furthermore, regarding errors in medical intervention, even in cases in which the opinion of the hospital and the patients and their family, etc., differ greatly, one must refrain from taking an overly defensive attitude, while simultaneously receiving the

support of specialists such as risk managers. It is desirable to respond moderately, and to give thought to the sentiments of the other party. A nurse who knew the patient during his lifetime is better prepared to appreciate the sentiments of the bereaved family, and it is for this reason that the nurses who were in charge of the patient are always required to be present at the autopsy explanatory meetings of this centre. In this way the autopsy is not simply an affair between the pathologist and the clinician, but something that engages the entire hospital. This is definitely helpful for the understanding of the bereaved family, and for improving the level of the hospital's medical care. Pathologists must actively play the role of an organiser who constructs such an organic system (Taniyama, 2006e, 2008e, 2009b).

10. Social significance of the Diagnostic Pathology

In order to gain social significance, the work and results obtained by the Diagnostic Pathology must be used effectively by the society. Concerning the practice of pathological diagnosis, the pathologist must primarily make correct pathological diagnoses and give guidance for appropriate medical treatment. Second, the pathologist must perform autopsies to monitor medical care, and to form the basis of trusted medical care. Third, the pathologist must build a system of effective medical care in which the patient and his or her family (the bereaved family) correctly understand the pathological diagnosis done by the pathologist. This includes the establishment of the Pathology Clinic. Concerning research work, pathologists are required to announce the results obtained, and to apply them in medical practice (Taniyama, 2011, 2008c, 2006f).

Kitazawa states that, besides requiring the hospital to have the “attributes of a good hospital”, the patient wants the medical doctor to make a “proper explanation”. In doing so, Kitazawa mentions “communication skills” as an important capability, and laments that, although such phrases are often used by medical professionals, there are some terms that are rather difficult for the patient to understand, and that medical professionals are sometimes not aware that the patients do not understand them (Kitazawa, 2005). Furthermore, regarding the relationship between the medical doctor and the patient, it is necessary to notice the

differences in the way of thinking that result from their different positions. It is known that if the patient is satisfied with the mode of communicating, they conform well (compliance) with the medical instructions given by the medical doctors. 1) The level of satisfaction with the way of communicating, 2) understanding of the explanations given by the physician, and 3) the degree to which the patient's expectations are realised each plays a role in obtaining favourable compliance. Furthermore the fundamentals of an interview are to 1) ask, 2) listen, 3) respond, and 4) observe. It is known that open-minded questions help to get through to the patient, and that signs of comprehension, and repeating the final part of what the patient says, are effective empathic responses that lead to the patient having a higher degree of satisfaction. It has been suggested that the desirable conditions for an interview are 1) make the usual greetings, 2) keep the eye-line at about the same height as the interviewee, 3) think about the arrangement of desks and chairs, 4) consider privacy, and 5) take enough time (Taniyama, 2011). In a Pathology Clinic that takes these points into consideration, patients can deepen their understanding of the disease through the pathologist's explanations. This leads to favourable compliance with the instructions on medical treatment given by the clinician.

The pathologist can also take the position of a third party towards the patient, which differs from that of the clinician. This helps the patient to judge the information coolly. At the same time, the pathologist is also a medical doctor who earnestly hopes for the patient's recovery, and the medical doctor is required to handle the interview using detailed observation, embracing power, and a caring attitude. Furthermore, in actual medical practice, as a member of team-based medical care, the pathologist is also required to make an active effort to exchange information with clinicians. Because of the current nationwide lack of pathologists in Japan, they are forced to undertake a busy schedule of routine work involving pathological diagnosis and research (Taniyama, 2006b, 2006c). From now on, however, pathologists are also required to establish contact points with the patient and his or her family (the bereaved family) by explaining the pathological diagnosis. However, the frequency with which this new obligation is met is not very high. Nevertheless, the establishment of the Pathology

Clinic should be highly valued and understood by the general public as a Diagnostic Pathology that provides high added value. As mentioned before, the sources of the energy to continue these efforts are the words of gratitude received from patients and clinicians fundamentally (Taniyama, 2008a). In addition, pathologists must receive income equivalent to their effort. To borrow the words of Kawada: "Culture is to understand the feelings of human beings" (Kawada, 2002). A pathologist, who feels the subtlety of the patient's heart, and responds to it, is a deeply cultured medical doctor.

11. Summary

The Diagnostic Pathology is part and parcel of medical care: that is to say, it is a comprehensive human study that seeks the health and happiness of mankind through the use of the human intellect. The Pathology Clinic is a huge information desk, at which the pathologist, who practices this part and parcel, gets in touch with the patient and his or her family.

12. References

- Baile, W.F., Buckman, R., Lenzi, R., Glober, G., Beale, E.A., & Kudelka, A.P. (2000). SPIKES—a six-step protocol for delivering bad news: application to the patient with cancer. *Oncologist*, 5: 302-311.
- Fujimori, M., Akechi, T., Morita, T., et al. (2007). Preferences of cancer patients regarding the disclosure of bad news. *Psychooncology*, 16: 573-581.
- Hashimoto, N. (2002). Communication. In: Principles of medical care and medical humanics. Takeuchi M., ed., *Kobundo*, Tokyo, 109-124. (in Japanese)
- Kawada, S. (2002). Psychology and Philosophy of Human Comprehension. In: Principles of Medical Care and Medical Humanics. Takeuchi, M., ed., *Kobundo*, Tokyo, 39-51. (in Japanese)
- Kitazawa, K. (2005). The University of Tokyo Hospital must change! – What are the Attributes of a Good Hospital. In: How Future Medical Care and Hospitals Ought to be. University of Tokyo Hospital planning office, ed., *Kanehara publication*, Tokyo, 11-26. (in Japanese)
- Nishimaki, M., Taniyama, K., Kodama, K., et al. (2010). A study of relation among pathology informed consent, mental state and adjustment in patients with breast cancer. *Hiroshima Medicine*, 63: 151-155. (in Japanese)
- Taniyama, K. (1997). In quest of new contact points between patients and their families and the pathologist—Explanation of the results of pathological diagnosis by the pathologist—. *Igaku No Ayumi*, 1997, 182: 911-914. (in Japanese)
- Taniyama, K. & Sasaki, N. (1998). Participation of the pathologist in the informed consent. *Byori To Rinsho*, 16: 639-643 (in Japanese).
- Taniyama, K. (2006a) *Practice of the Pathologic Clinic. Modern Media*, 53: 241-244. (in Japanese)
- Taniyama, K. Inai, K. & Kuroda, M. (2006b). Adequate distribution of pathologists in Japan- (1) an analysis of the current situations. *Byori To Rinsho*, 2006, 24: 877-884. (in Japanese with English abstract)
- Taniyama, K., Inai, K. & Kuroda, M. (2006c). Adequate distribution of pathologists in Japan- (2) a new formula for 2005 for the number of certified pathologists in Japan, and a proposal for the future. *Byori To Rinsho*, 2006, 24: 995-1001. (in Japanese with English abstract)
- Taniyama, K. (2006d). Demands of family members for autopsy reporting. *Iryo*, 60: 106-111. (in Japanese with English abstract)
- Taniyama, K. (2006e). Medical Service Law Article 21 and autopsy in Japan- what pathologists now have to do -. *Iji Shinpo*, 4300: 66-70. (in Japanese)
- Taniyama, K., Motoshita, J., Sakane, J., et al. (2006f) Combination analysis of a whole lymph node by one-step nucleic acid amplification and histology for intraoperative detection of micrometastasis. *Pathobiology*, 2006, 73: 183-191.
- Taniyama, K. (2008a) Legal and ethical issues in surgical pathological diagnostics. *Byori To Rinsho*, 26 (Supplement): 124-131. (in Japanese)
- Taniyama, K. (2008b). The appropriate state of the Pathologic Clinic. *Byori To Rinsho*, 26: 746-748. (in Japanese)
- Taniyama, K., Ishida, K., Toda, T., et al. (2008c). Tyrosine1248-phosphorylated HER2 expression and HER2 gene amplification in female invasive ductal carcinomas. *Breast Cancer*, 15: 231-240.

- Taniyama, K. (2008d). Needle necropsy in Japan. *Iji Shinpo*, 4390: 93-94. (in Japanese)
- Taniyama, K. (2008e) Pathologist as a member of team oncology. *Shuyonaika*, 2: 307-313. (in Japanese)
- Taniyama, K., Oshita, S., Saito, A. & Kuraoka, K.(2009a). Practice of the Pathology Clinic. *Rinshokensa*, 53: 357-359. (in Japanese)
- Taniyama, K. (2009b). Management of the Pathology. *Rinsho Byori*, 57: 687-694.
- Pathology Clinic and Diagnostic (in Japanese with English abstract)
- Taniyama, K., Morii, N., & Kuraoka, K., et al. (2011) Topoisomerase II-alpha index predicts the efficacy of anthracycline-based chemotherapy for breast cancers. In: HER2 and Cancer, Williams SI et al., ed., New York, USA: *Nova Science Publishers*, 187-200.