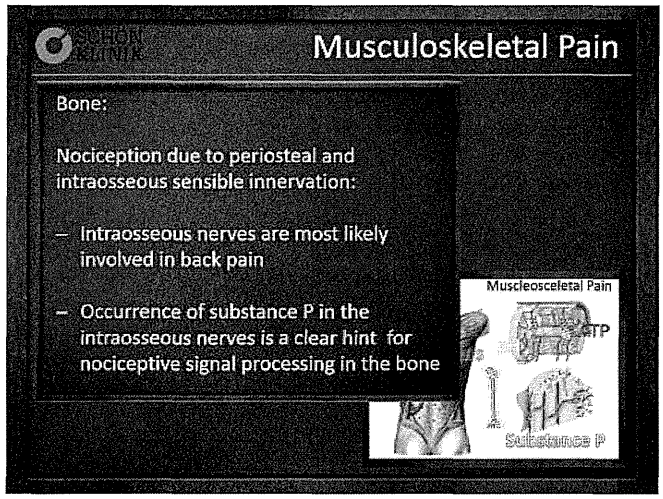
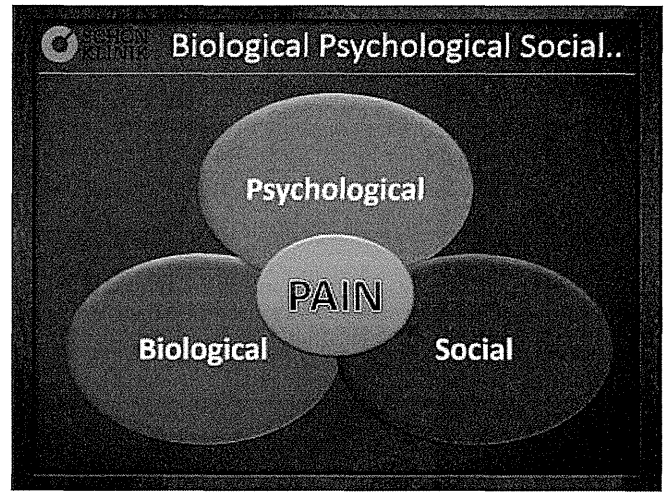
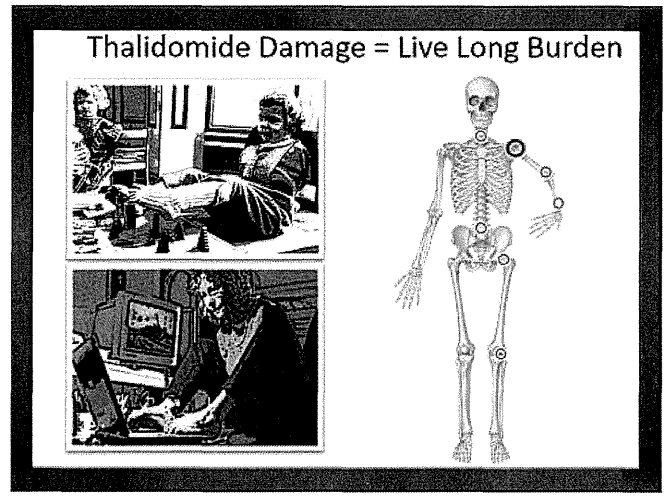
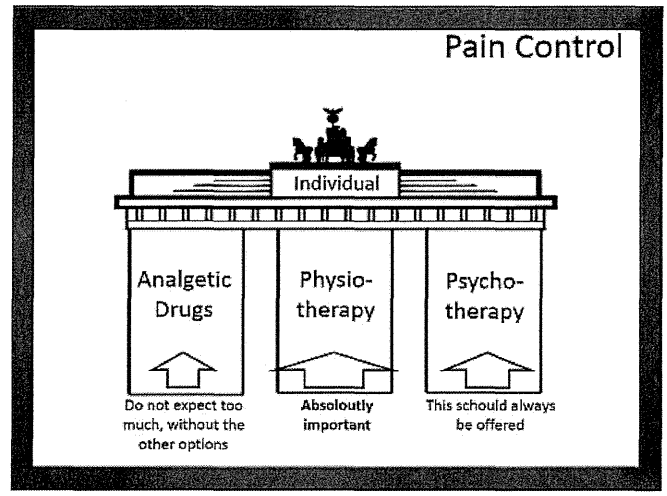




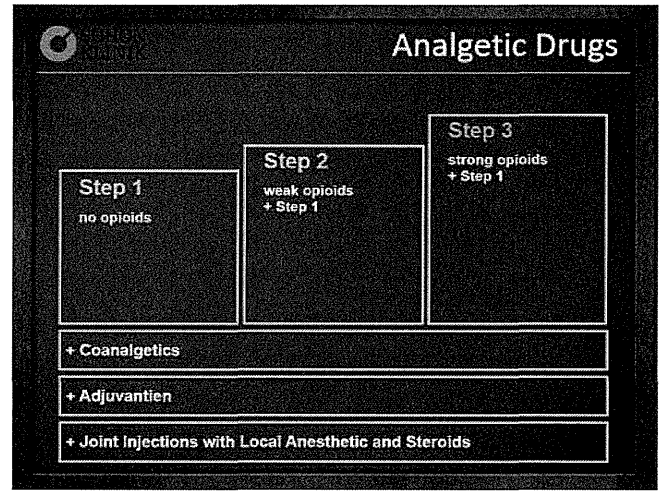
personal assessment of pain strongly. Nearly every chronic pain has an impact on our functional skills, and therefore of the mobility in general. Losing mobility will determine an autonomic life and social well-being massively. So to estimate ones chronic pain, we have to keep all these aspects in our minds.



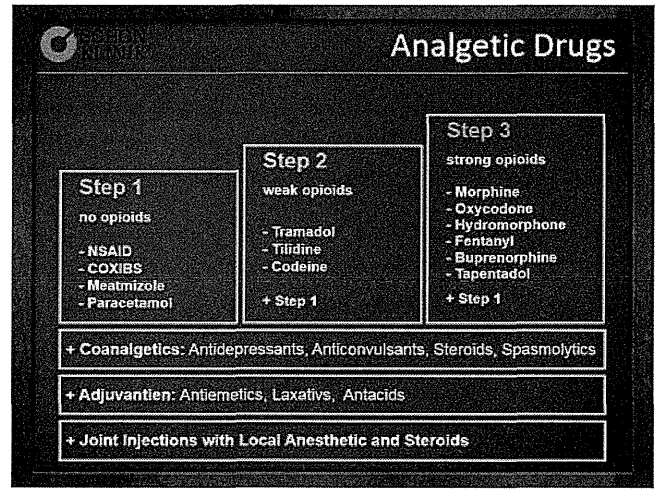
Today in Germany, we have around 2,700 thalidomide survivors and as we heard, they are now in their mid 50s and thus in an age in which health problems in general become more frequent. All thalidomiders compensate their disabilities as good as they can, but last year have shown that this compensation is deteriorating, and the number of consequential damage increases. The bandwidth of physical and physiological limitations is enormous. And as Dr. Ding-Greiner mentioned or pointed out before, this study has shown that the amount of chronic pain and proportion of physiological impact differs significantly from the general population in a negative sense. Unfortunately there're no already made solutions and magic potion for pain relief. So for my point of view, treating pain needs to be individual, multimodal and multiprofessional. Because pain is a complex challenge, we need complex answer.



It's about strategy for solving individual pain problems. As a base, we have three pillars that should come with each with different weightings are used. To discuss all these pillars in detail would exceed my time and could interview with next coffee break. And so I will focus on lacks and physiotherapy. First of all, it is important to find a good team of physiotherapists and to work with those together. In my view, a regular inter-professional dialogue on the individual patient is of central importance. Physiotherapy should be geared more to the possibilities of the patient and includes both training and relaxation techniques. In addition to medication and physiotherapy, psychotherapeutic techniques should always be attempted because as we heard before, pain always affect the mood and mental well-being. Quite a few thalidomiders have been traumatized by doctors and the surrounding in their childhood. And the prevalence of depression and anxiety is significantly increased.

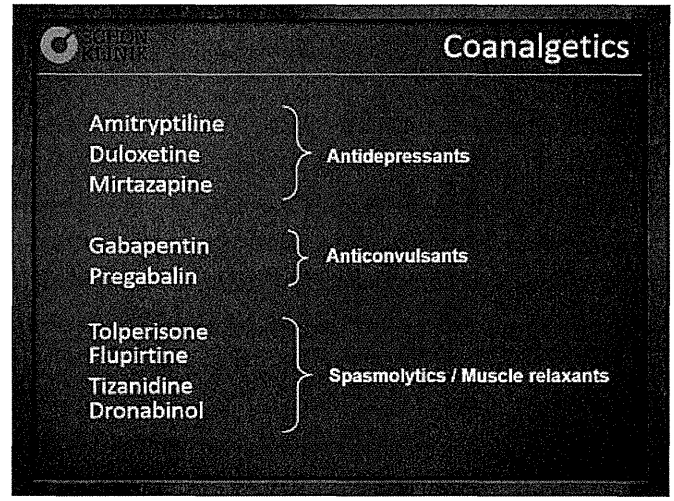


In the medication, I would go now into more detail. Medical pain therapy can be based on the modified WHO scheme which is extended by so called co-analgesics and adjuvant drugs. Basically drug therapy for pain you should go step by step on this ladder and you add co-analgesics and adjuvant drugs on every step. The first step, non-opiate includes a variety of drugs which are either effective such as paracetamol which may cause various complications in long-term use. The most effective analogies in muscle skeletal pain are the non-steroidal anti-inflammatory drugs and the neuro COX inhibitors. Because of the possible dangerous side effects in terms of stomach bleeding and kidney damage, they should be applied only under strict medical supervision, and always prescribed together with proton pump inhibitors. Metamizole, also known as Dipyrone, is effective and has comparatively low organ toxicity. However, there is a possibility of bone marrow depression with agranulocytosis. For this reason, metamizole is controversial in many countries. In Germany it is often used and agranulocytosis is really rare, compared to the potential legal complications of the non-steroidal drugs.



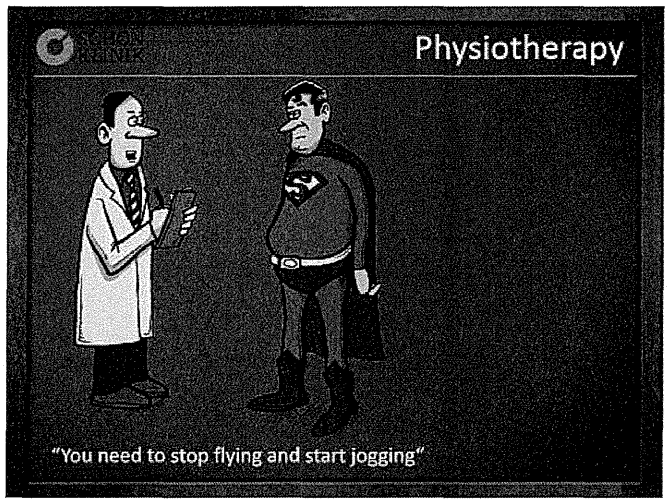
In step 2 and 3 there are oipoids and they are the strongest pain killers currently known to us probably due to its similarity to endogenous substances (endorphins), the least organ toxicant. However, they appear to be dangerous for patients with obstructive sleep apnea or coronary heart disease in terms of nocturnal hypoxia. Although the proven potency, opioids are not always superior to superior in muscle skeletal pain compared with non-steroidal anti-inflammatory drugs. And they should never mix together for weak opiates or strong opiates, and should not prescribe together. When you are not successful with weak opiates, you should proceed to step 3, and opiates should be prescribed together with laxative drugs because they are always doing obstipation.

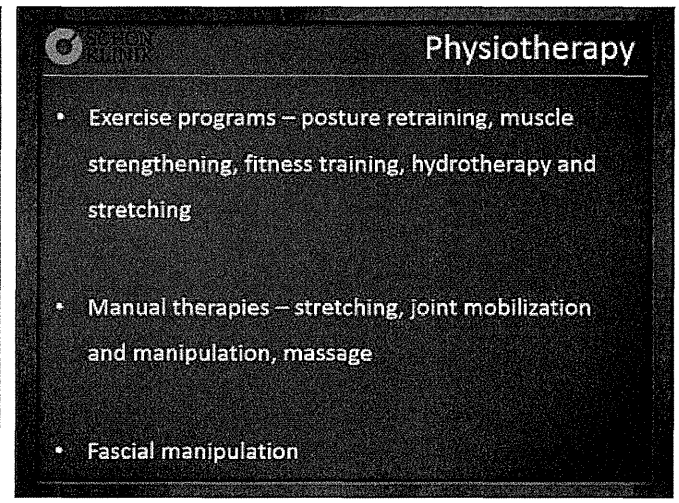
So I would now like to respond to the so called co-analgesics. They have a specific analgesic effect. They can lower the dosage of the common analgesic drugs, and they have influence on the affective pain component. Some antidepressants have had a firm place in the medicine since decades because they modulate the descending pain control and also influence the effect of component. The antiepileptic drugs gabapentin and pregabalin are especially effective in neuropathic pain and also have a strong anxiolytic effect. Particularly in the dose-finding with gradual uptitration, strong sedation and dizziness can lead to discontinuation of therapy. Tolerance and tolerance development and drug dependency may also occur.



The muscle relaxants seem to have made low and painful muscle tension and as we heard before, this is common in patient's limb deficiencies. Since the lack of four arms' length is compensated by movements of the shoulder girdle. The rotator cuff and adjacent regions are considerably overloaded. Benzodiazepine should not be used because they have a significant potential for addiction and there is a suspicion that the decedent inhibition of pain is compromised by benzodiazepine. Flupirtine is centrally effective and has a good analgesic and a muscle relaxing effect. In Europe, cases of serious liver damage or liver failure have occurred. Therefore, close monitoring of liver function tests during therapy is required. Dronabinol, a cannabinoid, is authorized in Germany and in US for painful muscle tension in multiple sclerosis. And there are some thalidomide patients who really benefit under illegal self-medication of cannabis. I personaly believe that the off-label prescription of medicines available on the market is reasonable, but you have to be cautious when prescribing documented agreements with patients and controls by the prescribing physician are needed. In general, to increase the compliance when prescribing co-analgesics, the sense, side effects and limitations need to be explained in detail.

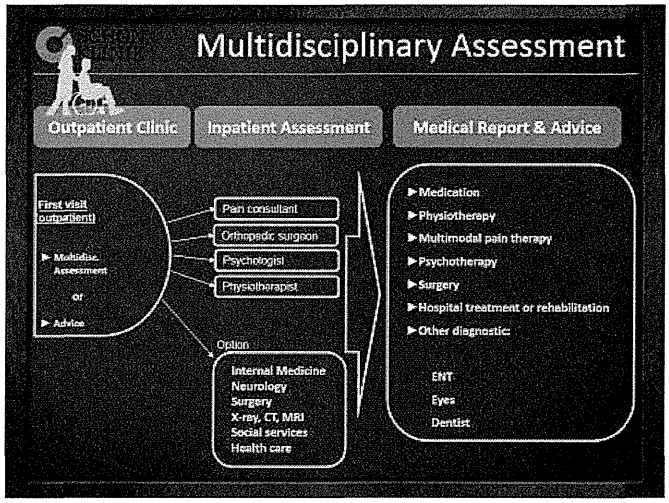
So even if in our best ages we feel all resilienced and strong, we all know painful limitation of the mobility is a matter of aging. This affects people with disabilities even more. And I think one appropriate





answer to this problem is individual, extended and suitable physiotherapy. I'm not specialized in physiotherapy but I know there are lots of different therapy (???@02:54:27). It seems rational to me that every single patient should together with his physiotherapist, find out which treatment regimen works best. This should be done on a weekly basis and include regular active self-exercise by the patient. Active therapy for muscle strength and relaxing therapies should interchange.

I was also asked to talk about our virtual clinic and network for thalidomiders in Hamburg. I have to say what I establish my hospital is not virtual thing, it is a real existing clinic.



In our hospital we provide a wide range of outstanding treatments with great expertise on orthopedics phycology and neurology. We are a teaching hospital belonging to the University of Hamburg. After a year of planning, we developed a concept which aims at providing acute medical services for people with thalidomide embryopathy. It consists of three coordinated services with interdisciplinary treatment at one location. During the first consultation in our outpatient clinic, all patients see a pain consultation and an orthopedic surgeon. And beside pain and orthopedic assessment, all patients will be examined for general risk factors like diabetes or cardiovascular diseases. In case of more complex health problems, there is the opportunities to hospitalize the patients to the hospital for several days, and there we can offer a wide range of specialties whatever needed. At the end of the consultation, all patient receive a comprehensive medical evaluation and a detailed advice for further medical treatment. To meet the special demands of the patients, we refurnished the patient's room with special sanitary area. This enables people with short arms to use it largely and

independently. Beside these activities, I started a network with ambulance doctors from different specialists in the region of Hamburg. And this network is supported by a website to give all the information needed for the patients. By just one click on the body map, it is possible to find the right specialist for the medical problem, and this website has been viewed together with a local thalidomider group. They are also initiated whole project in my hospital. And it is a great pleasure to develop things together. So as an anesthetist before I put you all to sleep better I stop my talk, and say thank you very much for your attention.

Hinoshita： Thank you, Dr. Beyer. Maybe we have some questions, OK? Any question or comment or opinion? I have two or three questions. First, you explained about the merit of the co-analgesics. It is really effective for the thalidomiders, and the thalidomiders can gladly accept taking many kinds of drugs? Because in general they dislike taking drugs.

Beyer： Yeah. Yes. I have made the same experience, and I personally not, the opinion that prescribe a drug and hear the patient, I don't believe that this will work out. From my point of view, the biggest pillar of the three pillars is physiotherapy. And most other doctors especially from orthopedics easily prescribe medication. I think I could do so because I have an overview, and I'm not afraid of opiates drugs whatever needed. But I know that drugs only have limited effects especially with their side effect. I mean I think that thalidomiders maybe don't go often to doctors, you don't know really how their kidney function or they suffered for diabetes when I prescribing non-steroidal for weeks maybe I have no information about the kidney. Kidney dysfunction, I'm afraid of this. So again, I say I think the biggest part of the therapy should be based on physiotherapy and also psychotherapy. But sometimes you need to prescribe something, and it's a matter of starting on the lowest level to control it very good.

Hinoshita： I see. One more question. I have ever heard from some specialists on the thalidomide embryopathy in different countries. The massage, the limb massage would be very effective to suppress uncontrollable pain in thalidomiders. How do you do think of it?

Beyer： I get tried the massage, yeah. I think that every patient this is needed to find out which kind of therapy works best. And you can have some patients who are very well in warm water, and some of them are very well in cold water. You have to find out to try it weekly. And I think massage is a really good thing but you need also try to have muscle strength especially for the rotator cuff. Quite a few of them are suffered from, how to say, so the (???@02:59:17) not shoulder position, and they could benefit from muscle strength and special massage. Thank you very much.

Hinoshita： Danke schön.

Beyer： So I think it's a matter of find out what are expressed but not only lay down for massage also do exercise.

Hinoshita： Thank you. OK. Liz, please.

Newbronner： I just wondered with you explained the physio is really important. Have you found that physios you work with local physios? Have the skills to work with thalidomide survivors or they needed additional training or understanding of the thalidomide embryopathy?

Beyer：Many of the thalidomiders came from far away to our clinic, and they have their special experience with their own physiotherapist at home. But some of them reported that physiotherapists now and at the point they don't know what to do. I think there is a need to have a conference or symposium of this subject especially for orthopedic surgeons and physiotherapist to find out what kind of treatment should be applied to or not. I mean there is this new concept of physio training. I don't know if you've heard of it. But it's based on manipulation of the pass. I think it could be very effective but if you apply the wrong way, you can harm the patient with it. I think it's painful, and it's starting like doing exercise.

Hinoshita：OK, please.

Peters：We have special exercise teams in all clinic, competent teams depending on this physiotherapist and doctors and even psychologists, and a special trainers for the thalidomiders. Because it's really important for the thalidomiders. And to have therapist which even more the same as they know we need more. Most things with thalidomiders know more about his disease or his MTE and doctors and therapist. That's a problem. That problem is solved by competent teams.

Hinoshita：Thank you, Dr. Peters. Do you have any other question? Dr. Schulte-Hillen.

Schulte-Hillen：Thank you very much. Does a traditional Chinese medicine play a role like acupuncture? Not yet?

Beyer：I have not found all yet. But if a patient came to me and asked me and say "I have a good experience of this." I have no problem to prescribe it. And to get a feedback how does it work, I'm not sure, I think there are no limitations in manual therapy, Chinese medicine, and acupuncture. You have to try it. And I'm sorry this is maybe not good message these is no ready-made solution. You have to find out individually.

Schulte-Hillen：It is a good message whatever helps going to be apply. That's a good massage.

Beyer：Yeah. I think that's the way.

Hinoshita：Any comment? Dr. Peters.

Peters：I think we have got very good experience with acupuncture at our clinic. A part of our pain control and therapy.

Hinoshita：Basically acupuncture with herbal medicines, it's very popular in Japan. How do you think of this, Dr. Kayamori? Have you ever experienced it? Acupuncture for pain control.

Kayamori：The important thing is, how do I say, relationship between person and patient. Acupuncture is only intermediate, so it's up to the patient if relationship between the doctor and the acupuncturist is good and the patient. So I think a little bit effective. But there is no scientific knowledge of acupuncture.

Hinoshita：Thank you. Dr. Ghassemi, OK?

Ghassemi： I just want to give a short comment because in every year, a part of diseases or organ problems, of course, I mean physiotherapists in general are very well working with, but it's always important to send him to the special person. That is more convenient with that special organ to work with. And especially when it comes to thalidomiders, I mean we have today seen that both their posture and direction they have so many problems, so many other malformations that maybe we don't know. So it's even more important, not to send him to just every physiotherapy. Because we have all the effects of them, you have it, also I know you have it in Sweden. Its orthopedic parts that they do some manipulation of the neck which could be actually disastrous result in not only thalidomiders but even in others. So that was just a comment.

Hinoshita： Do you have any comment against Dr. Ghassemi, Dr. Beyer? Final comment, please.

Beyer： There is no scientific research about the result of the spine surgery because you can't double blind it. At my clinic, I have a famous orthopedic surgeon who is doing spine surgery. And he says 90 percent is to make the right indication. And another one says every spine surgery has the indication apart from the first.

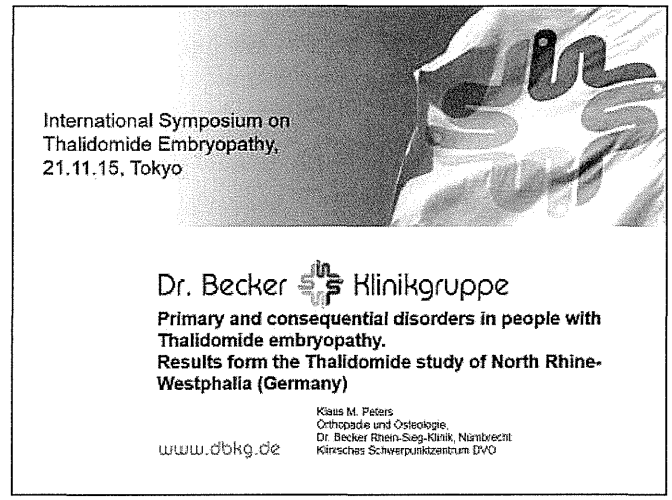
Hinoshita： Thank you very much anyway. Thank you. Sorry, the schedule is just behind the timetable, but I don't want to shorten the afternoon tea time. Then what do you say starting the next session from 4:35? The next part would start at 4:35 PM. Then please relax yourself and take a rest.

(Intermission)

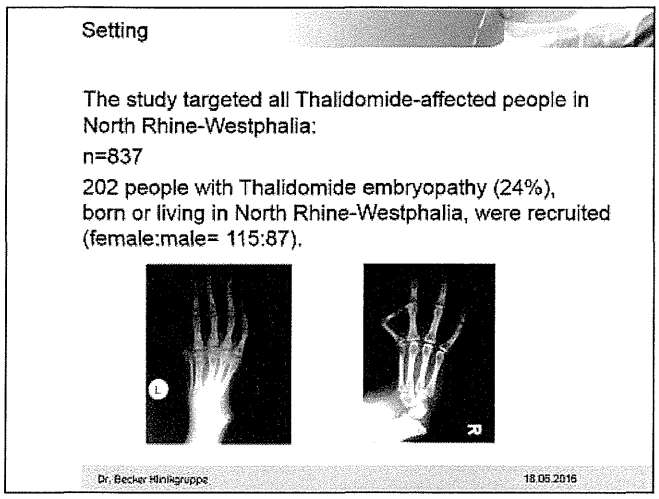
⑧Prof. Dr. Klaus M. Peters

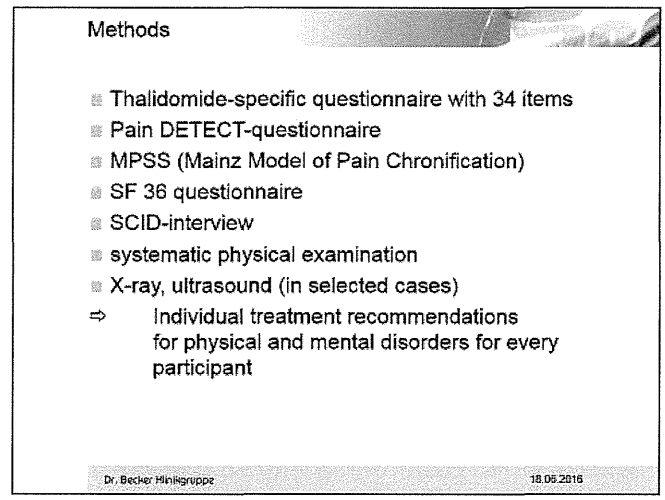
" Primary and consequential disorders in people with thalidomide embryopathy. Results from the thalidomide study of north Rhine-Westphalia/Germany."

Hinoshita： OK, then let's start again. The next speaker is Professor Dr. Klaus M. Peters. His presentation title is 'Primary and consequential disorders in people with thalidomide embryopathy. Results from the thalidomide study of North Rhine-Westphalia in Germany'. Then I will introduce him to you with his individual or personal history. He graduated from University of Cologne and Basel in 1986. He studied his surgical work at University of Cologne. After he worked at two orthopedic clinics, he became senior consultant of orthopedic and osteologic department of Rhein-Sieg Clinic, Numbrecht, since 1995. He specializes not only in orthopedics but also rheumatology and osteology. He has been a super numeral professor RWTH Aachen since 1999. Then Professor Peters, please.

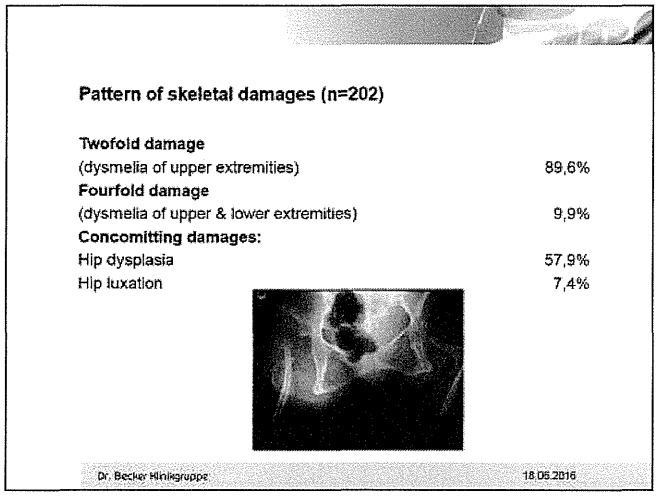


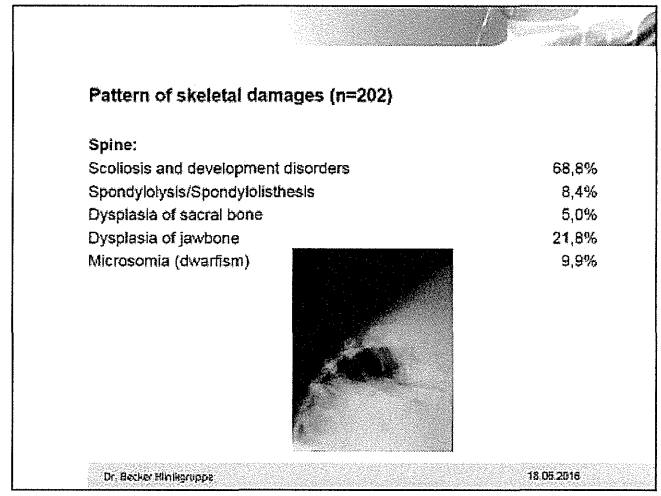
Peters： Yes. First of all, Dr. Hinoshita, thanks a lot to you to invite me to Tokyo and to give a possibility to present my results. We performed the study in the north of Westphalia, the biggest county in Germany with most inhabitants, and



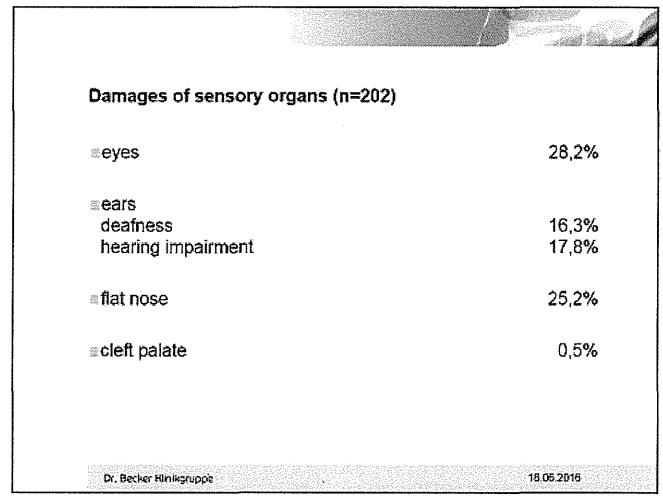


about 837 thalidomiders are still living in North Westphalia. And the study targeted all people living in North Rhine-Westphalia, and we got 202 people with thalidomide embryopathy that means 24 percent of all living patients. What we did with the paper in this people is that we had thalidomide-specific questionnaire with 34 items. We performed the pain-detecting questionnaire, we performed MPSS reminds model of pain chronification people forms 36 questionnaire, we did skit interview with all the thalidomiders. And we did systematic physical examination in all of the 202 patients. And we did further



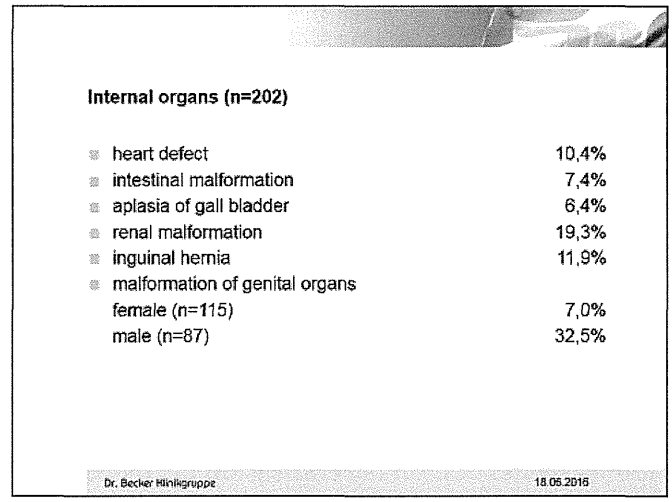


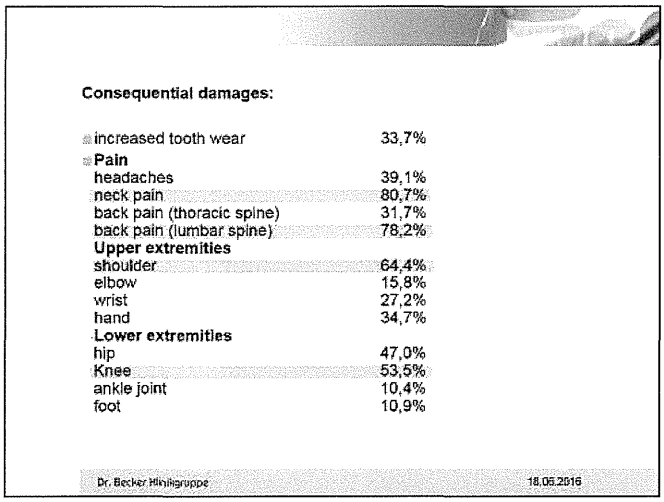
X-ray and ultrasound diagnostic in selected cases. After our examinations every patient got individual treatment recommendation for physical and mental disorders. What's the pattern on our skeletal damages twofold damages is about in 90 percent of our thalidomiders. And the fourfold damage is about 10 percent. That's a bit less than its collective off of mark (???@03:30:00) is in 70s. Concomitant damages were hip dysplasia this in about 58 percent and additional hip luxa tion is about 7.4 percent. What about spine? Scoliosis and development disorders is about nearly 70 percent of all thalidomiders. Spondylolysis and spondylolisthesis 8.4 percent. Dysplasia of sacral bone of sacra l bones 5 percent, Dysplasia of jawbone in 21.8 percent. And microsomia that means dwarfism about 10 percent of our people. What about

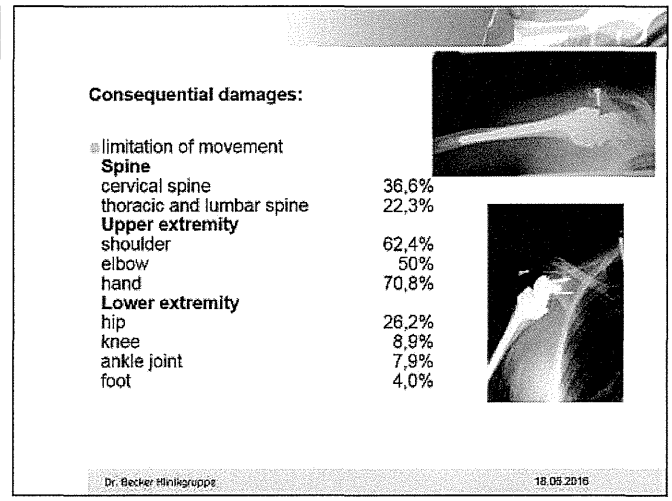


damages of sensory organs? Damages in the eyes about 28 percent, according to deafness, deafness in 16 percent and hearing impairment in about 18 percent. So called flat nose in about one-quarter of our patients. Cleft palate in 0.5 percent. What about the internal organs? 10 percent of them have heart defects, 7.4 percent intestinal malformation. Aplasia of gallbladder was in 6.4 percent.

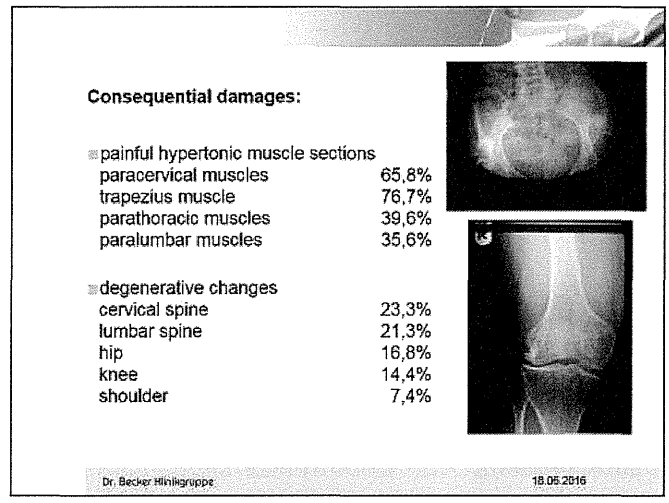
Renal malformation is about 20 percent, inguinal hernia is about 12 percent. What about malformation of genital organs, the females 15 patients namely in 7 percent, and males 87 patients namely in 32.5 percent. Now to the consequential secondary damages we discuss already a lot of them doing day to day, we have increased tooth ware. The mouth and teet h problems in about one-third of all patients. What about pain? We told you already about a lot of pain. And the most dominating pain is neck pain. It's about 80 percent. And the back pain about 78 percent. If you see the upper extremities, the pain



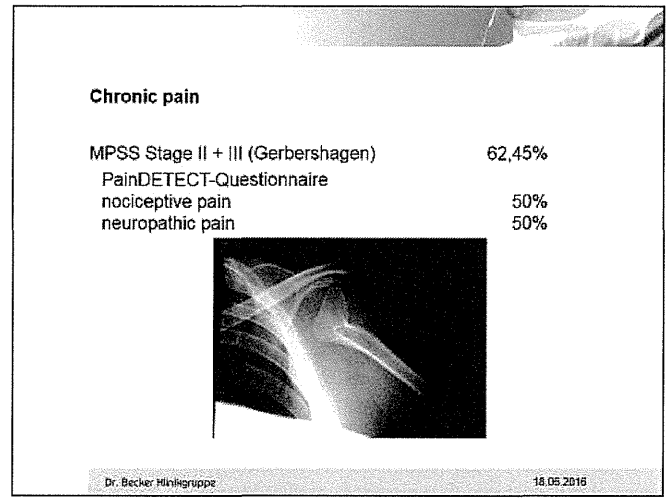




of the shoulder joints dominating with 64.5 percent, followed up by the pains of the wrist. In the low extremities it's not the pain of the hip but it's pain of the knee dominant. It's the most common pain in about 54 percent. What about consequential dameges due to the limitation of the movement. In the spine, you have the limitation of the movement cervical spine is about 36.6 percent, lumbar spine is 22 percent. What about the upper extremities? Here is a hands dominating limitation of the movement of the lists in about 70 percent. That's due to t he primary damages. And then followed by the shoulder about 62 percent. What about lower extremities, here is a hip joint are dominating with 26 percent followed by the knee. Knee is painful but the movement are not so limited. Only limitations in nearly 9 percent of the participants. What about the muscles? Painful hypotonic muscle

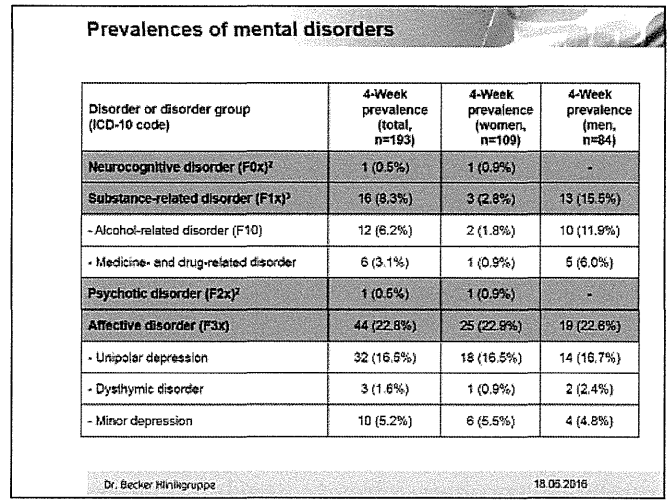


sections as we heard al ready several times, paracervical muscles about 66 percent, trapezius muscles about 77 percent, parathoracic muscles about 40 percent, paralumbar muscles about 36 percent. What about degenerative changes? You see degenerative changes. You see we have degenerative changes in the cervical spine about 23 percent followed by lumbar spine about 21 percent. Degenerative changes of the hip, osteoporosis of the hip in about 70 percent, that's much rarer as in Sweden. And as the knee in about 15 percent but only extra examination those patients were painful joints. It's different to you.

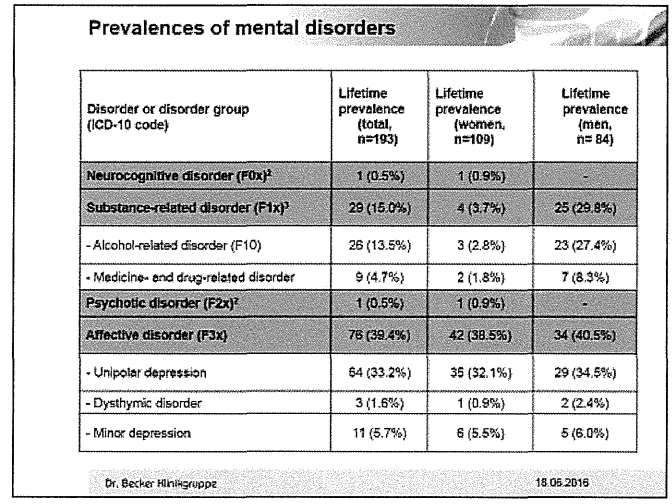


You did the CT scans all of your participants. That may say the differences. What about chronic pain? What we did find about chronic pain, 63 percent of all our thalidomide patients have chronic pain as stage 2 and 3 of ???. There is chronic pain, and used the pain detection questionnaire only have still nociceptive pain. And the other patients, the other 50 percent have already neuropathic pain. That' a lot.

Now to mental disorders. Due to ICD code, you see, substance related disorders are really common and all that four-week prevalence so called point prevalence. In the point prevalence you see substance related disorders are in about 15.5 percent of all of men. The women are less in only 2.8 percent. Effective disorders are very common in all groups. In men 22.6 percent and the same percentage in women. That's a four-week prevalences. If you see in the lifetime prevalence, substance-related disorders, for example, especially alcohol related disorders are common in men 25 percent, in women only in 2.8 percent. The men are much more affected by alcohol related disorders in Germany than women. And medicine and drug-related disorders also men are more common than in female. 8.3 percent versus 1.8 percent. Another group of mental disorders as effective disorders is especially the depression. You see the lifetime prevalence of all people both genders about nearly 40 percent of all thalidomide survivors in the study had effective disorders. And nearly equal i n men and women. You see in women 38.5 percent versus 40.5 percent in men especially depressions. What about neurotic stress and some other stress disorders? Also a huge amount in the four-week prevalence, you see about 27 percent of all, and the women a bit more than the



Disorder or disorder group (ICD-10 code)	4-Week prevalence (total, n=193)	4-Week prevalence (women, n=109)	4-Week prevalence (men, n=84)
Neurocognitive disorder (F0x)[2]	1 (0.5%)	1 (0.9%)	-
Substance-related disorder (F1x)[3]	16 (8.3%)	3 (2.8%)	13 (15.5%)
- Alcohol-related disorder (F10)	12 (6.2%)	2 (1.8%)	10 (11.9%)
- Medicine- and drug-related disorder	6 (3.1%)	1 (0.9%)	5 (6.0%)
Psychotic disorder (F2x)[2]	1 (0.5%)	1 (0.9%)	-
Affective disorder (F3x)	44 (22.8%)	25 (22.9%)	19 (22.6%)
- Unipolar depression	32 (16.5%)	18 (16.5%)	14 (16.7%)
- Dysthymic disorder	3 (1.6%)	1 (0.9%)	2 (2.4%)
- Minor depression	10 (5.2%)	6 (5.5%)	4 (4.8%)



Disorder or disorder group (ICD-10 code)	Lifetime prevalence (total, n=193)	Lifetime prevalence (women, n=109)	Lifetime prevalence (men, n= 84)
Neurocognitive disorder (F0x)[2]	1 (0.5%)	1 (0.9%)	-
Substance-related disorder (F1x)[3]	29 (15.0%)	4 (3.7%)	25 (29.8%)
- Alcohol-related disorder (F10)	26 (13.5%)	3 (2.8%)	23 (27.4%)
- Medicine- and drug-related disorder	9 (4.7%)	2 (1.8%)	7 (8.3%)
Psychotic disorder (F2x)[2]	1 (0.5%)	1 (0.9%)	-
Affective disorder (F3x)	76 (39.4%)	42 (38.5%)	34 (40.5%)
- Unipolar depression	64 (33.2%)	35 (32.1%)	29 (34.5%)
- Dysthymic disorder	3 (1.6%)	1 (0.9%)	2 (2.4%)
- Minor depression	11 (5.7%)	6 (5.5%)	5 (6.0%)

Prevalences of mental disorders

Disorder or disorder group (ICD-10 code)	4-Week prevalence (total, n=193)	4-Week prevalence (women, n=109)	4-Week prevalence (men, n=84)
Neurotic, stress, and somatoform disorders (F4x)	52 (26.9%)	33 (30.3%)	19 (22.6%)
- Phobic disorder (F40)	24 (12.4%)	14 (12.8%)	10 (11.9%)
- Anxiety disorder (F41)	5 (2.6%)	4 (3.7%)	1 (1.2%)
- Panic disorder	*4 (2.1%)*	*3 (2.8%)*	*1 (1.2%)*
- Generalised anxiety disorder	*1 (0.5%)*	*1 (0.9%)*	-
- Obsessive-compulsive disorder (F42)	2 (1.0%)	1 (0.9%)	1 (1.2%)
- Post-traumatic stress disorder (F43)	6 (3.1%)	5 (4.6%)	1 (1.2%)
- Dissociative disorder (F44)	-	-	-
- Somatoform disorder (F45)	27 (14.0%)	18 (16.5%)	9 (10.7%)
- Pain disorder	*24 (12.4%)*	*17 (15.6%)*	*7 (8.3%)*
- Other somatoform disorders	*4 (2.1%)*	*2 (1.8%)*	*2 (2.4%)*

Dr. Becker Klinikgruppe　18.05.2016

Prevalences of mental disorders

Disorder or disorder group (ICD-10 code)	Lifetime prevalence (total, n=193)	Lifetime prevalence (women, n=109)	Lifetime prevalence (men, n= 84)
Neurotic, stress, and somatoform disorders (F4x)	59 (30.6%)	37 (33.9%)	22 (26.2%)
- Phobic disorder (F40)	27 (14.0%)	16 (14.7%)	11 (13.1%)
- Anxiety disorder (F41)	10 (5.2%)	7 (6.4%)	3 (3.6%)
- Panic disorder	*9 (4.7%)*	*6 (5.5%)*	*3 (3.6%)*
- Generalised anxiety disorder	*1 (0.5%)*	*1 (0.9%)*	-
- Obsessive-compulsive disorder (F42)	3 (1.6%)	2 (1.8%)	1 (1.2%)
- Post-traumatic stress disorder (F43)	8 (4.1%)	7 (6.4%)	1 (1.2%)
- Dissociative disorder (F44)	1 (0.5%)	1 (0.5%)	-
- Somatoform disorder (F45)	27 (14.0%)	18 (16.5%)	9 (10.7%)
- Pain disorder	*25 (13.0%)*	*18 (16.5%)*	*7 (8.3%)*
- Other somatoform disorders	*4 (2.1%)*	*2 (2.8%)*	*2 (2.44%)*

Dr. Becker Klinikgruppe　18.05.2016

Prevalences of mental disorders

Disorder or disorder group (ICD-10 code)	4-Week prevalence (total, n=193)	4-Week prevalence (women, n=109)	4-Week prevalence (men, n=84)
Eating disorder (F50)	5 (2.6%)	5 (4.6%)	-
- Anorexia nervosa	3 (1.6%)	3 (2.8%)	-
- Other eating disorder	2 (1.0%)	2 (1.8%)	-
Personality disorder (F6x)[1]	15 (7.8%)	6 (5.5%)	9 (10.7%)
Mental retardation (F7x)[2]	4 (2.1%)	1 (0.9%)	3 (3.6%)
Presence of at least one mental disorder	91 (47.2%)	51 (46.8%)	40 (47.6%)
- One diagnosis[2]	50 (25.9%)	29 (26.6%)	21 (25.0%)
- Two diagnoses	25 (13.0%)	14 (12.8%)	11 (13.1%)
- Three or more diagnoses	16 (8.3%)	8 (7.3%)	8 (9.5%)

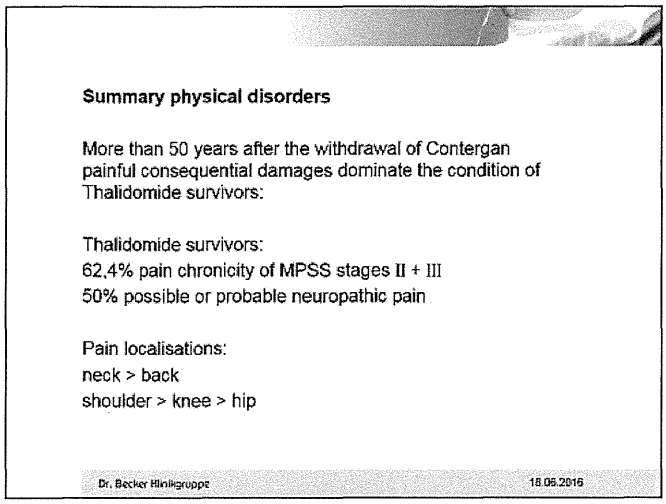
Dr. Becker Klinikgruppe　18.05.2016

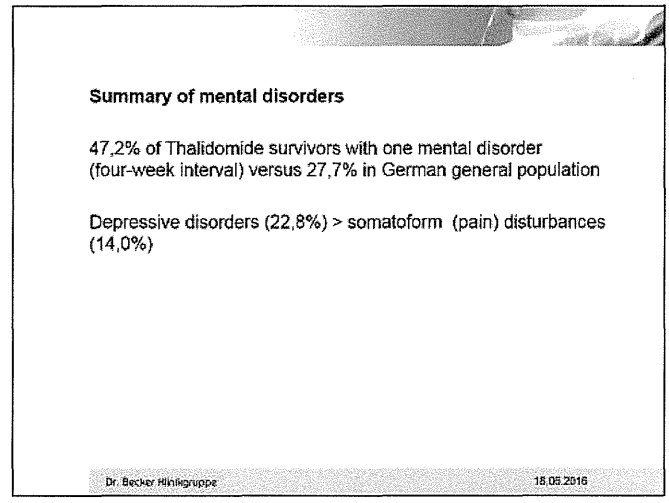
Prevalences of mental disorders

Disorder or disorder group (ICD-10 code)	Lifetime prevalence (total, n=193)	Lifetime prevalence (women, n=109)	Lifetime prevalenc e (men, n= 84)
Eating disorder (F50)	7 (3.6%)	6 (5.5%)	1 (1.2%)
- Anorexia nervosa	3 (1.6%)	3 (2.8%)	-
- Other eating disorder	4 (2.1%)	3 (2.8%)	1 (1.2%)
Personality disorder (F6x)[1]	15 (7.8%)	6 (5.5%)	9 (10.7%)
Mental retardation (F7x)[2]	4 (2.1%)	1 (0.9%)	3 (3.6%)
Presence of at least one mental disorder	115 (59.6%)	62 (56.9%)	53 (63.1%)
- One diagnosis[2]	51 (26.4%)	30 (27.5%)	21 (25.0%)
- Two diagnoses	36 (18.7 %)	17 (15.6%)	19 (22.6 %)
- Three or more diagnoses	28 (14.5%)	15 (13.8%)	13 (15.5%)

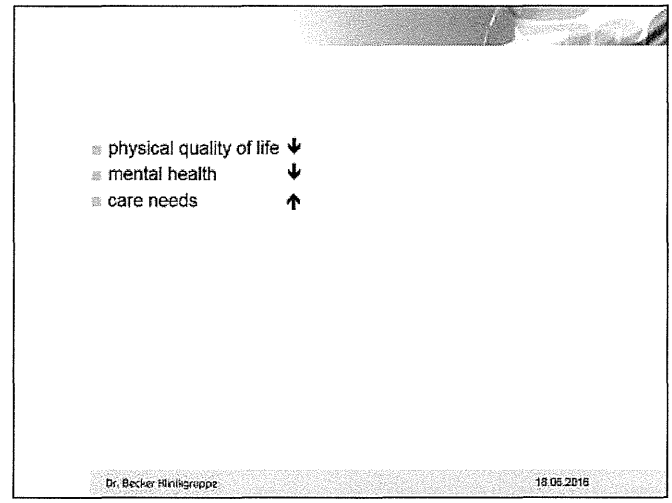
Dr. Becker Klinikgruppe　18.05.2016

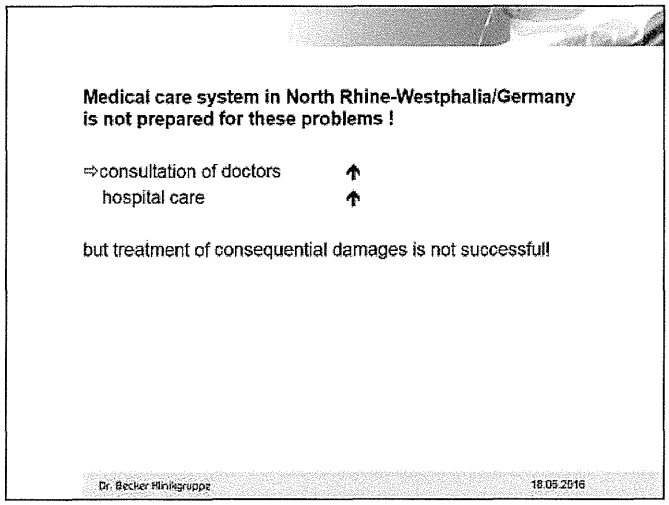
men. That's the four-week prevalence. And if you see the lifetime prevalence, it's even higher, it's normal must be. So, 30.6 percent of the whole collective. And the women a bit more than the men 33.9 percent against 28.2 percent. And here you see especially phobic dis order as the problem. And some matters of the disorder ab out 14 percent of lifetime prevalence. Eating disorders are very rare and only in female. Men have no eating disorders. And if you see personal disorders, in 7.8 percent and bit more in men in the lifetime prevalence than in the women. And if you look at the presence of the mental disorders, admit the one mental disorder in about 47 percent in the four-week prevalence, and that's nearly equal if you compare women with men if you have one diagnosis. If you have two diagnoses in another 13 percent in three of more mental diagnoses in about 8.3 percent of the participants. And if you see here in the lifetime prevalence, you have already nearly 60 percent of all thalidomiders have at least one mental disorders, that's a lot. You see the men are a bit worse than the women. And if you see one diagnosis, two diagnoses, three and more diagnoses you see 26 percent one diagnosis even 18 percent have two diagnoses, and another 14.5 patients have even three or more mental disorders. That's a lot, much more than in the German community. Now we come to the summary of the physical disorders. More than 50 years after the history of Contergan (thalidomide) painful secondary damages dominate condition of thalidomide survivors. To the pain chronicity 62 percent of the patients have chronic pain of the MPSS stages 2 and 3. And in half of them pain is already neuropathic pain. And if you look for the pain localization you can say neck is more than back. And if you see the joints, shoulder is more than knee and than hip. Some other mental disorders, 47 percent of thalidomide survivors have one mental disorders in the four week prevalence

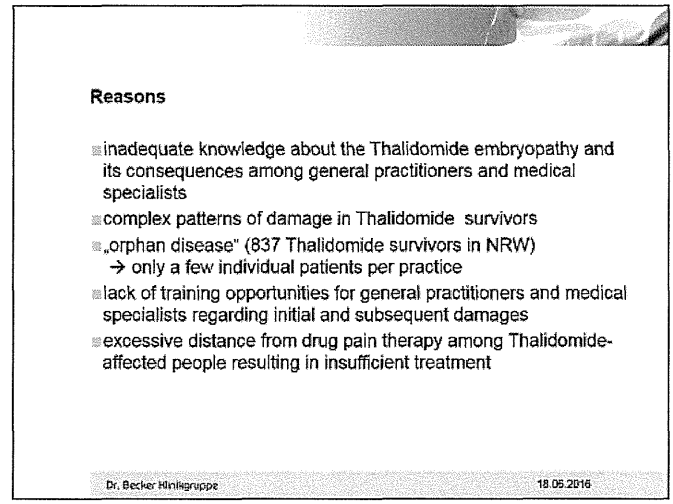




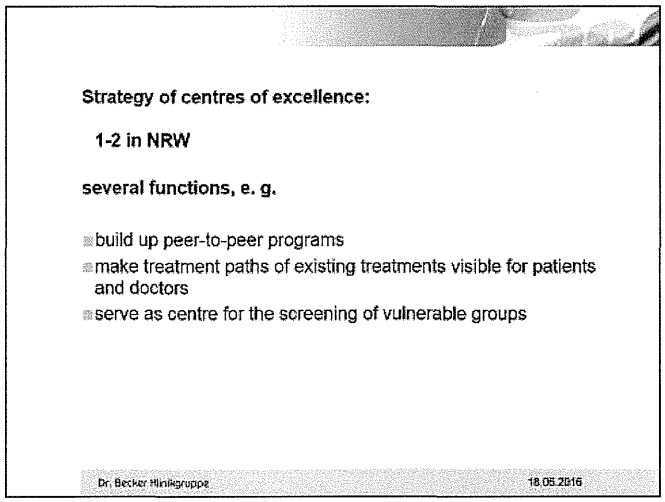
that means point problems versus 27.7 percent in the German general population. You see the point prevalence is much higher in the thalidomide survivors in the general German population. And the depressive disorders dominate before against some other form pain disturbance as you see 22.8 percent versus 14 percent. What is the other result physical quality of life also thalidomide survivors becomes worse. The mental health becomes worse, and their care needs increase. Our problems in Germany, t hat's medical care system is not prepared up to now for these problems. Although we have increased consultation of doctors and

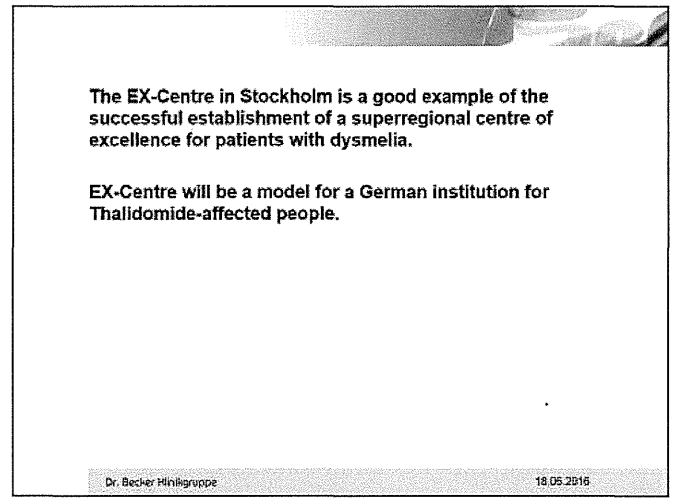




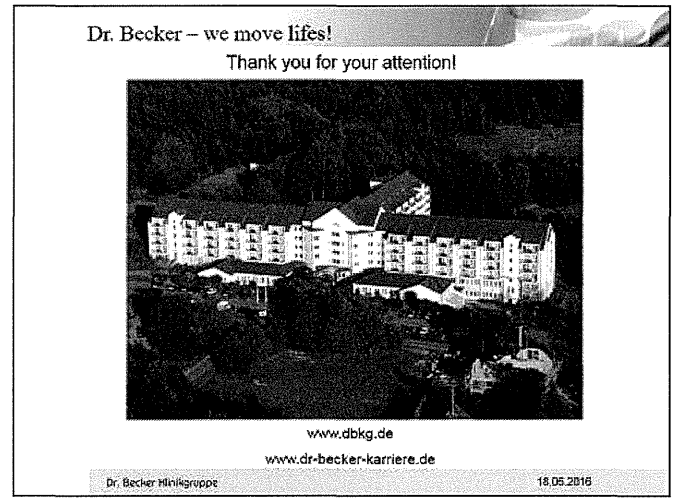


increased hospital care of the thalidomiders. But the treatment of the secondary consequential damages is not successful up to now. What are the reasons of set situation? We have nowadays inadequate knowledge about thalidomide embryopathy, and its consequences among the general physicians and medical specialists in Germany. Why? We have a complex patterns of damage in thalidomide survivors. They are not unique, they're very different. And TE isn't an open disease. You see only 837 thalidomide survivors in North Rhine-Westphalia about 2,500 in all Germany. And as a spe cialist or a general practitioner, you have only a few individual patients every practice. That's a problem. And we have lack of training opportunities for the general practitioners and medical specialists regarding initial and





subsequent damages. And on the other hand, even excessive distance from drug pain therapy among thalidomide-affected people resulted in insufficient treatment especially in pain. What is the strategy and results of our study regar ding North Rhine-Westphalia? We want to establish centers of excellence and also in Westphalia we want to establish one or two of these centers, these centers should have several functions. We want to grade up peer to peer programs. We want to make treatment path of existing treatments visible for patients and doctors. And we want to serve as a center for screening of one of groups within the thalidomiders. The EX Center of Stockholm as you visited in September is a good example for the successful establishment of superregular center for excellence for patience of Westphalia. And the excellent model of our German institutions for thalidomide affected people. And that's our clinic and I think it's a lot to do in the future for the thalidomide survivors, and we have to do it. Thanks a lot.



Hinoshita： Thank you very much, Dr. Peters. Do you have any question? Dr. McCredie.

McCredie： You have an alarming number of mental diseases.

Peters： Yes.

McCredie： Is that largely reaction to the s tuations they're finding themselves in or something else?

Peters： I think it's a lot of them were not detected up to now. I think its percentage is much higher than they knew. Because all these patients were examined by the skit interview, and also systematic very intense interview about three hours last to put these diagnoses together. And it's a moment a lot of people didn't have these examination, therefore the numbers we know are much lower. But in reality, they are higher. And we have to do, we have to come to these patients.

McCredie： I think in Australia we are getting it at sideways because I've been told by those who

lumbar thalidomide association of the other. Almost all the thalidomiders are in antidepressants. That's a sort of sideways look as the same thing.

Peters： Yes.

Hinoshita： OK. Is there any other question? Dr. Schulte-Hillen.

Schulte-Hillen： Thank you very much for this presentation. I want to make a remark on teeth wear. I think the name were ??? 2008. They had a similar approach and they wanted to find out whether the teeth, the very bad teeth of the thalidomiders came from abuses as beer can opener, something like that. And they found out not to be the case but they found out that 42 percent of the thalidomiders had gastric regurgitation. And they thought that could be the explanation, so maybe somebody in your clinic has very bad teeth. It could be a good idea to perform gastroscopy to find out he has a reflux problem.

Hinoshita： What do you say to this, Ms. Newbronner?

Newbronner： Just a brief comment to follow on that certainly in the survey brief comment l problems are far more common in the thalidomiders who have no limb damage than the people with limb damage which perhaps suggests that there are other causes including poor dental hygiene for people with facial disfigurements. So I think that was borne out by the Swedish study, wasn't it?

Hinoshita： Anyway, the mouth or a dental problem has not been focused so far. Then it's a new theme to treat thalidomiders from now and near future. Anyway, Dr. Maruoka.

Maruoka： My name is Maruoka. I belong to the same hospital as Dr. Hinoshita. Please let me speak Japanese. OK? For the regurgitation and bruxism are related, and because of the regurgitation there are some acids. And the acids are just cause of the decay of the teeth, and that's quite plausible.

Hinoshita： He said regurgitation might influence the teeth, maybe. We should start think of this further. OK. Any other question? Yes, please Dr. Kayamori.

Kayamori： I would like to ask prosthesis inserted in the shoulders. Could you comment on the insertion of artificial joint? Your opinion?

Peters： Yes. Here, several cases this osteoarthrosis of the shoulders will be put in inverse prosthesis. Then we have no problems of this rotator cuffs.

Kayamori： I was asked to have a Japanese thalidomider want to have a surgery in the shoulder. But I don't think artificial shoulder is not effective for a pain, because shoulder gel is so weak. So that's a reason why reply, no recommendation for the patient.

Peters： We are different. Depends on the joint. If it's a complete joint. Lots of them have new complete joint and no joint arthrosis, that's easy. But if you have a complete shoulder joint, and opportunity to do that joint but then you should do inverse prosthesis not only most cases, it's not sufficient to do ??? at plastic joint because of the muscles. Must have ??? muscle to do the Swedish solution. Otherwise you won't be successful.

Kayamori： Probably the problem is what calls a pain. That's a problem. Joint arthrosis is mainly a problem, that's one I think needs to have a surgical treatment. But pain is questionable one cause hypoplastic muscle, weak muscle.

Peters： Have you differentiated in advance before? You have to see if it's arthrosis pain or it is cause be the muscle. Then you can do by injections for example to see it comes from the muscles or comes from the joint.

Kayamori： But that one is normal person. So there are lots of factors or contributing to the pain in the thalidomiders. That's, if we are familiar with whole thing, comprehensive understand what the problem is existence.

Peters： To see comes from the joint, it's you have to make injection in the joint. And if the pain wait about 24 hours, then you know main pain comes from the joint.

Hinoshita： OK, then Dr. Beyer, please.

Beyer： So that is what I think, too. I'm with you in this part. In this region, you have really multi-reason having pain, from the bones, from the joints, from the muscles, from the fascia. And I think it's really good idea to distinguish between these different tissues by injecting local anesthetic in the joint because local anesthesia will work if it's a problem link to the joint from my point of view. And if you are sure that you are in the joint by ultrasound controls or whatever. I'm quite sure if the problem comes from the joint, you can solve it for 24 hour or maybe 10 hour. But you can't distinguish very good between muscles and joint itself.

Peters： Yes. Most of the problem is muscular problems. You see you have about 80 percent, 60 percent of our patients had shoulder problems. And you have done shoulder prosthesis up to now about five or six. You see its minority, only few cases. Most of them have muscular problems, and then you have to clear this problem. But one of them is osteoarthritis and therefore artificial joint can be benefit for this.

Kayamori： You you're thinking chronic pain is due to arthrosis. Patients complains of chronic pain. That means we have been doing the treatment for a long time. But still patients complain about pain. That is chronic pain, so we use a lot of medication and physiotherapy. But we reserve an operation. So if we are familiar with choice of chronic pain. But so far we don` t know.

Peters： I think it's depends on the history also pain. You can have a chronic pain, but suddenly pain of the shoulder comes worse and worse. Then you have to look.

Kayamori： Do you have to consider whole thing? Just we are talking about only one place. That is a shoulder pain. But patient complain about back pain, neck pain, lots of things. But even though we do surgery for the shoulder, but still patients complain about pain, other place. That is true.

Peters： But the solution is to replace their shoulder, you can only have solution for shoulder pain, not for the back pain. That's normal. But if you have severe problem with the shoulder and can't sleep any night because of the pain of the shoulder, then shoulder joint can be a solution for that pain.

Kayamori： So you came from North Rhine-Westphalia. That is I think Aachen is a capital. So I visited once while, I visited Aachen where I found head of Grunenthal is over there. There are producing a good medicine named analgesia. That's good one. Grunenthal is just producing, selling drugs.

Peters： Right.

Kayamori： Yeah. So if you think pain is due to arthrosis, if you prescribe good analgesia before doing surgery. How about prescribe good medicine.

Peters： You see you do before surgery long distance of other treatment before you said. It's the end of the story. This is the end of the story.

(Unclear)

Hinoshita： OK. There seems to be a great gap between both of your opinions. Anyway, after this symposium please individually discuss it. And then, is there anyone who can have any other short comment about this program? From doctors from England or Dr. Nakamura, or someone else?

Newbronner： I can give you the letter that consultant gave to me. I did the slide on. So you can have a little look at his comments again on wide shoulders causes the problem.

Peters： Can you do that tonight?

Hinoshita： OK. Anyone else? OK,

Newbronner： I was just interested, because your findings in relation to prevalence of mental health is very similar to our self-reported findings. And I wondered if you, that strategies you are using to help thalidomide survivors who have mental problems. Furthermore what approaches you're using because I think that is difficult issue for us in England.

Peters： Different approaches, most of them have ambulance psychotherapy in the ambulance setting.

Hinoshita： OK. Dr. Beyer, please.

Beyer： So I think it's a good idea to admit every one of them psychotherapist to find out whether he needs help or not. I mean it's a difficult thing, because there is a high barrier to go to a brain doctor. Because everybody say "No, I'm not crazy." But I think you should convince your patient to do so. Even if you find a mild depression, maybe this could be helpful for the patient. And in cases of major depressions or other mental disorders you need an expert to classify whether this needs for example, to be treated in a hospital or in an ambulance setting even if you have the feeling something is not OK there, you can't name it really good.

Hinoshita： OK. I have one question. In Germany, you have so many thalidomiders. There're the most over the world. But you have found so many specialized hospitals. And you are talking about the strategy of centers of excellence. Also in England, Dr. Morrison and other staff are trying to make the specialized

hospitals for the thalidomiders. Wrightington Hospital and Royal National Orthopaedic Hospital. And in Japan, we have seldom specialized hospitals exclusively for thalidomiders. May I ask you how to deal with thalidomiders to do some specialized operations? Or to control pain or to support dental problems or so? I mean for the patients far away from the specialized hospitals, it's difficult for them to go to the medical center. So do you have any good idea about this program?

Beyer：Yes. They can come as outpatient. Then he get examination and proposal what to do, and can do as ambulance patient at home. Or if you have a severe problem, you can come as inpatient to our clinic. If he has to have surgical procedure, there is a specialist in clinic. I and team surgical procedure.

Hinoshita：So you think one of the best ways is to establish the specialized hospitals.

Beyer：Yes.

Hinoshita：Even if a few in each country? The same idea as the United Kingdom?

Morrison：We don't have a single specialist centre because one hospital would not be able to cover every issue. So we refer to individual specialists which is what I tried to show this means the individual has to travel. But as I said, some hospitals have more specialists than others. So if a patient has a problem I just try to find the best person around the area they are willing to travel to. But quite often they like to see a specialist who has seen others like themselves - they don't like doctors who are not used to their damage and make comments when putting X-rays up and seeing the unusual anatomy which is not unusual when the individuals go to the local hospitals. Communication between beneficiaries as to how they have been helped is important and hence Facebook. But you often meet individuals who do not want help and I think Christina said or Janet said this, a certain group who do not want operations, and don't want to have anything done. And maybe you have to wait for them to be ready. And try to work with them slowly so they will accept help.

Hinoshita：Thank you very much. How about in Switzerland, Dr. Schulte-Hillen?

Schulte-Hillen：Thank you very much. I come from Germany. But I moved for job purposes for Switzerland. I know that the German thalidomide trust aides pensions to exactly nine patients in Switzerland. And I have so far tried to invent to contact them. They are absolutely no way organized.

Hinoshita：So if somebody has any serious problem which needs operations or so, they might visit some hospital in Germany?

Schulte-Hillen：Sorry, I did not understand this.

Hinoshita：OK. If thalidomiders living in Switzerland should go to Germany for some operations, specialized operations or so?

Schulte-Hillen：This should be possible on any account, but I don't know very much that any Swiss patient would go to Germany for any treatment. I'm sorry they are very special.

Peters：But I think there is international exchange also to get patients from Beijing or Netherlands

for example for doing surgical procedures.

Schulte-Hillen： Of course I would advise them to go to and see you, too, because I know there are very capable specialists if I was asked but so far I have not been asked.

Hinoshita： OK. Will you understand the situation in each country? Any other question or opinion, or comment? Nothing? Thank you very much, Dr. Peters. Then, let's have a brief intermission until 5:25 PM. From 5:25, we will start the joint discussion. Thank you.

(Intermission)

⑨Joint discussion

Hinoshita： And all of you are ready? Get your own receiver. All right? Then let's start the joint meeting or discussion finally. Actually I have ever given the symposiasts several main topics for the joint discussion. First, I will show them the question. What are the key problems thalidomiders are medically facing now? Today, we could listen to the basic and detailed reports in the general survey in Germany, United Kingdom, Japan, and Sweden. How can we overcome these problems? Then, first of all, can we hear from Dr. Kayamori or Dr. Shiga as for the situation in Japan? What is the most serious problems the thalidomiders are now facing?

Shiga： I think the most important problem is pain. And I met about 20 patients in a hospital, about 20 patients in the past time. Then I analyzed about lifestyle-related diseases and so on, but I talked with them, always they said "We have pain." So please solve this problem.

Hinoshita： Do you agree to this opinion, Dr. Kayamori, now in Japan?

Kayamori： Yes, we carried out a survey that is a study on health status and living condition of Japanese thalidomiders in 2012 in accordance with that survey that Japanese thalidomiders complain about shoulder pain, 44 percent and lumbar pain always 44 same in the short arm groups as well as hearing loss group. So chronic pain is one of the most troublesome problems in the Japanese thalidomiders.

Hinoshita： How about in Germany, Dr. Peters or Dr. Ding-Greiner?

Peters： I think it's same in Germany as well. Most problems are the chronic pain.

Hinoshita： The same opinion, Dr. Ding-Greiner?

Ding-Greiner： I think pain is one thing and a loss of mobility of function the other. What will we do with this people when they are not able to move? We do not have enough assistant people in Germany, and care and nurses, there are not enough for what they need. And they are cognitively absolutely up to date. So they can't go to restrooms without those people. They are in a bad situation like an 80-year old person. But they are 50 years old, so they have a young mind. And I think there is something which they even don't want to think of it. And we don't know what to do. If you have short arms, it makes a difference for the way you arrange your home of only 10 centimeters you make a difference. And they

are no home. You could adapt the environment to your physical situation. So they will lie on the bed, they will sit on the chair, and that's all they can do. And I don't think it's a lifestyle. I don't think it's a life they deserve. I think it's a very, very big problem. They are open for technique innovation more than elderly people we have in Germany, because they see it's only way of getting some autonomy.

Hinoshita： OK. Most of the thalidomiders have great anxiety for the later life, right? Then also the ADL, Activity of Daily Living, is now poor, and we should improve the housing condition or the living environment, right?

Ding-Greiner： That's a financial problem.

Hinoshita： Yeah, financial problems.

Ding-Greiner： A very big financial problem. That's what the problem is. Because it's high cost.

Hinoshita： But in UK, the government had decided to give great benefit, you know? How about the situation in UK?

Newbronner： In the UK, because the financial situation for thalidomiders has improved substantially since 2000. In particular from 2010 when people received the health grant. And in the UK, the health grant is 75 percent of people's annual compensation grant. So it is big improvement in people's financial situations. And what we found in the UK is that people make different choices when they have the resources to make choices about how they want to live and how they want to spend their money and preserve their health. They make different choices. Some people choose to adapt their homes or buy equipment, other people buy assistants. And they pay for all kind of health care. And I think giving people the freedom to make those choices is really crucial alongside of the knowledgeable of special medical treatment and health care. But in their daily lives people need the financial resources to decide themselves what will make their lives better.

Hinoshita： I see. How about in Sweden? Now pain and the house living have been focused on. Pain is a great problem in Sweden, too?

Ghassemi： Yes, I believe so. In the beginning, when I started a study, we didn't have so many responses as I showed you before. Now I think because it was they were so independent, and they didn't even want to be part of any studies. But when we were in Stockholm at the entry meeting, first thing I heard that "Can't you start these your study again?" They preferred the CT again because I think now they are dealing with problems with pain. I totally agree with you. Because not only pain it's just concern about being very dependent future. And it's the (???@04:26:12) case just to accept for many of them. And it comes to the economy and I know that is in Sweden, the stage has agreed with the almost huge sum of money for the whole association. I think it's as the president was telling me I think it's something like 1.8 million euro which is, and as you say they are trying to divide their money not exactly equal, because it depends on how many points of impairment they have. And I think they are going to use that money for the (???@04:27:00) house or so.

Hinoshita： Financial aid and support.

Ghassemi： Yeah.

Hinoshita： Thalidomiders accept it, too.

Ghassemi： Yes. That is actually a part from the monthly grant. The monthly one they have from the Astrazeneca.

Hinoshita： How about in the Switzerland or the area around you? And you, yourself how do you feel about it?

Schulte-Hillen： Personally I think the most burning question of the thalidomiders is the question of relieving pain and the question of loss of autonomy. Because they have led the life a lot of autonomy and a lot struggle until now. And they see themselves impaired by age and but we as doctors should not forget there is another burning problem which is not heard, that is, hypertension, there is no way to measure correctly hypertension in these people. That is Dr. Ding-Greiner pointed out earlier today. These people are in danger for cardiovascular disease. And there must be every effort I think should be taken to find device that permits measuring blood pressure correctly.

Hinoshita： From the standpoint of thalidomiders, pain is a very important problem for you?

Schulte-Hillen： For me, personally not. Because I do not have pain.

Hinoshita： But other thalidomiders?

Schulte-Hillen： As far as I know them, yes.

Hinoshita： In the latter part of discussions, pain was discussed very hotly. How would you solve the pain control, Dr. Beyer?

Beyer： I would like to analyze but I can't take everyone's pain. But you wouldn't be able to take part of life, so I think it's important to see pain therapy has always to focus on mobility. In first instance, if you prescribe medication which cause severe dizziness in a patient, you might danger him for falling down or breaking bones whatever. So I think it all need to be rational for the individual problem of this individual patient. And individual patients have to agree with it. Because if you prescribe pills he doesn't want to have, he never takes it. And you always have to find individual solution, otherwise it will not work out at all. And I'm sorry to say this. No medication or whatever you can give for completely pain relief. And you have to take everything, otherwise you can't get. Acupuncture, fascial manipulation, you have to try everything. And maybe there is strategy to start with more harmless therapies to find out whether it helps, together with others. Then tostart with, a harmless therapy. So it takes time. You can't do at once. You can't predict how it works out. Take time, and you have to discuss this with the patient to let him understand. There is no solution for this. Sometimes operation might be good.

Hinoshita： Systematic strategy is needed for pain, Dr. Ding-Greiner.

Ding-Greiner： This is a very important point. To discuss therapy with the patient takes time. And this amount of time we do not have in our health system in Germany, neither in hospitals. At the Hospitals