Research report on

the

ATLANTOtec®

Patient survey

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INKAM

INSTITUT FÜR KUNDENZUFRIEDENHEITS-ANALYSEN
UND MARKETING PROF. DR. THEIS GMBH

Agenda

1 Abstract

The ATLANTOtec® method is a special massage technique for correcting atlas misalignment. In order to be able to statistically record changes in patients' complaints following an ATLANTOtec® treatment, two ATLANTOtec® practices in Switzerland and Sweden carried out patient surveys in 2008 and 2009.

The interviews were conducted with the help of a standardised questionnaire, which was presented to the patients immediately before and approximately one month after the treatment during a follow-up session. The questionnaire contained 18 predefined areas of complaint (e.g. neck, shoulder, back and knee pain as well as headaches, sleep disorders and migraines) and the patients had the task of indicating their respective level of complaint before and after the treatment in the dimensions of frequency and severity of the complaints on a 7-point rating scale (without verbal anchoring of the scale levels).

The questionnaires were collected and statistically analysed by the scientific institute INKAM (Institut für Kundenzufriedenheits-Analysen und Marketing Prof. Dr. Theis GmbH, Marburg). A total of 504 people, 297 women and 207 men, all aged between 16 and 84, took part in the survey. The degree of accuracy of the survey results is +/- 4.45% (degree of certainty 95.5%).

The following findings were summarised from the study:

- Very few patients came for treatment for just one or two reasons. As a rule, 10 or more areas of complaint were stated.

- 74% of all patients were symptom-free in at least one area of complaint one month after treatment.

- In terms of complete pain relief, the treatment achieved the greatest success in **migraine patients**: 39% of all respondents were free of pain (one month) after atlas correction, while a further 43% experienced relief in the frequency and/or severity of their pain.

- Over 85% of all patients surveyed stated that they were symptom-free or had at least noticed a reduction in the frequency and/or severity of their symptoms in the following areas around one month after the ATLANTOtec® treatment: **Neck pain, headaches and tension**.

- At least 7 out of 10 patients surveyed stated that they were symptom-free after ATLANTOtec® treatment or had at least noticed a reduction the frequency and/or severity of their symptoms in the following areas: Shoulder complaints, dizziness, migraine, low back pain, fatigue, hip complaints, sleep complaints, tinnitus, depression and gastrointestinal complaints.

The results of the study are available in three versions of different lengths: Research report (130 pages), Research report - short version (43 pages), Results report (1 page)

2   Brief description of the ATLANTOtec® method*

For some time now, manual therapists have recognised that many health problems can be caused by an incorrectly aligned cervical spine. In many cases, this is caused by a misalignment of the first cervical vertebra, the so-called atlas.

The ATLANTOtec® method is used to correct the misalignment of the atlas. The procedure consists of applying a special massage technique to the short deep neck muscles, followed by stretching of specific muscles connected to the atlas. The aim is to release the muscles that clasp the first cervical vertebra in order to allow it to return to the anatomically and physiologically correct position.

A specially developed device is used for the treatment, which pulsates and vibrates at a specific frequency and can be adjusted according to muscle consistency and tone. This device enables relaxation of the deepest muscle layers, which could never be achieved with manual massage.

Following the (one-off) treatment (duration approx. 80 minutes), the body is given a regeneration period of around one month to adapt to the new situation. During a subsequent check-up session (lasting approx. 60 minutes), the position of the atlas vertebra is checked and, if necessary, corrected if it is not yet perfectly aligned.

The ATLANTOtec® method differs significantly from other therapies such as Atlaslogy, Vitalogy, Atlas Therapy according to Arlen or Atlas Orthogonal. No chiropractic adjustments with jerky turns of the head are carried out, nor are any sudden movements made. Instead, the focus is on a deep massage of the neck and back muscles using a specially designed device.

Source: www.atlantotec.com

3 Study design

3.1 Objectives and methodology of the survey

In 2008 and 2009, two ATLANTOtec® practices in Switzerland and Sweden conducted a patient survey. The basic aim of the survey was to record changes in patients' complaints as a result of ATLANTOtec® treatment.

In detail, the survey was designed find out:

- What complaints do patients come to treatment with?

- For which complaints were patients able to determine a successful treatment? For which complaints is the ATLANTOtec® treatment therefore best suited?

- How has the frequency and severity of the complaints changed as a result of the ATLANTOtec® treatment?

From a methodological point of view, the survey is a

- **Before and after examination**: During the period mentioned, all patients were given a questionnaire before treatment in which they were asked to record the frequency and severity of their personal complaints. The questionnaire listed 18 different complaints. In addition, patients were given the option of freely labelling their complaints. In addition, the respondents were asked to state how long it had been since treatment and to enter their age. At the follow-up session, which took place approximately one month later, the questionnaire was handed out again with the request to enter the current complaint status.

- **Sample study**: The survey was conducted in 2008/09 among all patients who were undergoing treatment at that time and who had consented to the survey. The subject of the study (population) was therefore "all patients in the study period". Although this did not pose a selection problem (selection of respondents from all ATLANTOtec® customers), it is not possible to speak of a complete survey. After all, the focus is not on "all patients who were treated with the ATLANTOtec® method".

- **Survey participants:**: A total of 504 questionnaires were analysed. Of all respondents, 297 were female and 207 male. The age of the respondents was between 16 and 84 years.

3.2 Reliability of the test results

Objectivity: The questionnaires were completed by the patients themselves before and after treatment. As a result, the measurement results are independent of personnel (in contrast to a personal interview, in which the interviewer has fundamental opportunities to influence the results). Furthermore, the client assured that all answered questionnaires were passed on to the institute without exception and that no prior selection was made. Under these conditions, the study is objective.

Reliability (reliability): The data analysis is based on the fact that questionnaires were distributed to all patients by two ATLANTOtec® practices over a defined period (1 January 2008 to 31 December 2009). From a methodological point of view, this is a partial survey (random sample study; not all practice patients - all ATLANTOtec® customers - were surveyed). However, since it can be assumed that the selection of survey participants associated with the defined time period does not affect the results of the study (the survey would most likely not have produced a different result if the survey had been conducted in 2007/2008 instead of 2008/2009), the study can be considered reliable.

The question of reliability is closely linked to the question of the **degree of accuracy:** With a confidence level of 95.5% (probability of error 4.5%) and a sample size of 504 questionnaires, a degree of accuracy (random error) of +/- 4.45% can be assumed. This means that the "true" (but unknown) value can deviate upwards or downwards by 4.45%. The level of the sampling error calculated in this way can be regarded as perfectly acceptable for the objective of the study. In the medium and long term, however, the patient survey should be continued so that the sampling error can be further reduced by increasing the number of respondents.

Validity (validity): A measurement instrument is considered valid if it actually measures what it claims to measure. Consequently, validity is largely dependent on which scales were used to record the characteristic values.

Changes in the complaint field are recorded in the ATLANTOtec® questionnaire as follows: The patient is asked twice to complete a questionnaire ("his"). The first time before the first treatment and the second time at an interval of approx. 4 weeks after the treatment in connection with the follow-up check.

They can enter their well-being before and after treatment (in terms of frequency and severity of discomfort) on two 7-point scales. The scale goes from left (green) to right (red) with an increasing tendency. Neither the extreme points nor the individual levels are verbally anchored.

This two-stage approach on one and the same questionnaire proves to be useful from the following points of view:

In principle, the frequency of complaints could have been measured on a metric scale. This would have required the introduction of verbal categories such as "annually, quarterly, monthly, weekly, daily". As part of the analysis, these ordinal categories would have had to be converted into metric data (e.g. for monthly: 12 times a year). This procedure would have had the advantage that the patient could have entered data in two separate questionnaires,

for example, that he had complaints "daily" before the treatment and after the treatment only "once a month". He would not need his assessment before the treatment in order to concretise his condition after the treatment.

On the other hand, there is no such option for complaint severity. Here it would only have been possible to introduce ordinal categories such as "very slight, slight, rather strong, strong, very strong, unbearable". However, due to the inter- and intra-individual differences in perception, these categories are neither stable over time nor comparable between people. Pain can therefore be perceived differently by one and the same person at different times. Furthermore, it is not uncommon for the same pain intensity to be perceived as "severe" by one person and as "very severe" by another. Consequently, there is no metric scale for determining pain intensity and a verbally supported ordinal scale appears unsuitable. If you want to record the intensity of symptoms before and after a treatment, you are therefore forced to switch to a two-stage survey using an ordinal scale without verbal anchoring and with direct time comparison. The patient then has the opportunity to enter their individually perceived intensity of discomfort, their subjective burden of pain. In the second round of questioning (after the treatment), the patient can then directly assess the extent to which their complaints have changed on the basis of the before-comparison value.

Overall, it can be seen that due to the (inevitable) lack of verbal anchoring of the scale levels, it is absolutely necessary to carry out the before and after survey on one and the same questionnaire. This does not affect the validity of the survey. However, if two questionnaires were used, the validity would be questionable.

The validity of the survey can be increased by clearly labelling the first answer boxes (in all questionnaires) as "No/no significant complaints" in future surveys. In addition, a "No response" category should be introduced.

3.3 Interpretation of the frequency/strength scale

As is known, the scale used in the questionnaire has no verbal support for the respondents. However, the coloured area running from green to red above the tick boxes and the colour of the boxes themselves (2x green, 3x yellow, 2x red) shows the respondents that the frequency and intensity increase from left to right.

If a respondent had no complaints before treatment or no more complaints after treatment, they should - according to the intention of the questionnaire developer - tick the first box. This necessity is pointed out in around half of the questionnaires. In the other half, this necessity does not result from a corresponding instruction in the questionnaire (a note: "If you have no complaints, tick the first box" does not exist) but from the overall context: on the one hand, there is no separate option to tick "no complaints" and, on the other hand, the questionnaire asks the respondent to complete the questionnaire in full and the respondent is thus forced to tick one box. This means that no other than the lowest frequency or severity level is possible.

This approach may have caused confusion among some respondents: In market research, it is generally known that respondents who are supposed to give an answer on a rating scale first determine the number of scale levels (i.e. count the levels from 1 to n and number them mentally) and determine the centre of the scale. They need this information to adjust their ticking behaviour.

In this case, the first box is therefore identified as "1" and the last box as "7" (nobody would think of starting their count with "0"). The centre of the scale is "4". The first scale level is therefore perceived as "frequency 1" or "strength 1".

For those who have no complaints at all, the interpretation of the scale creates an explanation problem, as they want to express that they "never" and not "very rarely" (i.e. at the lowest level) have complaints. He now has three options for dealing with this:

First possibility: In the absence of any other answer, he interprets the lowest level as "No complaints" and places his cross (or circle) here. This is also the most likely approach.

Second option: He asks the therapist which answer should be given for "No complaints". Some of the interviewees made use of this option (source: telephone conversation with Mr Lerro). It was then explained to them either to tick the first box or not to tick any box at all. The respondents made use of both answer options.

Third option: The lowest scale level is interpreted as "minor" or "no significant" complaints and "no complaints" is documented by "no response".

The given "completion instructions" and the variations in response behaviour have the following consequences in the context of data evaluation and interpretation of results:

(1) Recoding

It is necessary to interpret both the cross in the first box and "No answer" as "No/no significant complaints" (technical solution: recoding of "No answer" to "1").

In the present case, this approach is necessary due to the constraints, but is not entirely correct in terms of methodology: on the one hand, it is not possible to decide afterwards whether a respondent actually had "No complaints" or wanted to give "No response" to the item. This is largely unproblematic for the "before survey"; the survey result is not significantly influenced. At best, the number of those who had corresponding complaints at the start of treatment could actually be higher. Respondents who - for whatever reason - did not want to answer the item in the follow-up survey are now categorised under "No/no significant complaints". Here, the number of those who still had complaints but did not want to state this ("No answer") could actually be higher.

(2) Elimination of plausibility errors

Respondents opted for option three want to express that they have "minor complaints" (e.g. "very rare" for frequency, "very minor" for severity) by ticking the first box. Here, for example, the combination "frequency 1/strength3" is also plausible.

After recoding, however, this combination is no longer permitted. Because now
"Frequency 1" for "No complaints", which means that the intensity must also not exceed 1 (e.g. the combination "No migraine"/"Medium intensity" is not possible).

In order to obtain valid results, a (time-consuming) plausibility check of the answers given was necessary. The plausibility errors were detected and replaced with answers that were meant by the respondent (in the example: value for migraine frequency set from 1 to 2).

The following table shows which plausibility corrections were carried out in detail and which terms were used for the combination of frequency and strength.

Terminology for treatment outcome for frequency and strength		
Value BEFORE	**Value AFTER**	**Term for treatment result**
1	1	No/no significant complaints
2/3/4/5/6 or 7	1	Complaint-free
3/4/5/6 or 7	lower than VOR (not 1)	Improvement
2/3/4/5/6 or 7	like VOR	No change
1/2/3/4/5/6 or 7	higher than VOR	Deterioration

Possible combinations		
Treatment result - frequency	**Treatment result - Strength**	**Treatment result - total**
No/no significant complaints	No/no significant complaints	No/no significant complaints
	Complaint-free	Not possible (plausibility correction)
	Improvement	Not possible (plausibility correction)
	No change	Not possible (plausibility correction)
	Deterioration	Not possible (plausibility correction)
Complaint-free	No/no significant complaints	Not possible (plausibility correction)
	Complaint-free	Complaint-free
	Improvement	Not possible (plausibility correction)
	No change	Not possible (plausibility correction)
	Deterioration	Not possible (plausibility correction)
Improvement	No/no significant complaints	Not possible (plausibility correction)
	Complaint-free	Not possible (plausibility correction)
	Improvement	Improvement
	No change	Improvement
	Deterioration	Conditional improvement
No change	No/no significant complaints	Not possible (plausibility correction)
	Complaint-free	Not possible (plausibility correction)
	Improvement	Improvement
	No change	No change
	Deterioration	Deterioration
Deterioration	No/no significant complaints	Not possible (plausibility correction)
	Complaint-free	Not possible (plausibility correction)
	Improvement	Conditional improvement
	No change	Deterioration
	Deterioration	Deterioration

Note: For further surveys, ATLANTOtec® is advised to change the questionnaire here accordingly and to clearly mark the first answer box with "No/no significant complaints". "No information" should then be treated as what it is, i.e. as "no values available".

4 Overview of research results at

4.1 Complaint status at the start of treatment

Why do patients come to the ATLANTOtec® practice, i.e. what ailments do they hope to alleviate?

The following figure shows the results of the survey. It shows the proportion of respondents who had complaints before treatment (and therefore ticked between 2 and 7 on the frequency scale).

Proportion of patients who had symptoms at the start of treatment

Complaint	Complaints	None / no significant complaints
Neck pain	94%	6%
Tiredness	85%	15%
Tension	81%	19%
Low back pain	79%	21%
Shoulder complaints	79%	21%
Headache	78%	22%
Sleep complaints	70%	30%
Gastrointestinal complaints	67%	33%
Dizziness	65%	35%
Circulatory problems	60%	40%
Hip complaints	53%	47%
Knee complaints	52%	48%
Depression	45%	55%
Migraine	44%	56%
Tinnitus	39%	61%
Elbow complaints	38%	62%
Nervousness	31%	69%
Blood pressure	30%	70%
Other	18%	82%

The complaints mentioned by the respondents naturally affect patients to varying degrees. For most of the complaints mentioned per person, a rather low frequency/intensity is stated (cf. the analysis of individual complaint fields in Chapter 4). As a rule, they are not the actual reason for visiting the practice. Rather, these are the areas of complaint that occur with great frequency or intensity.

Chapter 3.6. makes clear which complaints these are.

4.2 Number of complaints at Start of treatment

As has become clear, patients generally visit the ATLANTOtec® practice for more than just one complaint. On average, around 11 out of 18 complaints are given.

The following illustration shows how many different complaints patients are "plagued" by at the start of treatment.

Number of complaint areas mentioned by patients at the start of treatment

Reasons	Percentage
1 Reason for treatment	0,4%
2 Reasons for treatment	1,2%
3 Reasons for treatment	0,2%
4 Reasons for treatment	3,0%
5 Reasons for treatment	4,4%
6 Reasons for treatment	3,2%
7 Reasons for treatment	6,9%
8 Reasons for treatment	6,3%
9 Reasons for treatment	8,3%
10 Reasons for treatment	8,7%
11 Reasons for treatment	9,3%
12 Reasons for treatment	10,7%
13 Reasons for treatment	10,1%
14 Reasons for treatment	6,0%
15 Reasons for treatment	6,7%
16 Reasons for treatment	7,1%
17 Reasons for treatment	4,8%
18 Reasons for treatment	1,8%
19 Reasons for treatment	0,8%

Survey result:

Only a few patients come for treatment for one (0.4%) or two (1.2%) reasons. most cases, there are 10 or more different areas of complaint that restrict their well-being

On average, patients named around 11 (out of 18 given) different complaints.

4.3 Treatment outcome general

Patients usually come to the practice with several complaints and hope that the ATLANTOtec® treatment will provide relief.

Treatment success can be said to have been achieved if the patient is "symptom-free" in at least area of complaint after approximately one month (the follow-up survey took place after this period) or if there has at least been a noticeable improvement in the frequency and/or severity.

A further result of treatment may be that the patient has experienced a worsening of their symptoms in at least one area.

Occasionally, a combination of both can also be observed: This is when the frequency of symptoms has increased in at least one area of discomfort and at the same time the severity has decreased (or vice versa). Colloquially, this could be referred to as "worsening" (we use the term "conditional improvement").

Proportion of patients who experienced an improvement or worsening in at least one area of complaint

Complaint-free	74%
Improvement Frequency and/or strength	95%
Conditional improvement	7%
Deterioration	24%
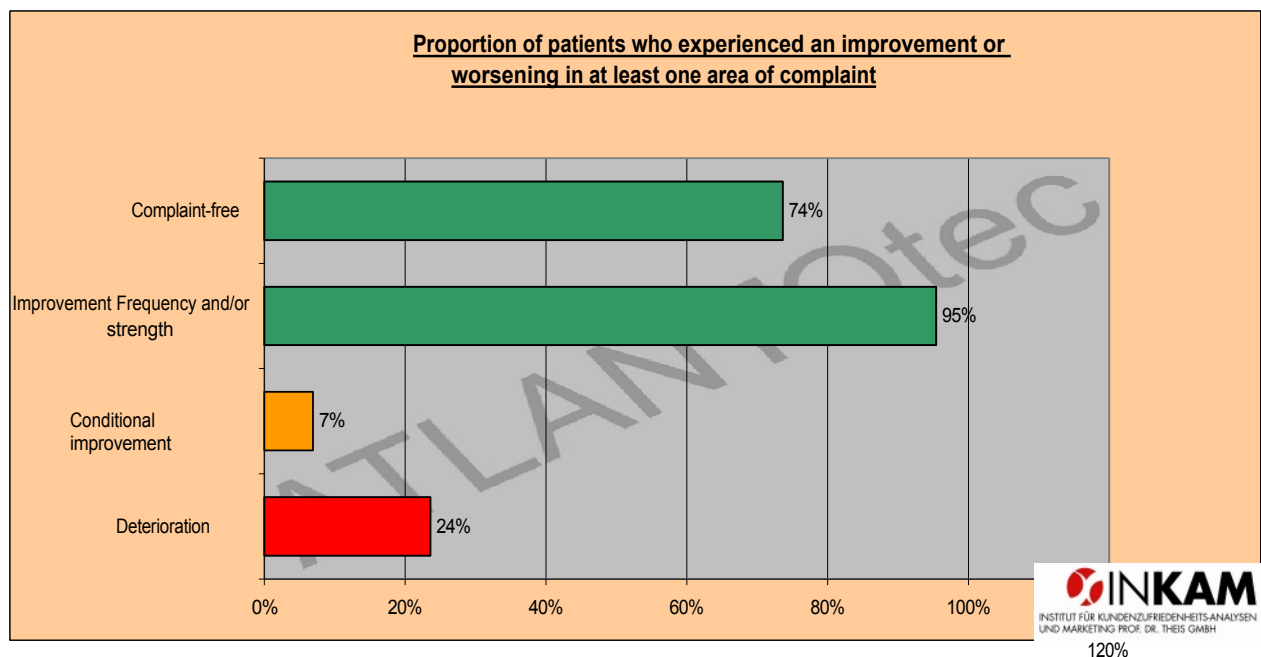
Survey result:

Three quarters of all respondents (74%) were symptom-free in at least one complaint area after the ATLANTOtec® treatment. An improvement in their well-being (due to a decrease in the frequency and/or severity of symptoms) was observed in at least one of their symptoms by 95% of all respondents.

24% observed a deterioration in at least one area of complaint. In 7%, there was a "conditional improvement" in at least one area of complaint.

4.4 Treatment result across all complaint areas

Previously, it was analysed how many patients experienced an improvement or worsening in at least one complaint area. The focus is now on the question of what result is observed for 2, 3, 4, etc. complaint areas. The following table shows the results for all 19 complaint areas surveyed (18 predefined complaint areas and one "other complaint area").

Number of complaints Areas	Percentage free of complaints	Percentage improvement (with frequency and/or strength)	Share Conditional Improvement	Share of deterioration
0	26,4%	4,6%	93,1%	76,4%
1	21,4%	4,8%	5,8%	14,5%
2	16,3%	5,8%	1,2%	5,4%
3	12,9%	7,5%	0,0%	2,6%
4	6,7%	10,1%	0,0%	0,4%
5	4,4%	10,9%	0,0%	0,4%
6	2,8%	11,3%	0,0%	0,0%
7	3,4%	8,1%	0,0%	0,2%
8	1,4%	9,1%	0,0%	0,2%
9	1,2%	8,5%	0,0%	0,0%
10	1,8%	6,2%	0,0%	0,0%
11	0,2%	5,0%	0,0%	0,0%
12	0,6%	3,8%	0,0%	0,0%
13	0,2%	1,6%	0,0%	0,0%
14	0,4%	1,6%	0,0%	0,0%
15	0,0%	0,6%	0,0%	0,0%
16	0,0%	0,6%	0,0%	0,0%
17	0,0%	0,0%	0,0%	0,0%
18	0,0%	0,0%	0,0%	0,0%
19	0,0%	0,0%	0,0%	0,0%

Survey result:

The table shows the treatment result achieved for any number of complaint areas. For example

26,4% in none single complaint area according to the symptom-free after treatment

21,4% in one and 16,3% in two complaint areas symptom-free (consequently: 37.8% are symptom-free in up to 2 complaint areas)

altogether experienced 23,6% a deterioration. Of these 14,5% in one, 5.4% in two and 2.6% in three complaint areas

4.5 Treatment success for individual complaint areas in terms of frequency and severity of complaints

The results described above have shown that the vast majority of patients experienced a general alleviation of symptoms as a result of the ATLANTOtec® treatment. It is now necessary to examine how the treatment has affected the well-being of patients with specific complaints.

Ideally, the patient is symptom-free after treatment. However, success is also achieved when there is an improvement due to decreasing frequency and/or intensity.

On the other hand, the so-called "conditional improvement" has an intermediate position: In individual cases, the frequency of the symptoms decreases while the severity increases (or vice versa; the severity decreases while the frequency increases). The extent to which we can actually speak of an "improvement" here is in the eye of the beholder.

Another possibility is that the patient does not notice any changes after the treatment or that there is even a worsening of the patient's condition.

The following figure shows the results for the individual complaint fields.

Survey result:

The evaluation of the patient survey shows that the ATLANTOtec® treatment was able to improve the well-being of patients in many areas of complaint.

The treatment achieved the greatest success with migraine patients: 39% of all respondents were symptom-free (one month) after the atlas correction. A further 43% experienced an improvement in the frequency and/or severity of their symptoms.

At least seven out of ten patients surveyed stated that they were symptom-free or had at least noticed a reduction in the frequency and/or severity of their symptoms in the following areas around one month after ATLANTOtec® treatment: Neck complaints, headaches, tension, shoulder complaints, dizziness, migraines, lower back complaints, fatigue, hip complaints, sleep complaints, tinnitus, depression and gastrointestinal complaints.

Progression of symptoms after treatment

Symptom	Complaint-free	Improvement in frequency and/or strength	Conditional improvement	No change	Deterioration
Migraine	39%	43%	1%	14%	3%
Depression	30%	41%	1%	27%	1%
Elbow complaints	30%	39%	1%	25%	6%
Dizziness	29%	53%	1%	14%	2%
Tinnitus	28%	45%	1%	25%	2%
Blood pressure	25%	29%	1%	40%	4%
Knee complaints	25%	44%	1%	24%	6%
Nervousness	25%	44%	0%	28%	3%
Hip complaints	25%	50%	0%	19%	5%
Circulatory problems	22%	43%	0%	32%	2%
Other	22%	58%	0%	18%	2%
Headaches	21%	66%	1%	10%	3%
Gastrointestinal complaints	20%	49%	1%	26%	4%
Sleep complaints Lower	18%	57%	0%	21%	3%
back complaints Shoulder	18%	64%	1%	13%	4%
complaints Neck complaints	17%	67%	1%	11%	4%
Tiredness	14%	74%	0%	8%	4%
Tension	13%	65%	1%	17%	3%
	12%	74%	2%	8%	

4.6 Treatment success for individual complaint areas with regard to the frequency of complaints

The following diagram shows how the ATLANTOtec® treatment has affected the frequency of the individual complaints.

The result of treatment can be shown by the fact that patients are free of symptoms after the treatment or at least an improvement has occurred (due to a decrease in the frequency of symptoms). There is also the possibility that no change (unchanged frequency) or a deterioration (due to increasing frequency of occurrence) has occurred.

Progression of the *frequency* of complaints after treatment

Complaint	Complaint-free	improvement	No change	Deterioration
Headache	21%	64%	12%	3%
Neck pain	14%	71%	13%	3%
Tension	12%	72%	13%	3%
Dizziness	29%	52%	17%	2%
Shoulder complaints	17%	63%	17%	3%
Migraine	39%	41%	16%	4%
Low back pain	18%	61%	18%	4%
Other	22%	57%	20%	2%
Tiredness	13%	62%	22%	3%
Sleep complaints	18%	55%	24%	3%
Hip complaints	25%	46%	24%	5%
Tinnitus	28%	42%	28%	2%
Gastrointestinal complaints	20%	48%	28%	3%
Knee complaints	25%	40%	28%	6%
Depression	30%	36%	33%	1%
Elbow complaints	30%	35%	30%	5%
Nervousness	25%	39%	34%	3%
Circulatory problems	22%	42%	34%	3%
Blood pressure	25%	29%	42%	4%

Survey result:

The ATLANTOtec® treatment led to a decrease in the frequency of complaints in all the areas of discomfort mentioned for the majority of the patients surveyed.

The patients surveyed reported the greatest treatment success in this regard headaches and neck pain; 85% diagnosed themselves with a reduction in frequency or relief from pain.

The treatment was almost as successful with regard to the frequency of symptoms of tension, dizziness, shoulder pain and migraines; 8 out of 10 patients were able to report relief from symptoms or a reduction in their frequency.

In more than 7 out of 10 respondents, the atlas correction led to pain relief or a reduction in the frequency of low back pain, fatigue, sleep, hip and tinnitus complaints.

6 out of 10 patients were able to observe success in all other areas of complaint (with the exception of blood pressure problems) in the form of relief from complaints or a reduction in their frequency.

A worsening in the sense of an increasing frequency of complaints was only perceived in a few cases (e.g. 6% for knee complaints).

4.7 Treatment success for individual complaint areas with regard to the severity of the complaints

The following illustration shows how the ATLANTOtec® treatment has affected the severity of the individual complaints.

Treatment results are also possible here: No symptoms, improvement, no change or deterioration.

Progression of complaint *severity* after treatment

Complaint	Complaint-free	improvement	No change	Deterioration
Neck pain	14%	70%	13%	3%
Headache	21%	59%	17%	3%
Tension	12%	67%	16%	5%
Migraine	39%	39%	19%	3%
Shoulder complaints	17%	61%	18%	4%
Dizziness	29%	46%	21%	4%
Low back pain	18%	57%	21%	4%
Other	22%	51%	25%	2%
Tiredness	13%	59%	25%	3%
Hip complaints	25%	44%	26%	4%
Sleep complaints	18%	50%	29%	3%
Tinnitus	28%	37%	32%	3%
Knee complaints	25%	39%	29%	7%
Elbow complaints	30%	34%	31%	5%
Depression	30%	33%	35%	1%
Nervousness	25%	37%	35%	3%
Gastrointestinal complaints	20%	41%	34%	4%
Circulatory problems	22%	37%	40%	2%
Blood pressure	25%	23%	46%	5%

Survey result:

Overall, the ATLANTOtec® treatment has not only reduced the frequency of complaints, but also their severity.

Patients with neck pain were the most likely to notice this. 84% experienced a reduced intensity or relief of symptoms.

The front runner is closely followed by headaches, tension, migraines, shoulder pain, dizziness, lower back pain and fatigue; in over 7 out of 10 patients, the severity of the symptoms has decreased or is no longer present at all.

More than half of all respondents see success in all other areas of complaint (slightly less than half for blood pressure complaints).

4.8 Average change in the degree of complaint frequency and severity

The result of ATLANTOtec® treatment is usually a change in the frequency and/or severity of the symptoms. In this respect, it is of interest to determine to what extent the frequency and severity of the complaints have changed on average.

The results of this question also provide information about the areas of complaint for which the ATLANTOtec® treatment promises (statistically) the greatest success.

The graphs on the following two pages show the results of the calculations.

Survey result:

On average across all respondents, not only the frequency of all complaints, but also their severity has decreased as a result of the ATLANTOtec® treatment.

The frequency of complaints BEFORE treatment was on average 4.4 on the 7-point rating scale and AFTER treatment 2.7. The severity BEFORE treatment was 4.2 and AFTER treatment 2.6. Consequently, the frequency of complaints (on average across all complaint fields and respondents) decreased by 1.7 and the severity by 1.6 points.

Patients with neck complaints noticed this most clearly: The average frequency of complaints BEFORE the start of treatment was 5.5 on the 7-point assessment scale and 3.1 after treatment (complaint severity at 5.2 and 3.0).

Similarly strong positive results were achieved in the areas of tension and shoulder complaints. On the one hand, they have the greatest impact on the well-being of patients (frequency of complaints is highest here). On the other hand, they have the greatest potential for reducing the frequency of complaints.

An (average) extremely reduced frequency of complaints after atlas correction was also found for all other areas of complaint.

With regard to the severity of complaints, one result should be emphasised in particular: In the migraine complaint area (average severity on the severity scale: 4.8), the severity was reduced to an average of 2.5 as a result of the atlas correction

Average frequency of complaints BEFORE and AFTER treatment

Complaint	BEFORE treatment	AFTER treatment
Neck pain	5,5	3,1
Tension	5,3	3,1
Other	5,3	3,0
Shoulder complaints	5,0	2,9
Headache	4,7	2,5
Tiredness	4,7	3,1
Low back pain	4,6	2,9
Tinnitus	4,3	2,8
Sleep complaints	4,2	2,7
Hip complaints	4,2	2,7
Migraine	4,2	2,3
Blood pressure	4,2	2,8
Gastrointestinal complaints	4,1	2,7
Dizziness	4,1	2,3
Knee complaints	4,0	2,6
Elbow complaints	4,0	2,4
Circulatory problems	3,9	2,7
Nervousness	3,3	2,1
Depression	3,2	2,1

Average complaint severity
BEFORE and AFTER treatment

	2,0	2,5	3,0	3,5	4,0	4,5	5,0	5,5	6,0

Neck pain Tension — 5,2 / 3,0
Other — 5,0 / 3,0
Migraine — 5,0 / 2,9
Shoulder pain — 4,8 / 2,5
Headaches — 4,8 / 2,8
Tiredness — 4,7 / 2,6
Low back pain — 4,5 / 2,9
Hip complaints — 4,5 / 2,8
Sleep complaints — 4,1 / 2,6
Knee complaints — 4,0 / 2,6
Gastrointestinal complaints — 3,9 / 2,5
Dizziness — 3,9 / 2,6
Elbow complaints — 3,9 / 2,3
Tinnitus — 3,9 / 2,4
Circulatory problems — 3,8 / 2,6
Blood pressure — 3,7 / 2,4
Nervousness — 3,6 / 2,6
Depression — 3,4 / 2,2
— 3,3 / 2,1

■ BEFORE treatment
■ AFTER treatment

5 Complaints fields at Details

In the preceding remarks, it became clear that the respondents to the ATLANTOtec® treatment were able to attest to a positive course of symptoms treatment for most areas of complaint. The question now arises as to whether different patient groups come to a similar judgement or differ from one another.

When differentiating the judgements, a distinction must be made according to the countries surveyed (ATLANTOtec® - practices from Switzerland and Sweden) as well as the gender and age of the patients.

5.1 Neck pain

5.1.1 Complaint status at the start of treatment

The following graph shows the proportion of patients - differentiated according to the various patient groups - who suffered from neck pain before treatment.
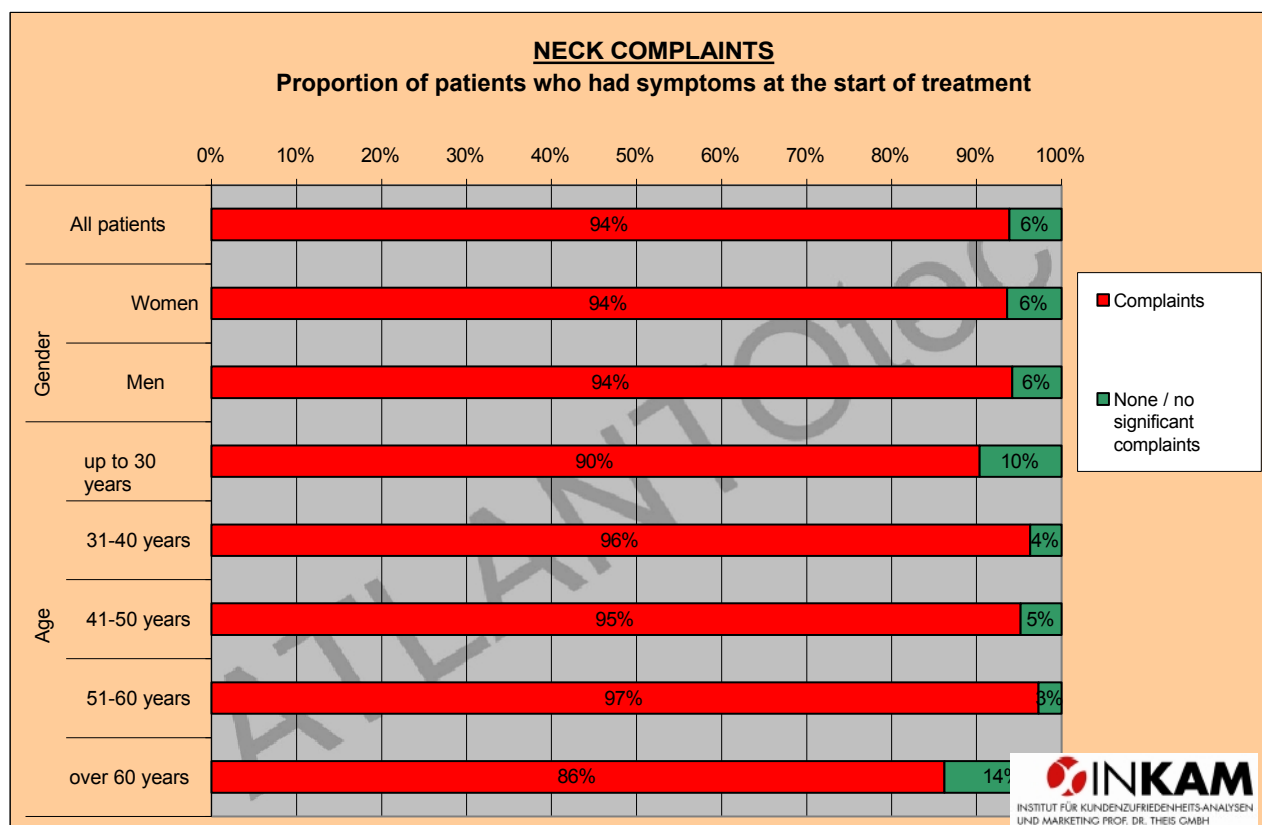
5.1.2 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression of symptoms in terms of <u>severity and frequency</u> in those patients who initially complained of neck pain (scale levels 2-7 for frequency and/or severity) and underwent *ATLANTO-* tec® treatment.

NECK COMPLAINTS
Progression of complaint frequency and severity in different patient groups

Group	Complaint-free	improvement	No change	Deterioration
Frequency				
All patients	14%	71%	13%	3%
Women	14%	73%	10%	3%
Men	14%	67%	16%	3%
up to 30 years	11%	66%	18%	5%
31-40 years	16%	69%	14%	0%
41-50 years	13%	72%	11%	3%
51-60 years	14%	76%	8%	2%
over 60 years	20%	66%	12%	2%
Strength				
All patients	14%	70%	13%	3%
Women	14%	70%	13%	3%
Men	14%	69%	13%	3%
up to 30 years	11%	68%	14%	7%
31-40 years	16%	68%	13%	2%
41-50 years	13%	69%	17%	1%
51-60 years	14%	78%	7%	2%
over 60 years	20%	60%	16%	4%

* The treatment can lead to the following results: In the best case scenario, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

5.1.3 Effects of treatment with different complaint intensity

The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have with different complaint intensities (complaint frequencies and severity) in the complaint area of neck complaints?

The following figure provides information about the results. It shows, for example, the change in the frequency of complaints in those patients indicated **level 5** on the frequency scale before treatment: There was no improvement in **15%** of all respondents. For **15%**, the frequency of complaints was reduced by one level, for **37%** by two levels, for **22%** by three levels and for **11%** by four levels. Consequently, 11% of all level 5 patients are symptom-free (no/no significant symptoms).

NECK COMPLAINTS
Success of treatment depending on the frequency and severity of symptoms
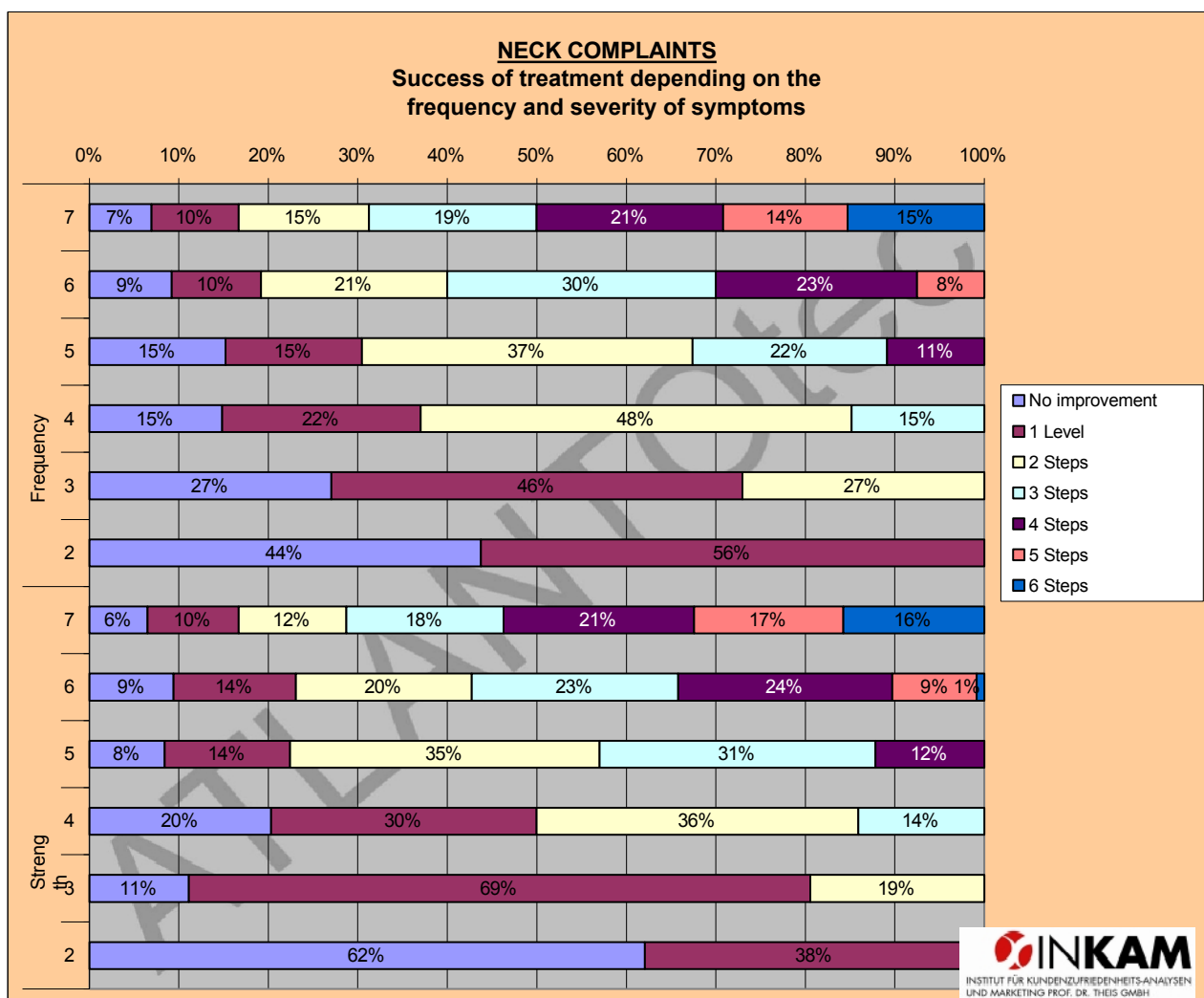
5.1.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of *neck* complaints has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

NECK COMPLAINTS
Average frequency of complaints BEFORE and AFTER treatment

Group		BEFORE treatment	AFTER treatment
	All patients	5,5	3,1
Gender	Women	5,7	3,2
	Men	5,2	3,0
Age	up to 30 years	5,3	3,1
	31-40 years	5,4	3,0
	41-50 years	5,8	3,3
	51-60 years	5,4	3,1
	over 60 years	5,3	2,9

5.1.5 Average complaint severity BEFORE and AFTER the treatment

The following graph shows - differentiated according to the various patient groups - how the severity of **neck** complaints has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

NECK COMPLAINTS
Average complaint severity BEFORE and AFTER treatment

Group		BEFORE treatment	AFTER treatment
	All patients	5,2	3,0
Gender	Women	5,3	3,0
	Men	5,0	2,9
Age	up to 30 years	5,0	3,0
	31-40 years	5,2	2,8
	41-50 years	5,6	3,1
	51-60 years	5,0	2,9
	over 60 years	5,1	2,8

5.2 *Tiredness*

5.2.1 Complaint status at the start of treatment

The following graph shows the proportion of patients - differentiated according to the various patient groups - who suffered from fatigue before treatment.

TIREDNESS
Proportion of patients who had symptoms at the start of treatment

Group	Complaints	None / no significant complaints
All patients	85%	15%
Gender — Women	86%	14%
Gender — Men	83%	17%
Age — up to 30 years	86%	14%
Age — 31-40 years	90%	10%
Age — 41-50 years	87%	13%
Age — 51-60 years	83%	17%
Age — over 60 years	72%	28%

5.2.2 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression of symptoms in terms of severity and frequency in those patients who initially complained of fatigue (scale levels 2-7 for frequency and/or severity) and underwent the ATLANTOtec® treatment.

TIREDNESS
Progression of complaint frequency and severity in different patient groups

	Complaint-free	improvement	No change	Deterioration
Frequency				
All patients	13%	62%	22%	3%
Women	14%	62%	21%	3%
Men	12%	61%	23%	4%
up to 30 years	13%	56%	27%	4%
31-40 years	16%	64%	18%	2%
41-50 years	6%	65%	25%	4%
51-60 years	14%	62%	19%	4%
over 60 years	21%	60%	17%	2%
Strength				
All patients	13%	59%	25%	3%
Women	14%	61%	22%	3%
Men	12%	55%	28%	5%
up to 30 years	13%	56%	28%	3%
31-40 years	16%	63%	20%	1%
41-50 years	6%	61%	29%	4%
51-60 years	14%	56%	24%	6%
over 60 years	21%	55%	21%	2%

* The treatment can lead to the following results: In the best case scenario, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

5.2.3 Effects of treatment with different complaint intensity

The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have with different complaint intensities (complaint frequencies and severity) in the complaint area of fatigue?

The following figure provides information about the results. It , for example, the change the frequency of complaints in those patients who indicated **level 5** on the frequency scale before treatment: There was no improvement in **7%** of all respondents. For **21%**, the frequency of complaints was reduced by one level, for **39%** by two levels, for **25%** by three levels and for **8%** by four levels. Consequently, 8% of all level 5 patients are symptom-free (no/no significant complaints).
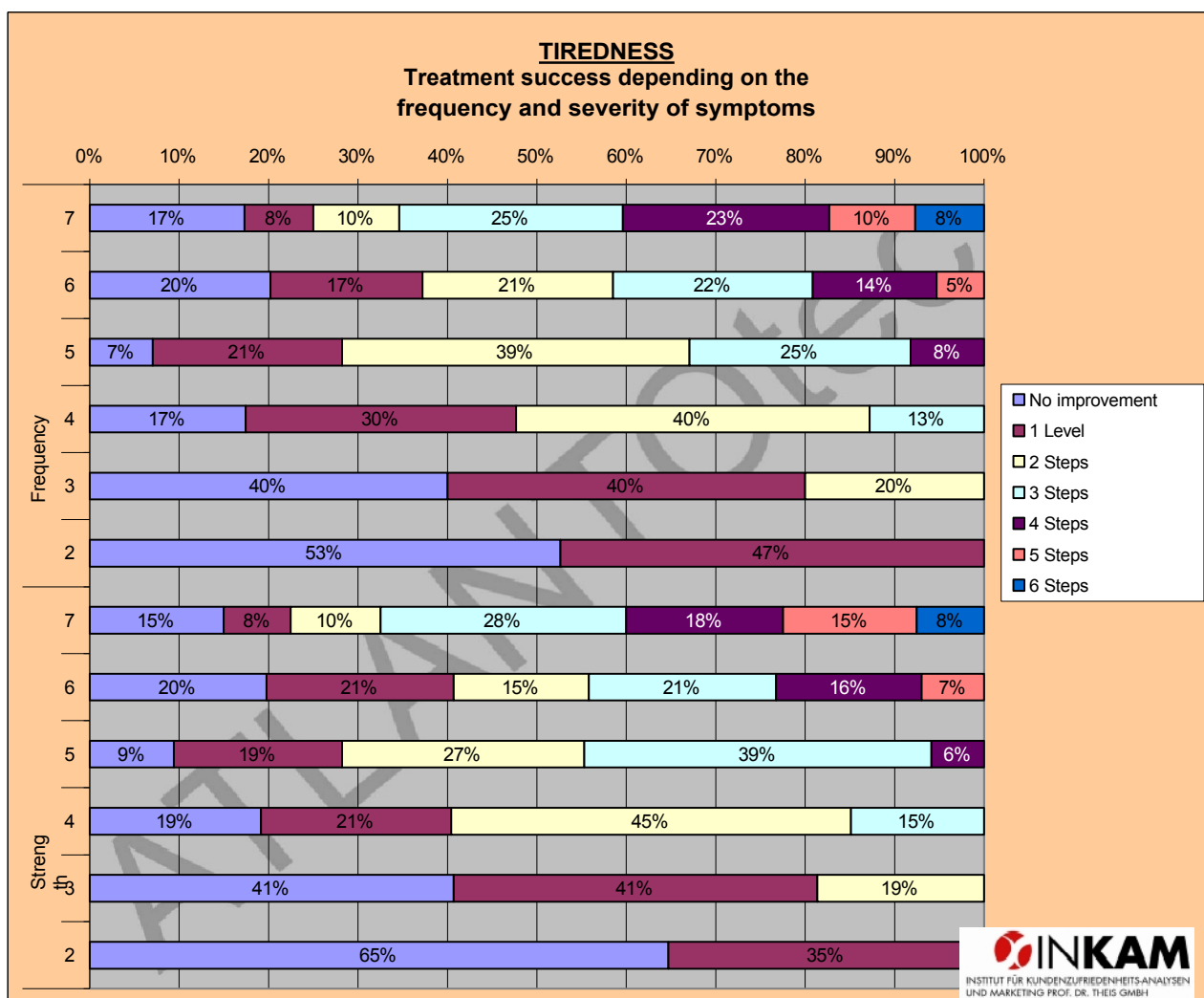
5.2.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of complaints of *fatigue* has changed on average across all patients (with complaints prior to treatment) as a result of the ATLANTOtec® treatment.

TIREDNESS
Average frequency of complaints BEFORE and AFTER treatment

Group	BEFORE treatment	AFTER treatment
All patients	4,7	3,1
Gender — Women	4,8	3,1
Gender — Men	4,5	3,0
Age — up to 30 years	4,7	3,1
Age — 31-40 years	4,9	3,0
Age — 41-50 years	4,8	3,3
Age — 51-60 years	4,4	2,9
Age — over 60 years	4,4	2,7

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5.2.5 Average complaint severity BEFORE and AFTER the treatment

The following graph shows - differentiated according to the various patient groups - how the severity of symptoms of *fatigue* has changed on average across all patients (with symptoms before treatment) as a result of the ATLANTOtec® treatment.

TIREDNESS
Average complaint severity BEFORE and AFTER treatment

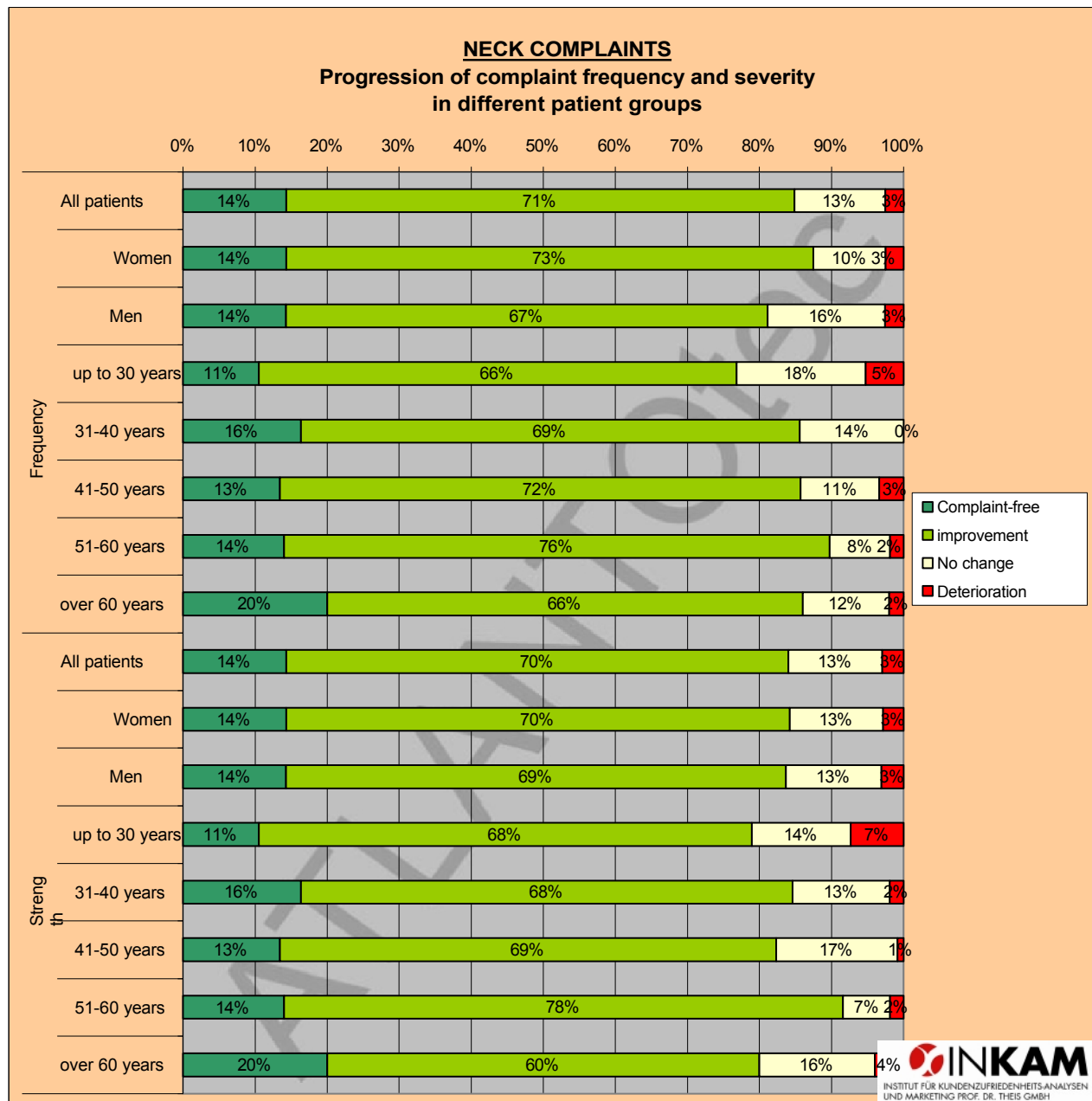| Group		BEFORE treatment	AFTER treatment
	All patients	4,5	2,9
Gender	Women	4,6	2,9
	Men	4,4	2,9
Age	up to 30 years	4,5	2,9
	31-40 years	4,7	2,9
	41-50 years	4,7	3,2
	51-60 years	4,3	2,9
	over 60 years	4,1	2,4

5.3 Tension

5.3.1 Complaint status at the start of treatment

The following graph shows the proportion of patients - differentiated according to the various patient groups - who suffered from tension before treatment.

TENSIONS
Proportion of patients who had symptoms at the start of treatment

Group		Complaints	None / no significant complaints
All patients		81%	19%
Gender	Women	80%	20%
	Men	81%	19%
Age	up to 30 years	83%	17%
	31-40 years	84%	16%
	41-50 years	85%	15%
	51-60 years	80%	20%
	over 60 years	62%	38%

5.3.2 Effects of treatment on the frequency and severity of symptoms

The following diagram shows the progression of symptoms in terms of severity and frequency in those patients who initially complained of tension (scale levels 2-7 for frequency and/or severity) and underwent ATLANTOtec® treatment.

TENSIONS
Progression of complaint frequency and severity in different patient groups

| Group	Complaint-free	improvement	No change	Deterioration
Frequency				
All patients	12%	72%	13%	3%
Women	13%	74%	10%	3%
Men	11%	69%	17%	2%
up to 30 years	12%	71%	13%	5%
31-40 years	11%	71%	16%	2%
41-50 years	16%	71%	11%	2%
51-60 years	7%	81%	11%	1%
over 60 years	18%	61%	16%	5%
Strength				
All patients	12%	67%	16%	5%
Women	13%	68%	14%	5%
Men	11%	64%	18%	6%
up to 30 years	12%	60%	19%	9%
31-40 years	11%	68%	15%	5%
41-50 years	16%	65%	15%	4%
51-60 years	7%	80%	10%	3%
over 60 years	18%	50%	26%	5%

* The treatment can lead to the following results: In the best case scenario, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

5.3.3 Effects of treatment with different complaint intensity
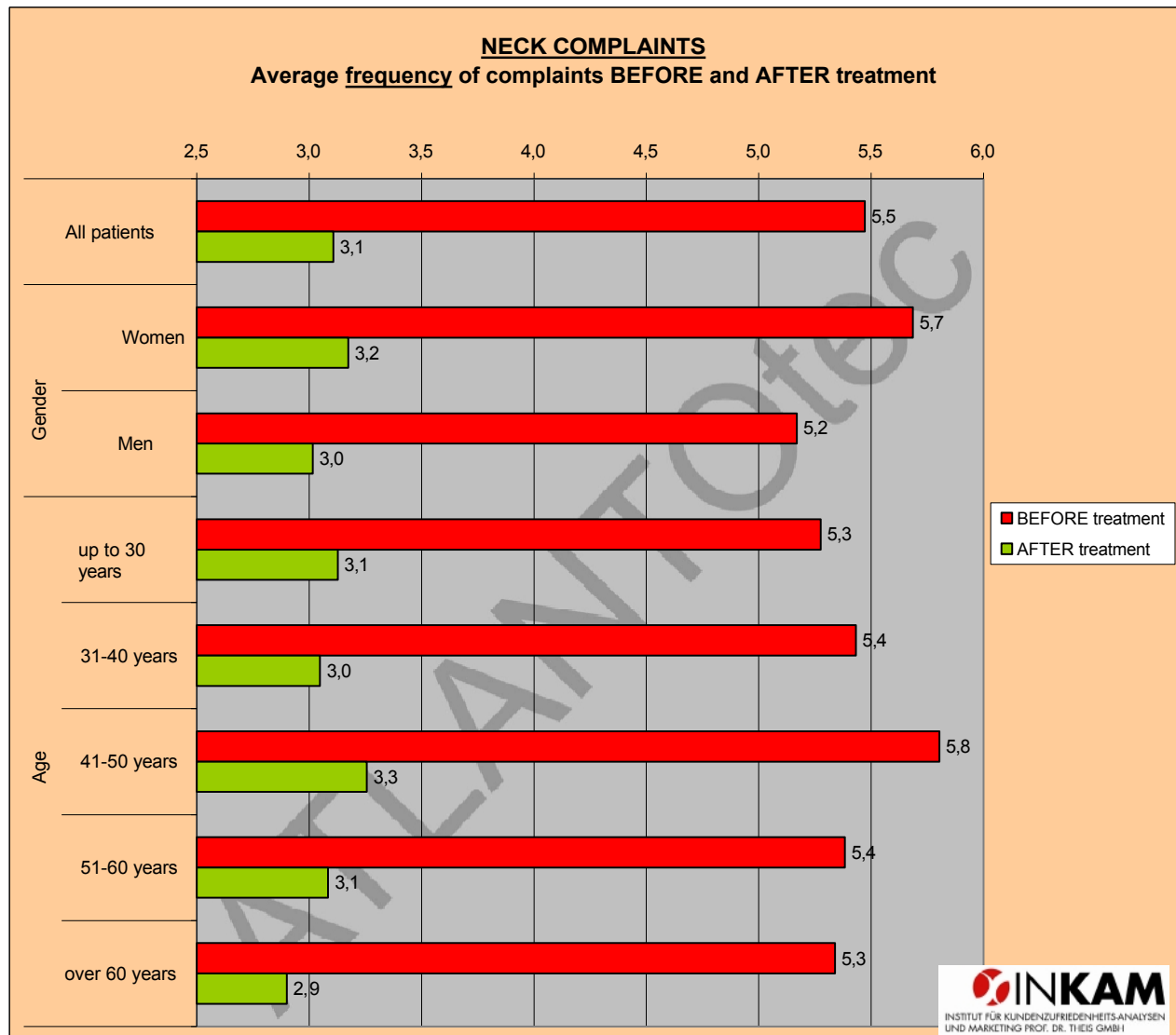
The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have on different levels of intensity (frequency and severity of complaints) in the area of tension.

The following figure provides information about the results. It , for example, the change the frequency of complaints in those patients who indicated **level 5** on the frequency scale before treatment: There was no improvement in **5%** of all respondents. For **26%**, the frequency of complaints was reduced by one level, for **32%** by two levels, for **24%** by three levels and for **12%** by four levels. Consequently, 12% of all level 5 patients are symptom-free (no/no significant complaints).
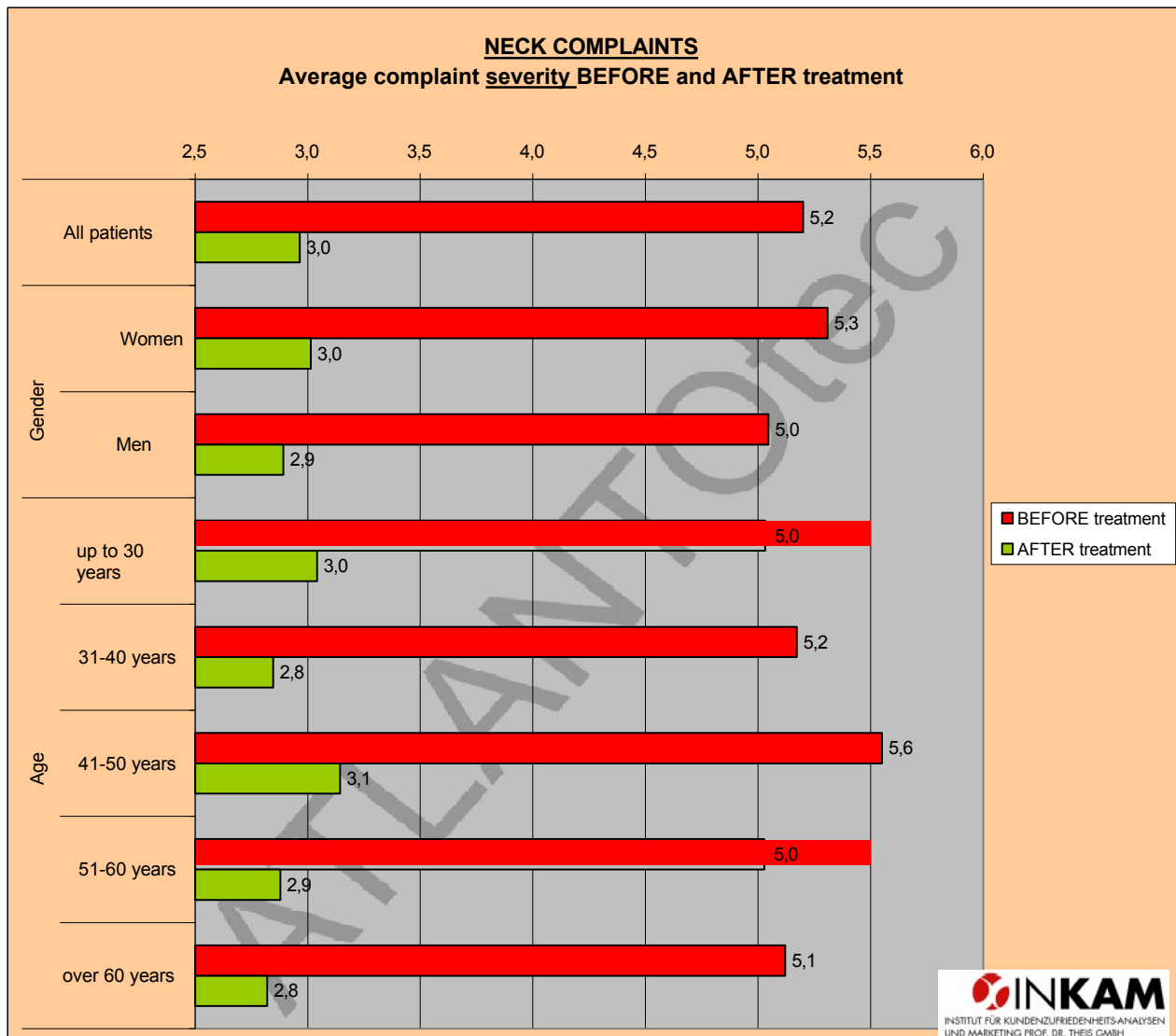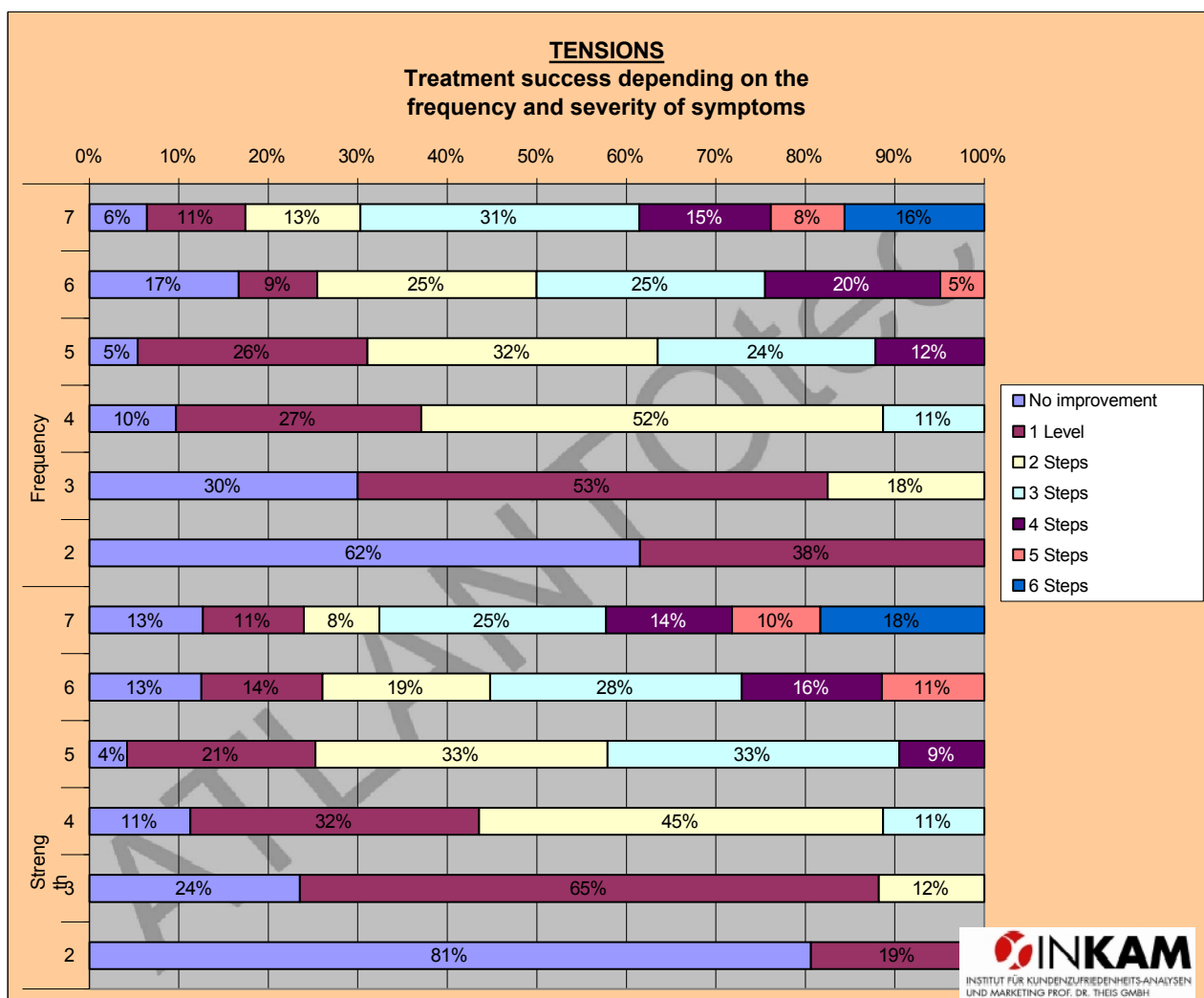
5.3.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of complaints of *tension* has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

TENSIONS
Average frequency of complaints BEFORE and AFTER treatment

Patient group	AFTER treatment	BEFORE treatment
All patients	3,1	
Women	3,2	
Men	3,1	5,0
up to 30 years	3,2	
31-40 years	3,1	
41-50 years	3,2	
51-60 years	3,2	
over 60 years	3,0	

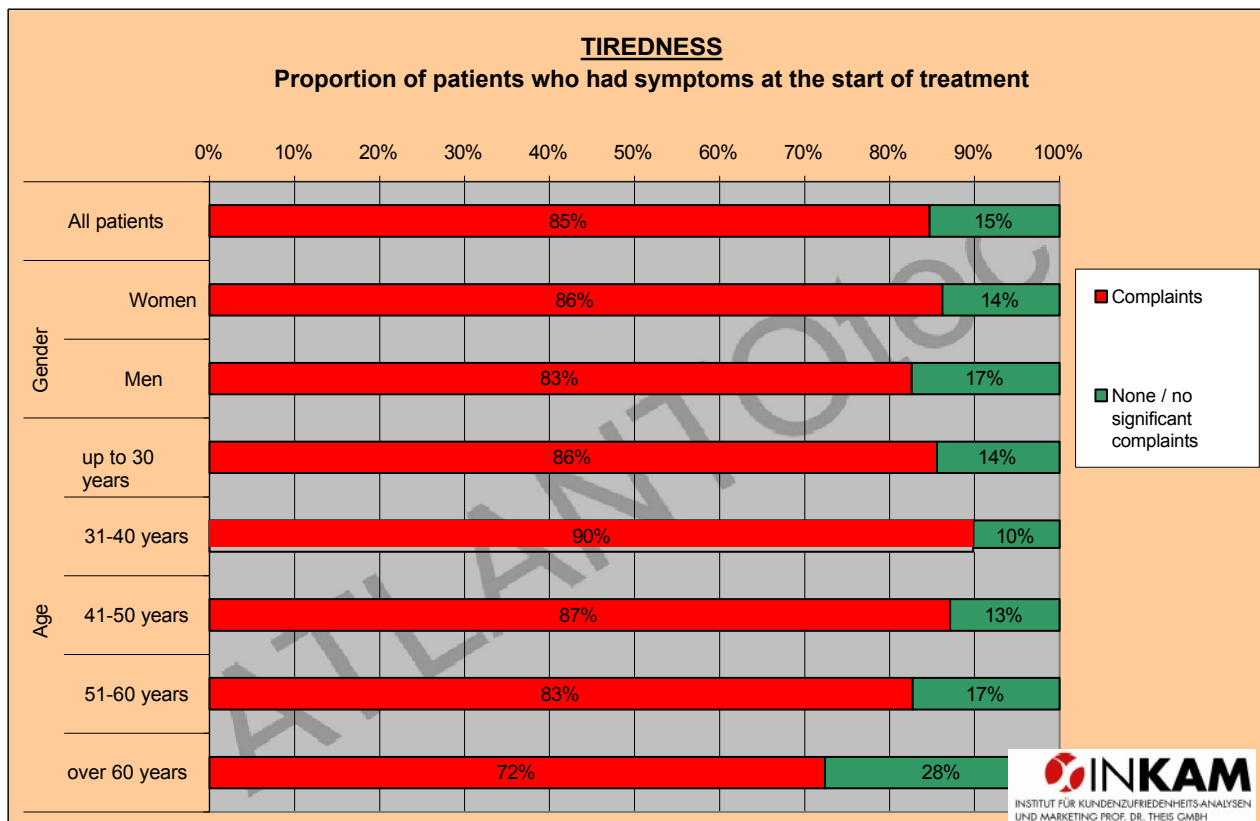## 5.3.5 Average complaint severity BEFORE and AFTER the treatment

The following graph shows - differentiated according to the various patient groups - how the severity of *tension* complaints has changed on average across all patients (with complaints prior to treatment) as a result of the ATLANTOtec® treatment.

TENSIONS
Average complaint severity BEFORE and AFTER treatment

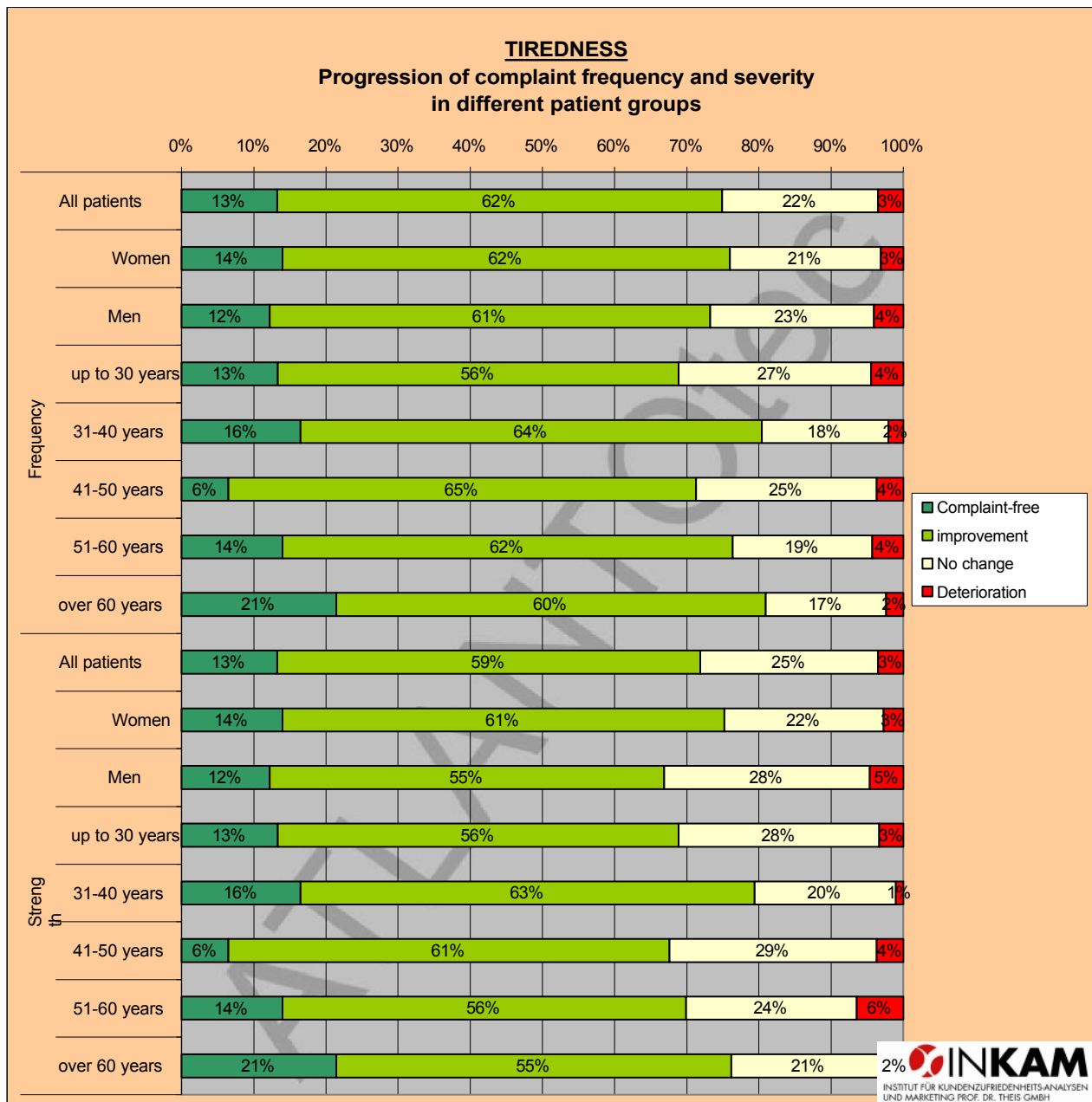| Group	BEFORE treatment	AFTER treatment
All patients	5,0	3,0
Women		3,1
Men	4,7	3,0
up to 30 years	4,8	3,1
31-40 years	4,9	3,0
41-50 years		3,0
51-60 years		3,0
over 60 years	4,9	3,1
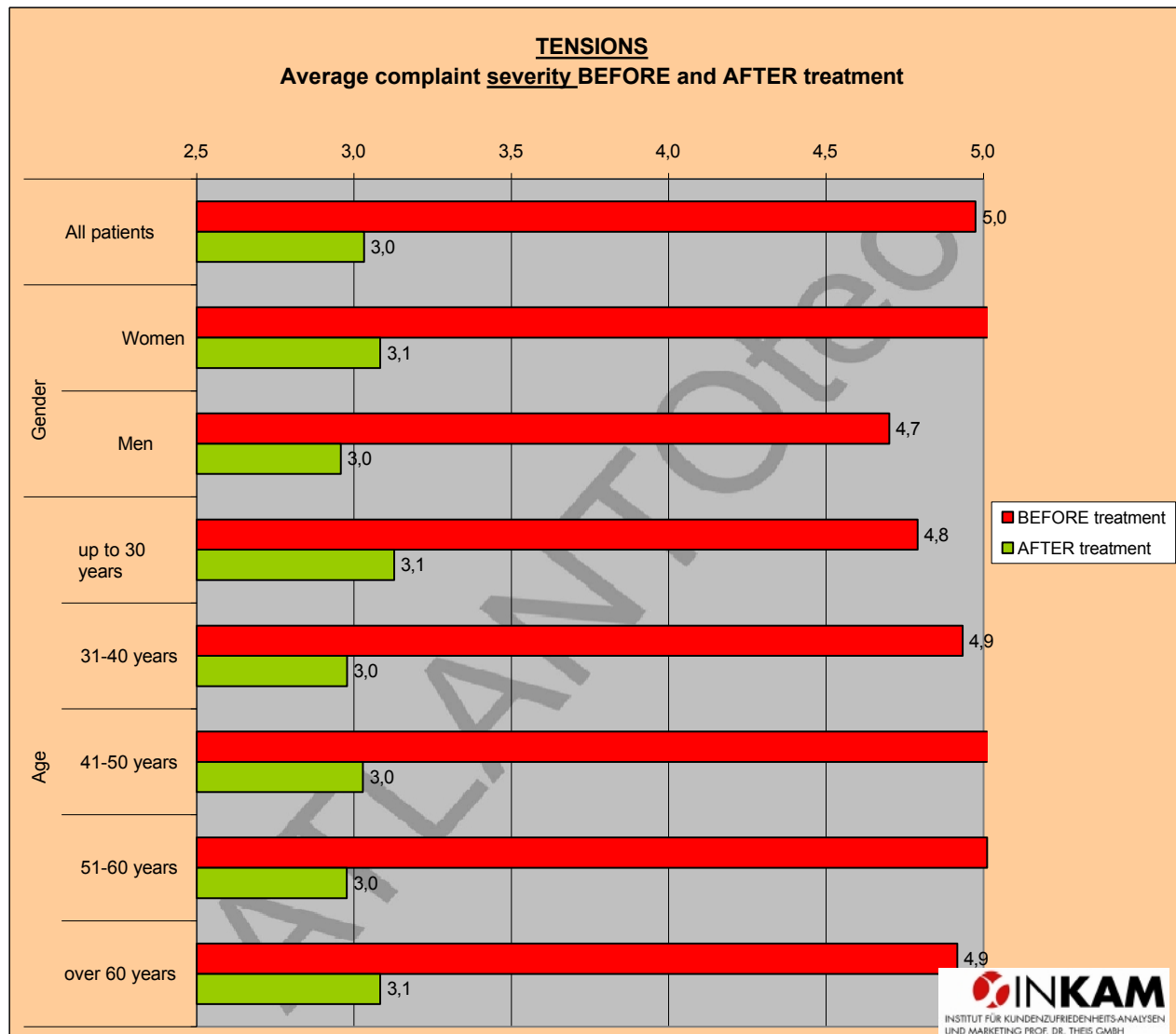
5.4 Headache

5.4.1 Complaint status at the start of treatment

The following graph shows the proportion of patients - differentiated according to the various patient groups - who suffered from headaches before treatment.
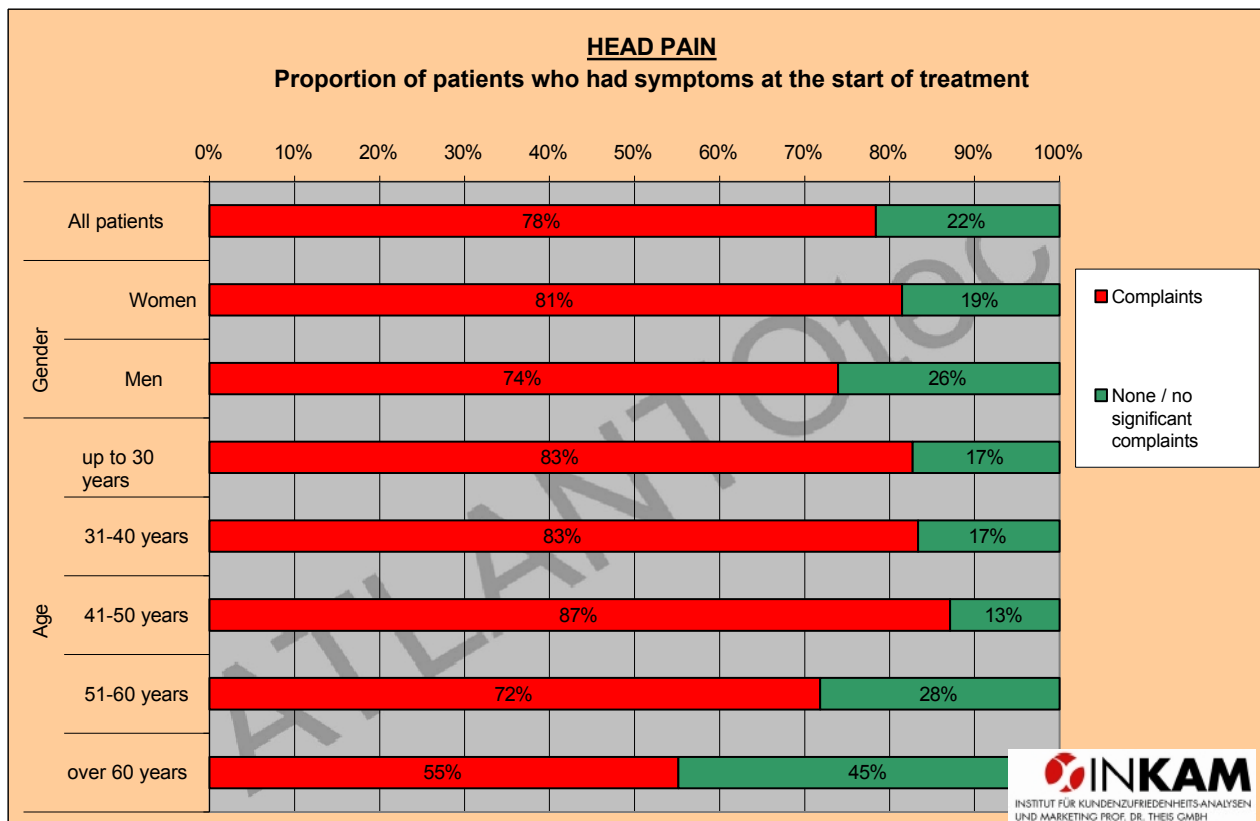
5.4.2 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression of complaints in terms of <u>severity and frequency</u> in those patients who initially complained of headaches (scale levels 2-7 for frequency and/or severity) and the ATLANTOtec®
- treatment.

HEAD PAIN
Progression of complaint frequency and severity
in different patient groups

|	Complaint-free	improvement	No change	Deterioration
Frequency				
All patients	21%	64%	12%	3%
Women	24%	63%	9%	3%
Men	16%	66%	15%	3%
up to 30 years	21%	61%	14%	5%
31-40 years	23%	67%	7%	3%
41-50 years	17%	65%	14%	4%
51-60 years	24%	62%	13%	1%
over 60 years	21%	67%	9%	3%
Strength				
All patients	21%	59%	17%	3%
Women	24%	58%	15%	2%
Men	16%	60%	20%	5%
up to 30 years	21%	55%	20%	5%
31-40 years	23%	58%	15%	3%
41-50 years	17%	63%	17%	3%
51-60 years	24%	56%	18%	3%
over 60 years	21%	61%	15%	3%

* The treatment can lead to the following results: In the best case scenario, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

5.4.3 Effects of treatment with different complaint intensity
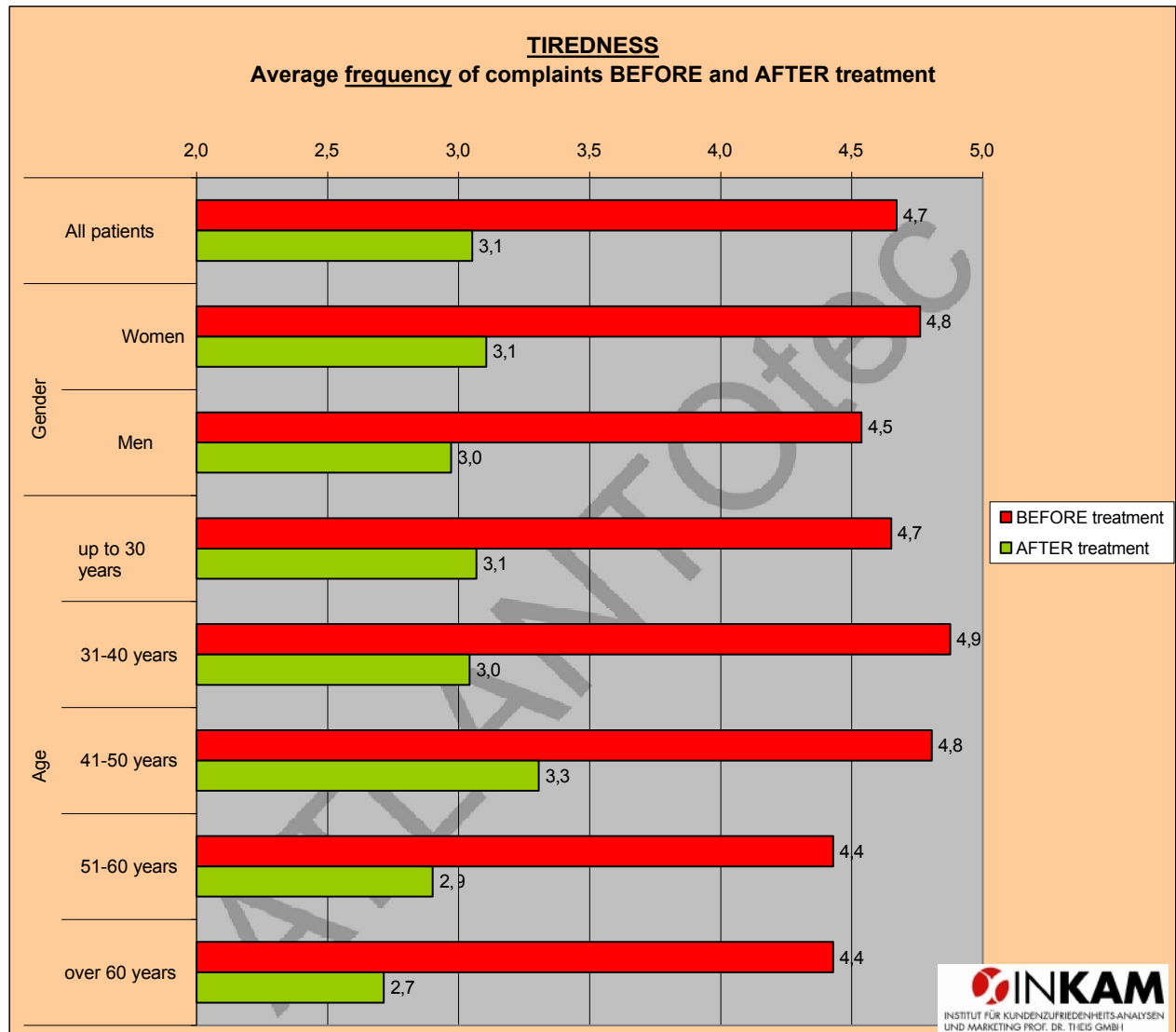
The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have on different levels of intensity (frequency and severity of complaints) in the area of headaches?

The following figure provides information about the results. It , for example, the change the frequency of complaints in those patients who indicated **level 5** on the frequency scale before treatment: There was no improvement in **6%** of all respondents. For **12%**, the frequency of complaints was reduced by one level, for **26%** by two levels, for **42%** by three levels and for **14%** by four levels. Consequently, 14% of all level 5 patients are symptom-free (no/no significant complaints).
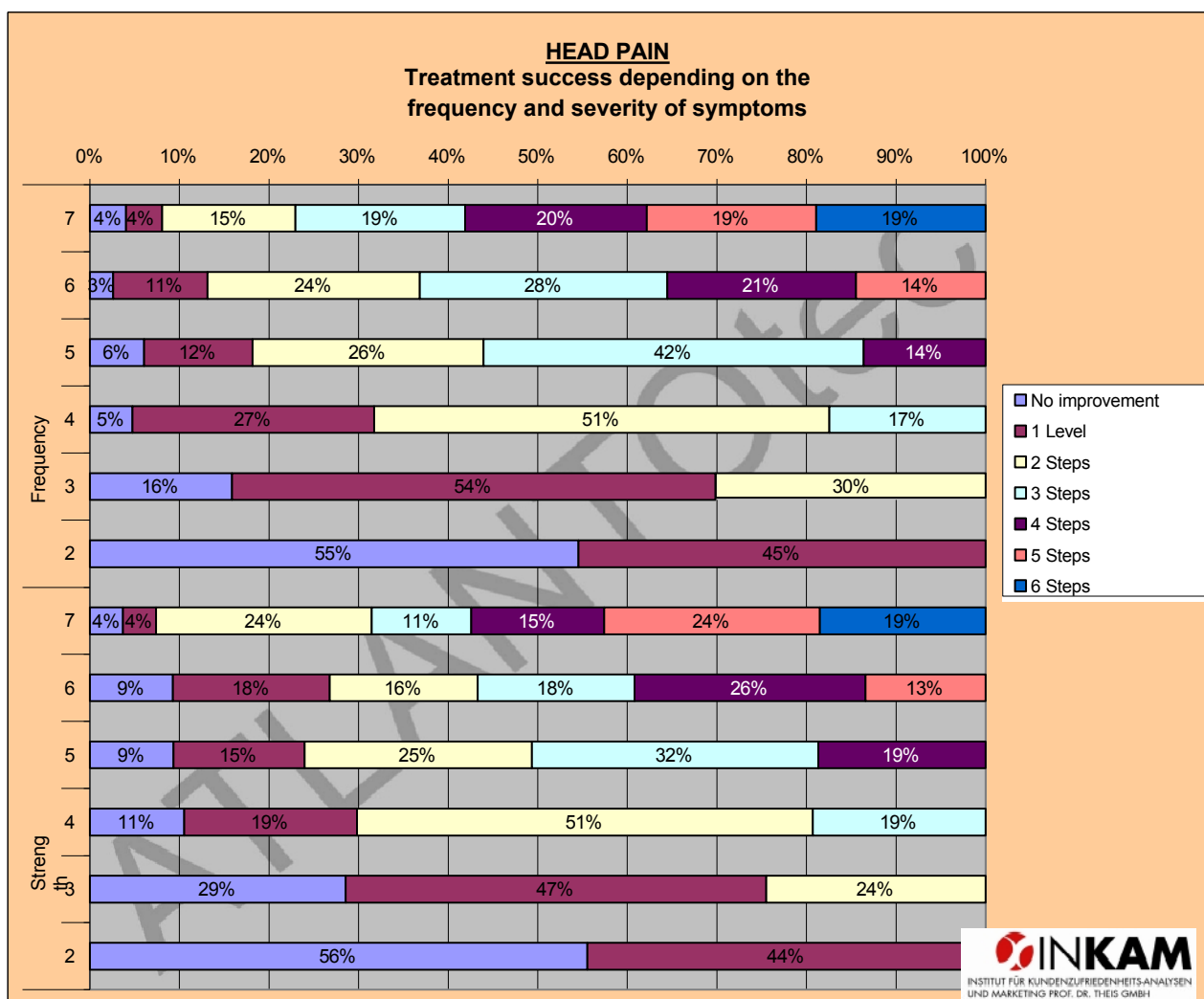
HEAD PAIN
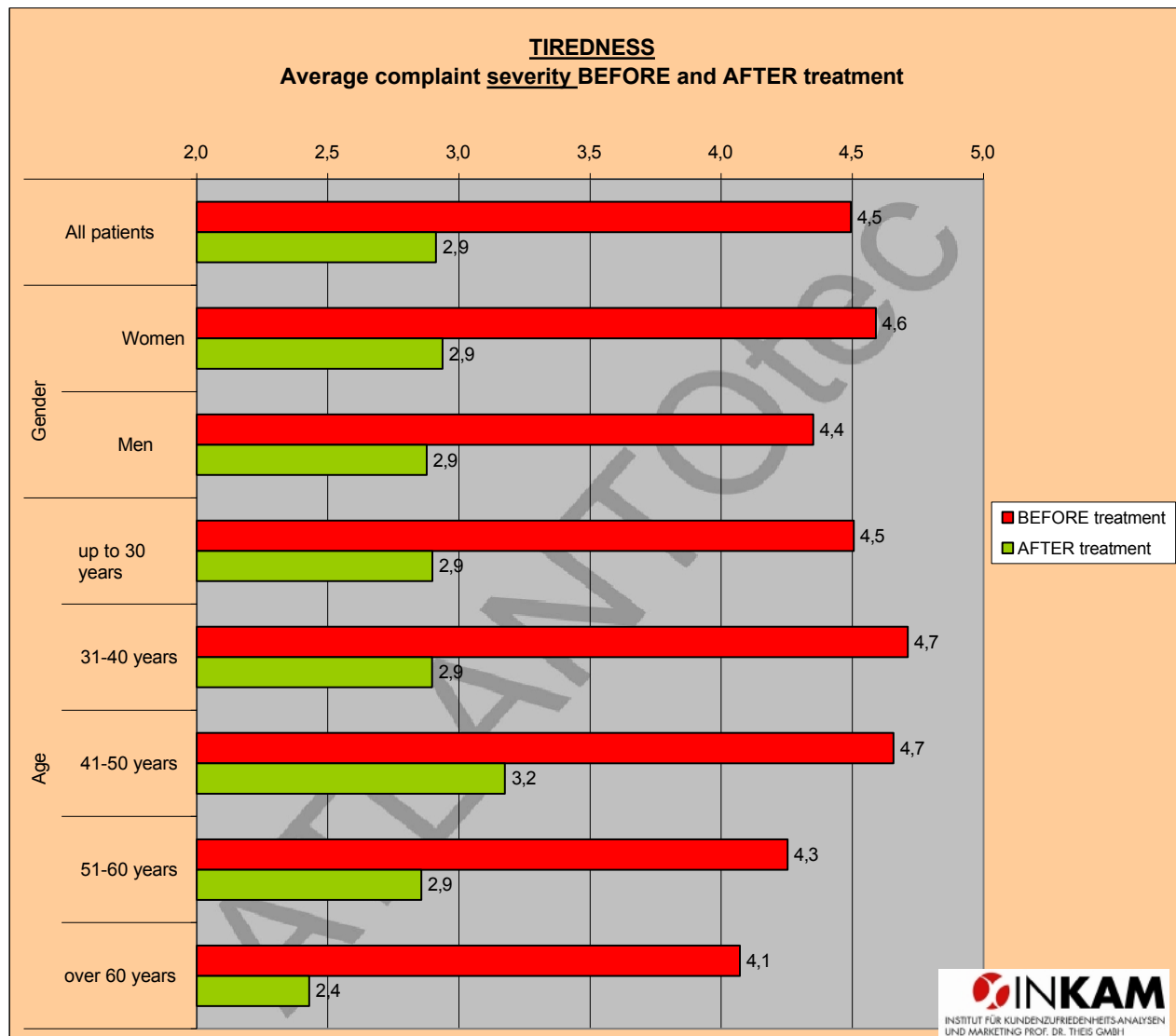**Treatment success depending on the frequency and severity of symptoms**

5.4.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of *headache* complaints has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

HEAD PAIN
Average frequency of complaints BEFORE and AFTER treatment

Group		BEFORE treatment	AFTER treatment
	All patients	4,7	2,5
Gender	Women	4,9	2,5
	Men	4,4	2,5
Age	up to 30 years	4,7	2,6
	31-40 years	4,9	2,3
	41-50 years	4,9	2,8
	51-60 years	4,4	2,5
	over 60 years	4,7	2,2
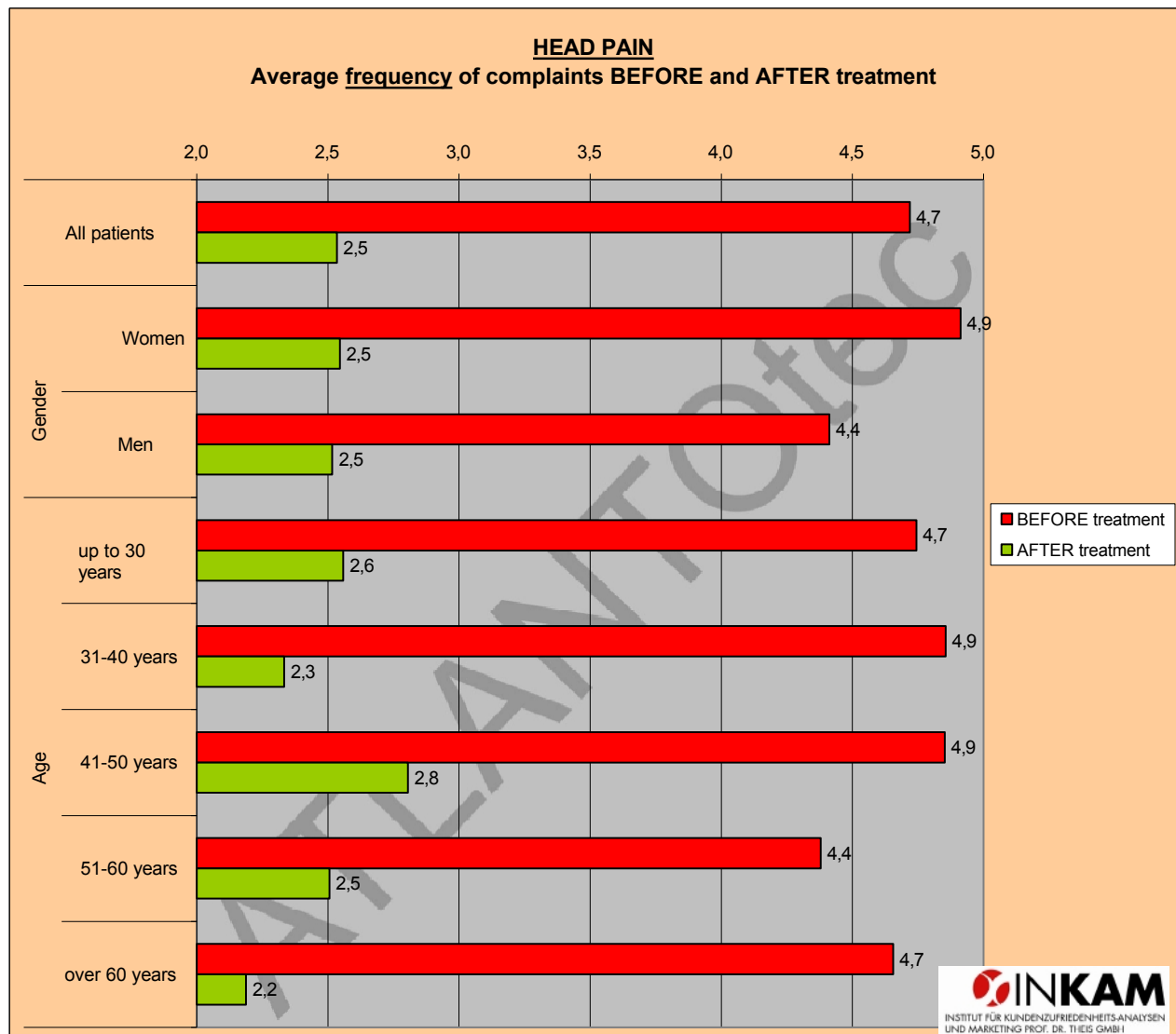
5.4.5 Average complaint severity BEFORE and AFTER the treatment

The following graph shows - differentiated according to the various patient groups - how the severity of *headache* complaints has changed on average across all patients (with complaints prior to treatment) as a result of ATLANTOtec® treatment.

HEAD PAIN
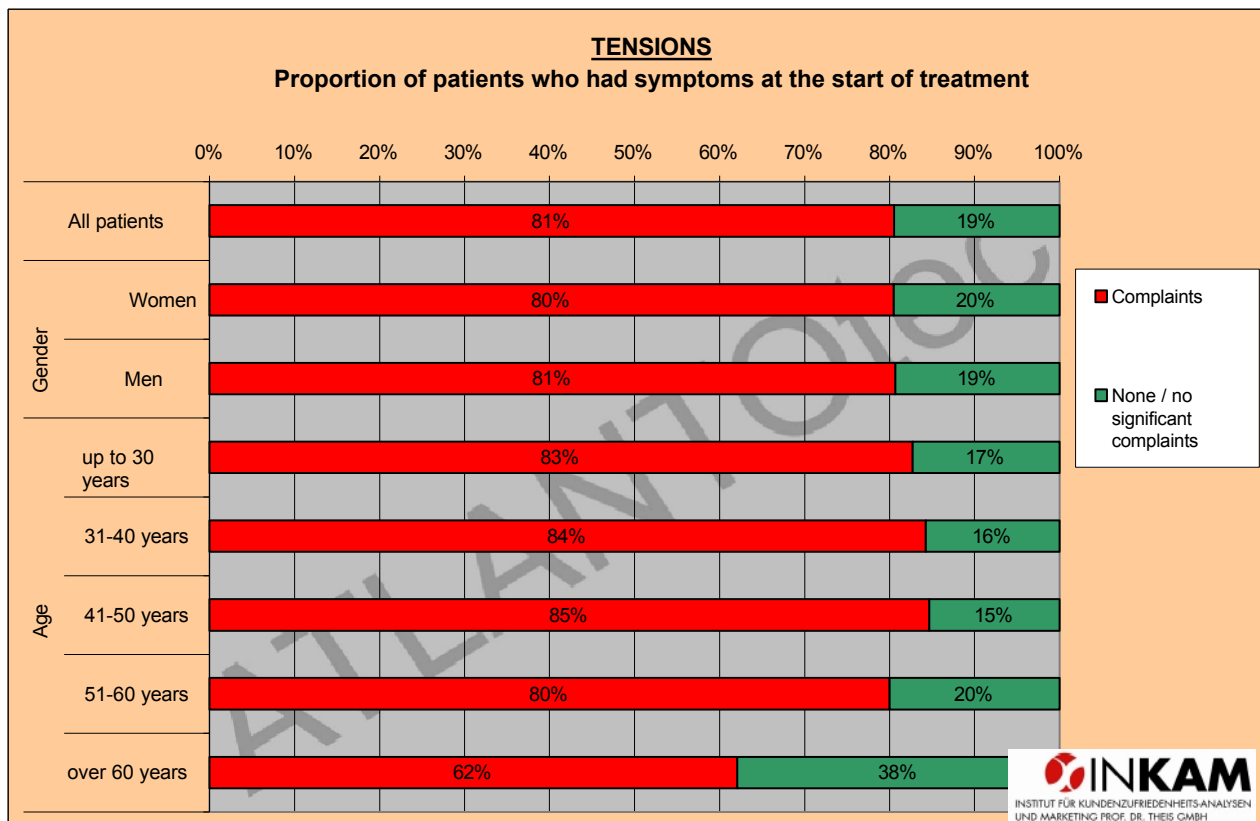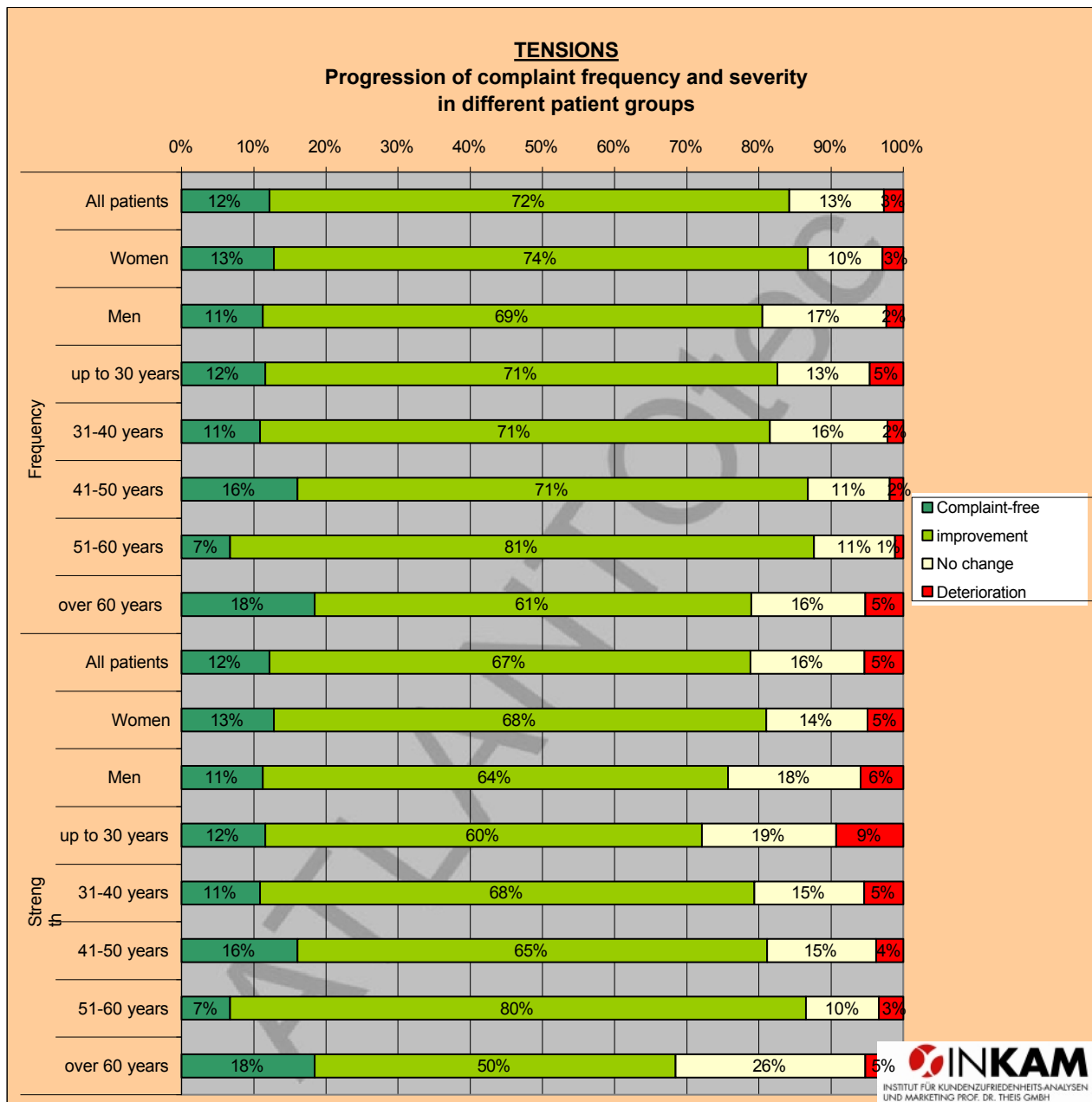**Average complaint severity BEFORE and AFTER treatment**

Group		BEFORE treatment	AFTER treatment
	All patients	4,7	2,6
Gender	Women	4,8	2,6
	Men	4,5	2,7
Age	up to 30 years	4,7	2,8
	31-40 years	4,8	2,5
	41-50 years	4,9	2,8
	51-60 years	4,4	2,7
	over 60 years	4,2	2,2
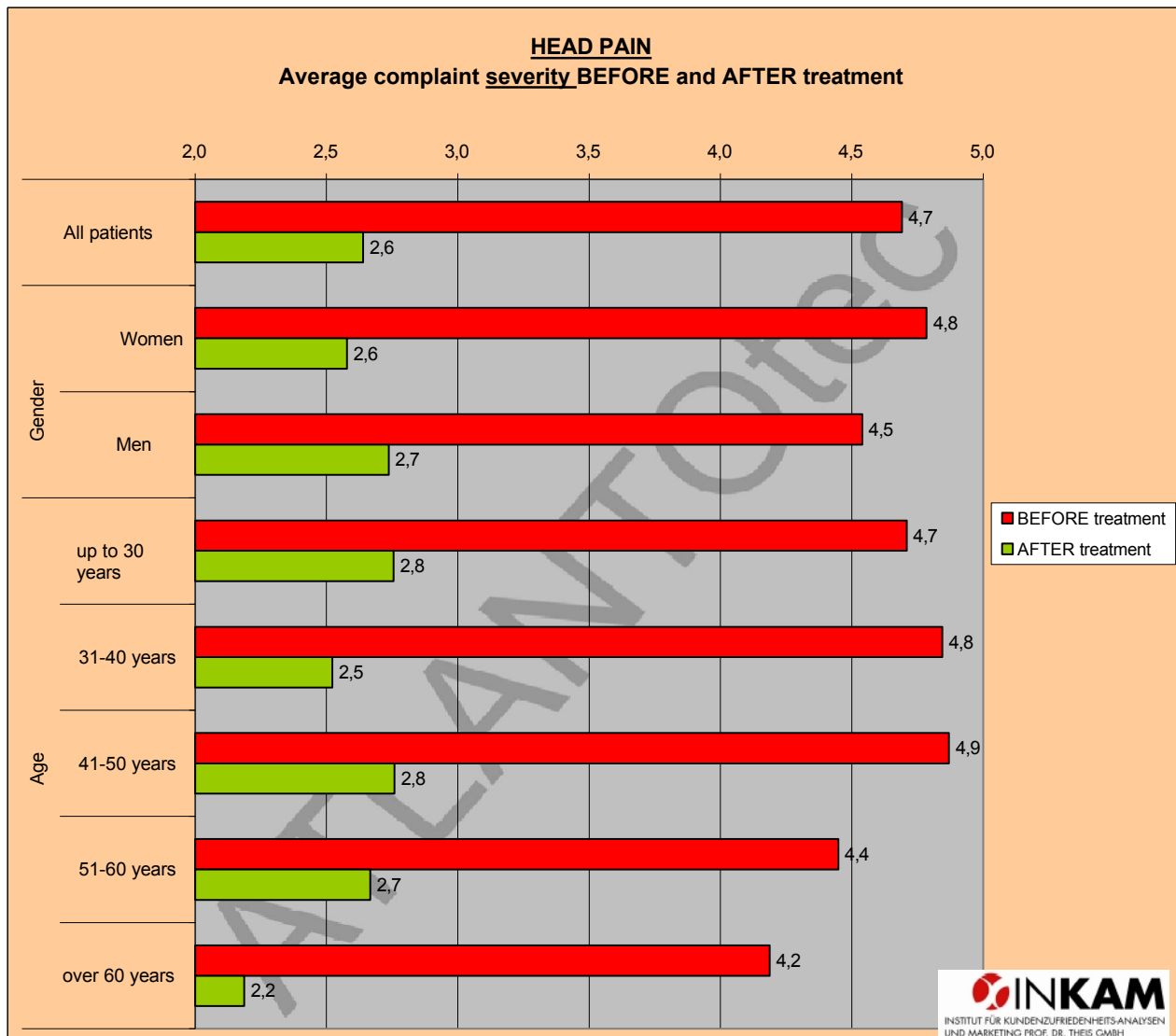
5.5 Low back pain

5.5.1 Complaint status at the start of treatment

The following graph shows the proportion of patients - differentiated according to the various patient groups - who suffered from low back pain before treatment.

CROSS COMPLAINTS
Proportion of patients who had symptoms at the start of treatment

Group	Complaints	None / no significant complaints
All patients	79%	21%
Gender — Women	75%	25%
Gender — Men	84%	16%
Age — up to 30 years	72%	28%
Age — 31-40 years	82%	18%
Age — 41-50 years	85%	15%
Age — 51-60 years	79%	21%
Age — over 60 years	71%	29%
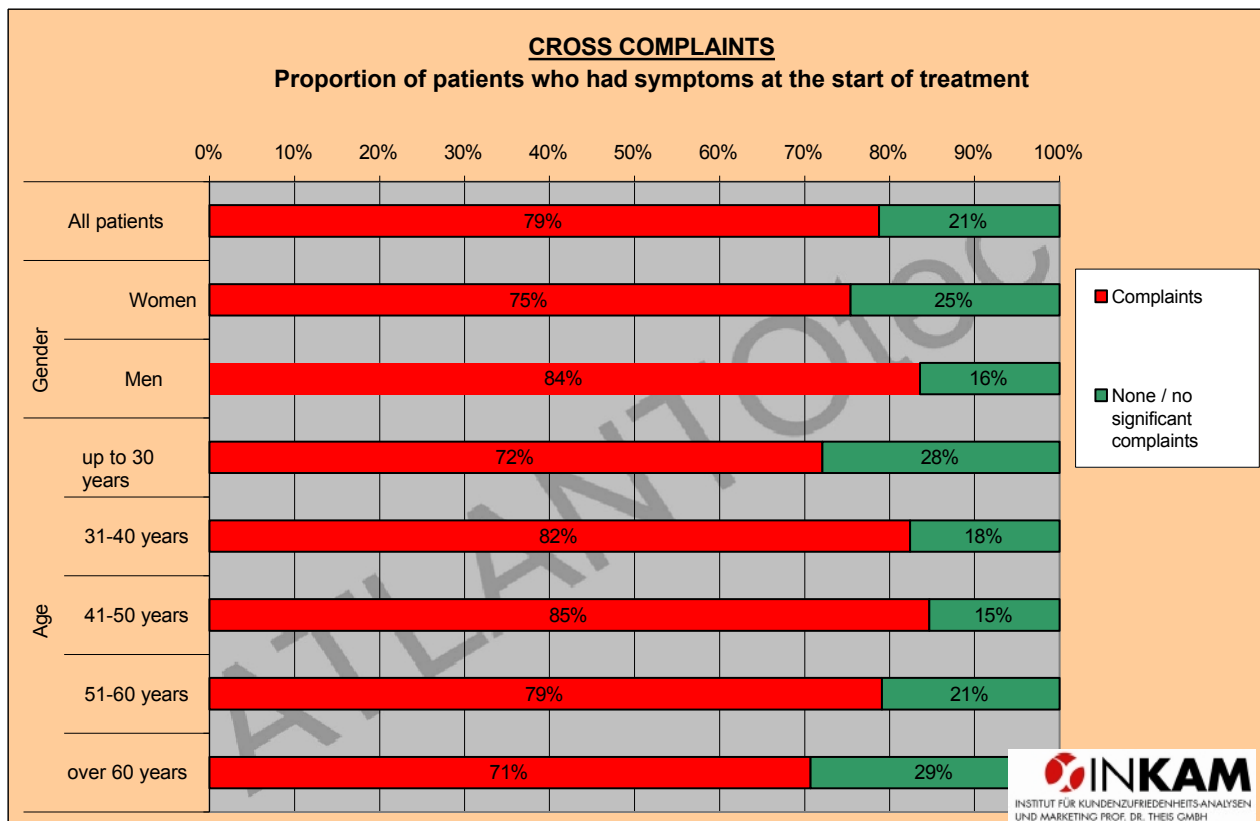
5.5.2 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression of symptoms in terms of <u>severity and frequency</u> in those patients who initially complained of cross discomfort (scale levels 2-7 for frequency and/or severity) and underwent ATLANTOtec®
- treatment.

CROSS COMPLAINTS
Progression of complaint frequency and severity
in different patient groups

Frequency	Complaint-free	improvement	No change	Deterioration
All patients	18%	61%	18%	4%
Women	21%	60%	14%	5%
Men	14%	61%	22%	2%
up to 30 years	24%	57%	16%	3%
31-40 years	21%	57%	18%	3%
41-50 years	14%	63%	19%	5%
51-60 years	11%	65%	20%	3%
over 60 years	21%	62%	12%	5%

Strength	Complaint-free	improvement	No change	Deterioration
All patients	18%	57%	21%	4%
Women	21%	58%	16%	6%
Men	14%	56%	28%	2%
up to 30 years	24%	51%	24%	1%
31-40 years	21%	54%	21%	3%
41-50 years	14%	61%	20%	6%
51-60 years	11%	61%	23%	5%
over 60 years	21%	55%	17%	7%

* The treatment can lead to the following results: In the best case scenario, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

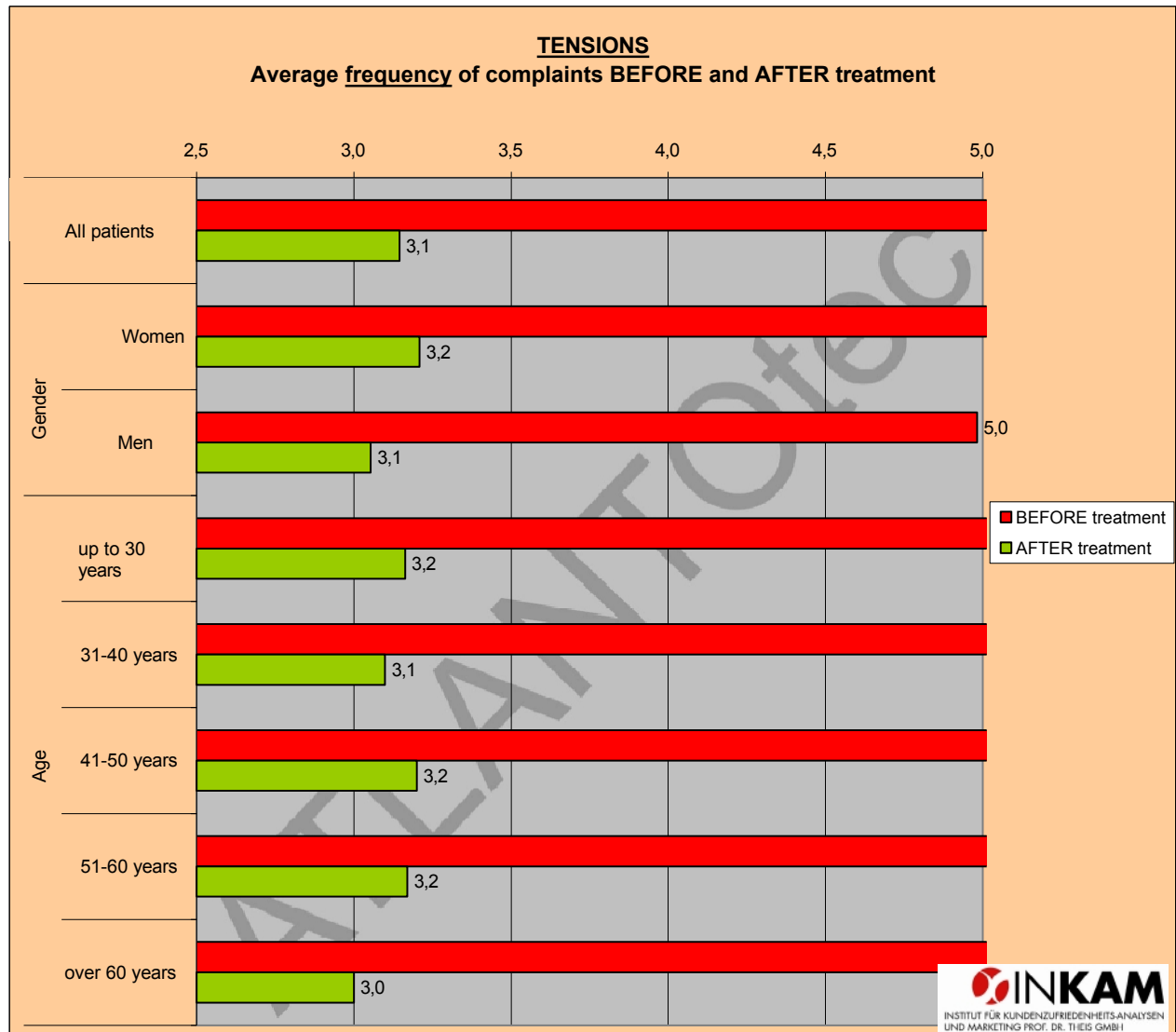### 5.5.3 Effects of treatment with different complaint intensity

The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have on different levels of intensity (frequency and severity of complaints) in the area of low back pain.

The following figure provides information about the results. It shows, for example, the change in the frequency of complaints in those patients indicated **level 5** on the frequency scale before treatment: There was no improvement in **14%** of all respondents. For **14%**, the frequency of complaints was reduced by one level, for **39%** by two levels, for **24%** by three levels and for **8%** by four levels. Consequently, 8% of all level 5 patients are symptom-free (no/no significant complaints).

CROSS COMPLAINTS
Treatment success depending on the frequency and severity of symptoms

5.5.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of complaints of **low back pain** has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.
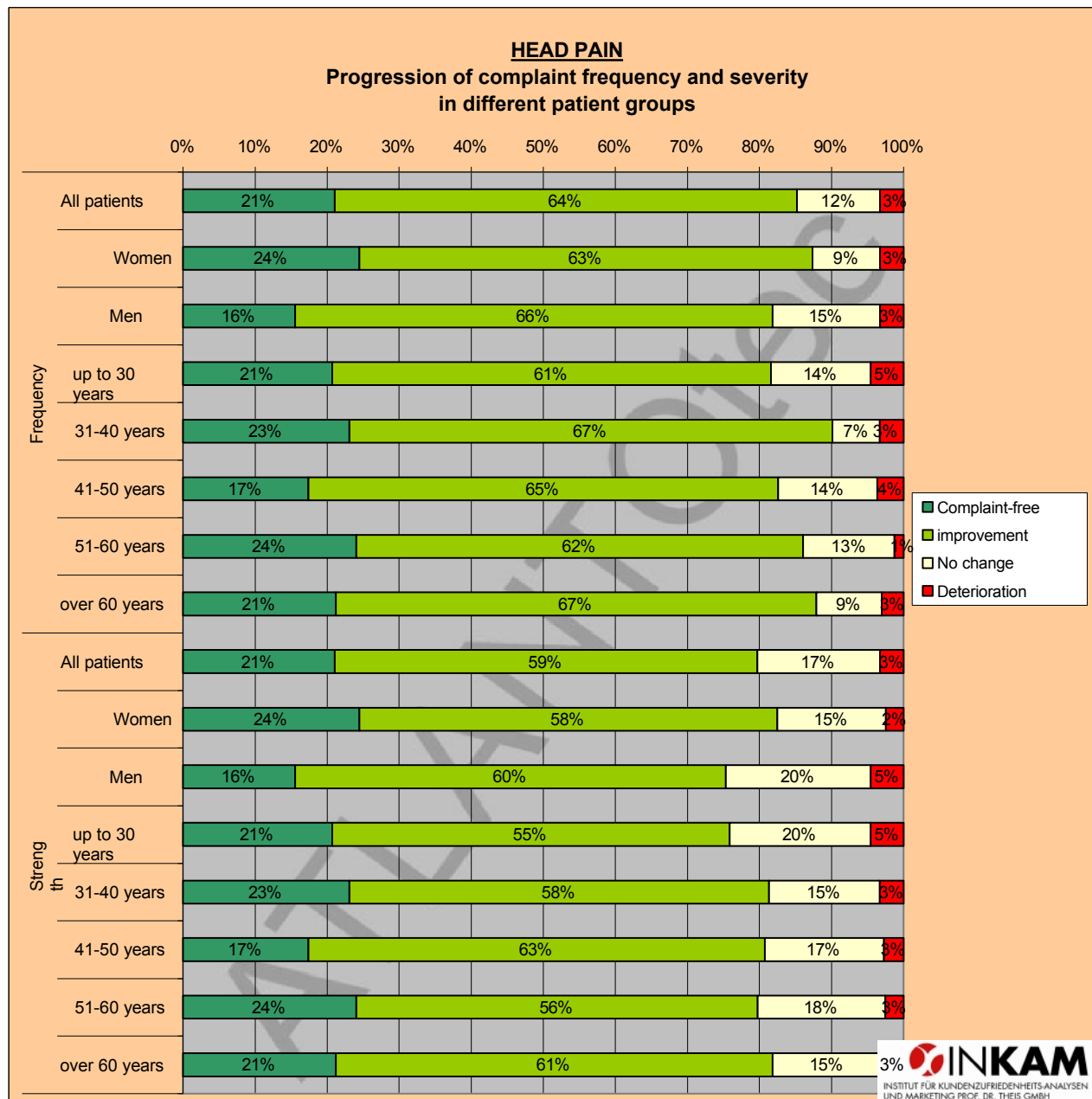

CROSS COMPLAINTS
Average frequency of complaints BEFORE and AFTER treatment

Group	BEFORE treatment	AFTER treatment
All patients	4,6	2,9
Women	4,7	2,9
Men	4,4	2,9
up to 30 years	4,4	2,8
31-40 years	4,3	2,6
41-50 years	4,8	3,0
51-60 years	4,7	3,1
over 60 years	4,7	2,9

5.5.5 Average complaint severity BEFORE and AFTER the treatment

The following graph shows - differentiated according to the various patient groups - how the severity of complaints of **low back pain** has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

CROSS COMPLAINTS
Average complaint severity BEFORE and AFTER treatment

Group		BEFORE treatment	AFTER treatment
	All patients	4,5	2,8
Gender	Women	4,6	2,8
	Men	4,3	2,8
Age	up to 30 years	4,2	2,7
	31-40 years	4,3	2,7
	41-50 years	4,7	3,0
	51-60 years	4,5	3,0
	over 60 years	4,5	2,8

5.6 Shoulder complaints

5.6.1 Complaint status at the start of treatment

The following graph shows the proportion of patients - differentiated according to the various patient groups - who suffered from shoulder complaints before treatment.

SHOULDER COMPLAINTS
Proportion of patients who had symptoms at the start of treatment

Group		Complaints	None / no significant complaints
All patients		79%	21%
Gender	Women	79%	21%
	Men	78%	22%
Age	up to 30 years	78%	22%
	31-40 years	73%	27%
	41-50 years	84%	16%
	51-60 years	84%	16%
	over 60 years	69%	31%
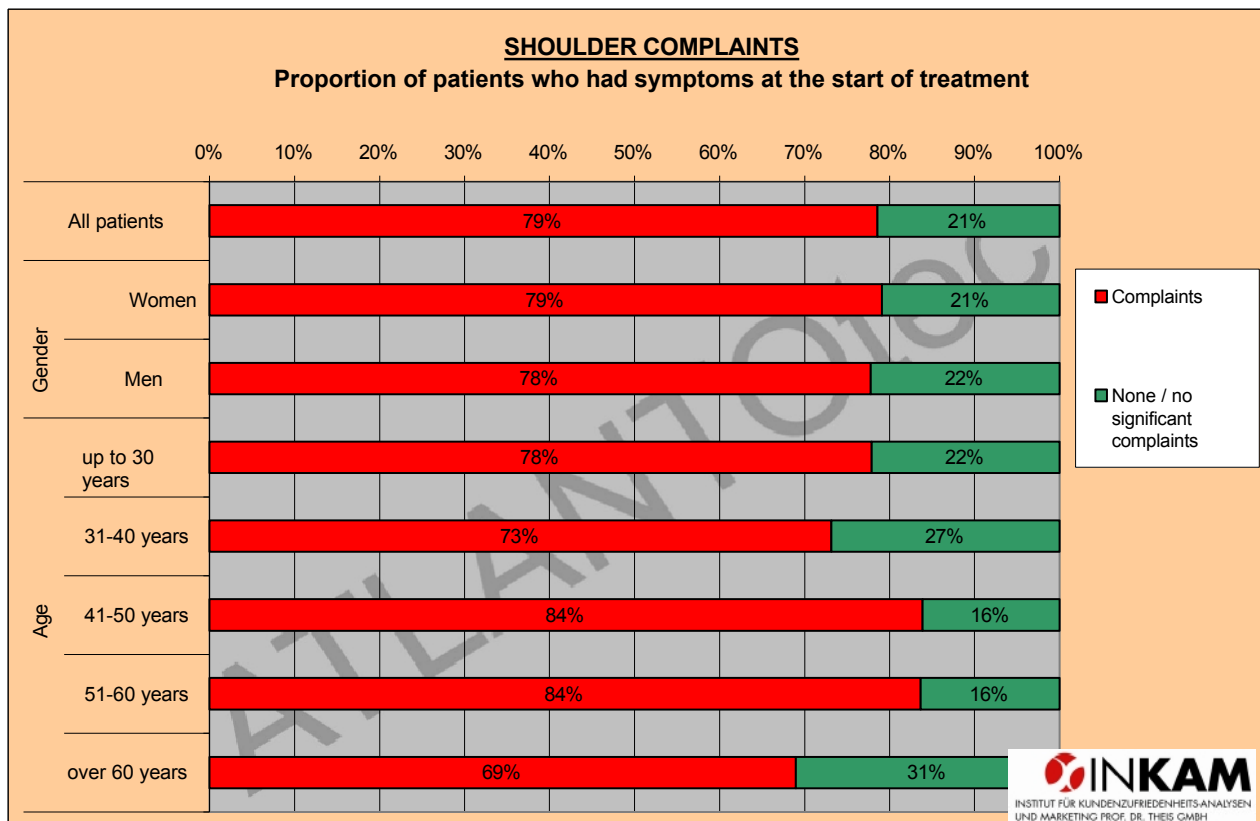
5.6.2 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression of symptoms in terms of severity and frequency in those patients who initially complained of shoulder complaints (scale levels 2-7 for frequency and/or severity) and underwent *ATLANTO-* tec® treatment.
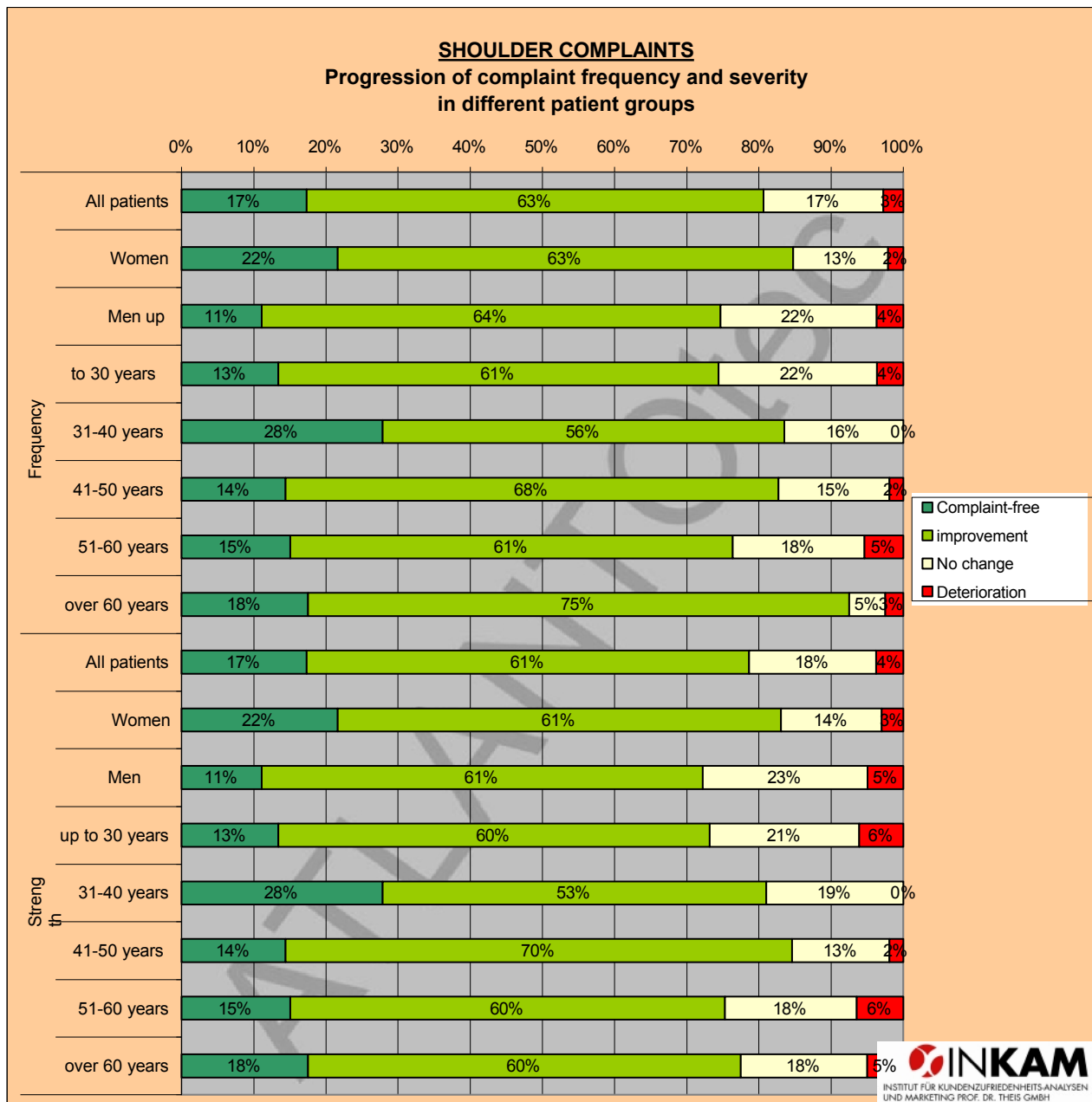
SHOULDER COMPLAINTS
Progression of complaint frequency and severity
in different patient groups

Group	Complaint-free	improvement	No change	Deterioration
Frequency				
All patients	17%	63%	17%	3%
Women	22%	63%	13%	2%
Men up	11%	64%	22%	4%
to 30 years	13%	61%	22%	4%
31-40 years	28%	56%	16%	0%
41-50 years	14%	68%	15%	2%
51-60 years	15%	61%	18%	5%
over 60 years	18%	75%	5%	3%
Strength				
All patients	17%	61%	18%	4%
Women	22%	61%	14%	3%
Men	11%	61%	23%	5%
up to 30 years	13%	60%	21%	6%
31-40 years	28%	53%	19%	0%
41-50 years	14%	70%	13%	2%
51-60 years	15%	60%	18%	6%
over 60 years	18%	60%	18%	5%

* The treatment can lead to the following results: In the best case scenario, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

5.6.3 Effects of treatment with different complaint intensity

The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have on shoulder complaints of varying intensity (frequency and severity of complaints)?

The following figure provides information about the results. It shows, for example, the change in the frequency of complaints in those patients indicated **level 5** on the frequency scale before treatment: There was no improvement in **11%** of all respondents. For **8%**, the frequency of complaints was reduced by one level, for **34%** by two levels, for **32%** by three levels and for **16%** by four levels. Consequently, 16% of all level 5 patients are symptom-free (no/no significant complaints).
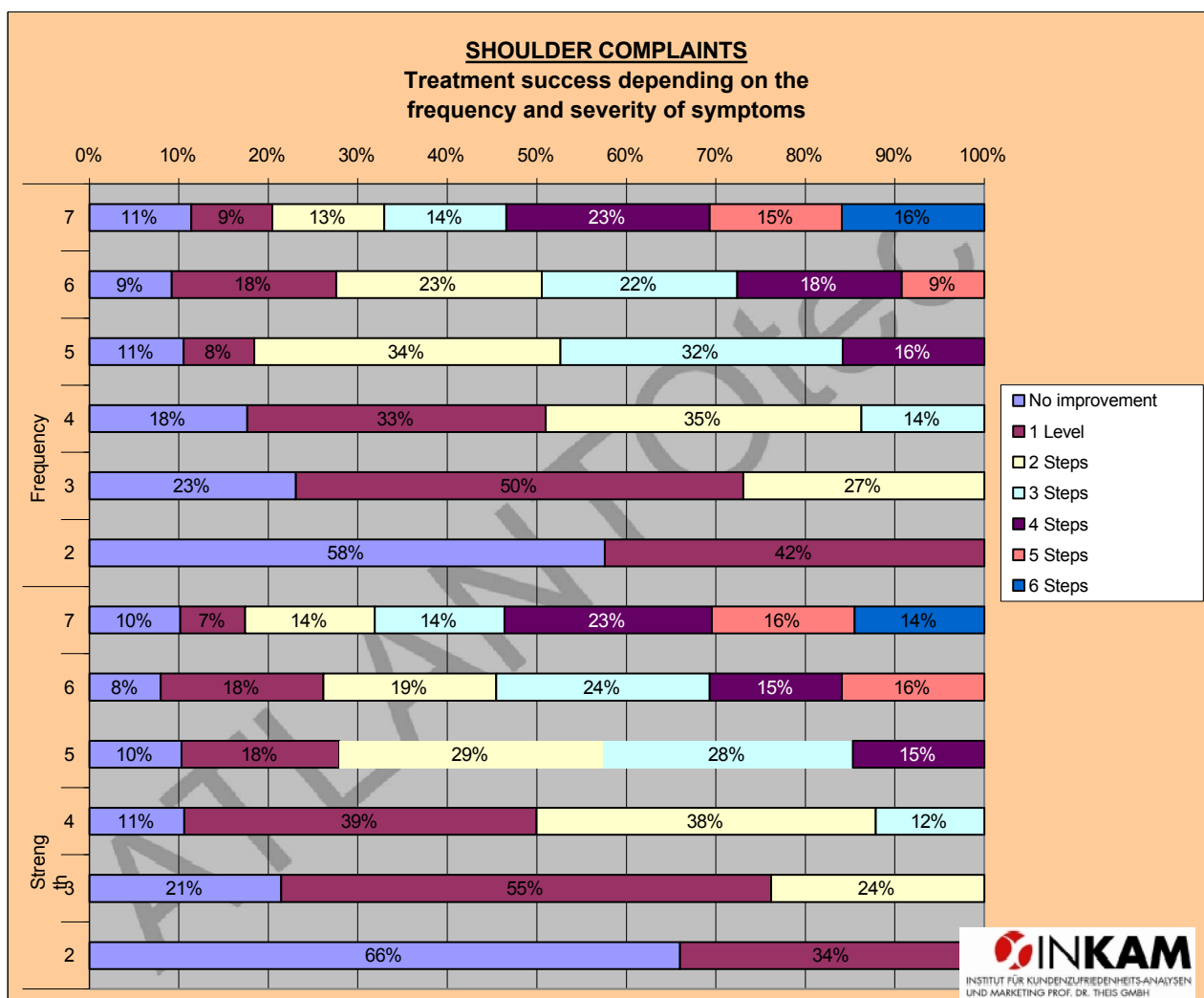
5.6.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of *shoulder* complaints has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

SHOULDER COMPLAINTS
Average frequency of complaints BEFORE and AFTER treatment

Patient group	BEFORE treatment	AFTER treatment
All patients	5,0	2,9
Women (Gender)	5,2	2,9
Men (Gender)	4,7	2,9
up to 30 years (Age)	4,7	2,9
31-40 years (Age)	4,9	2,7
41-50 years (Age)	5,3	3,1
51-60 years (Age)	4,8	3,0
over 60 years (Age)	5,3	2,9

5.6.5 Average complaint severity BEFORE and AFTER the treatment

The following graph shows - differentiated according to the various patient groups - how the severity of _shoulder_ complaints has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

SHOULDER COMPLAINTS
Average complaint severity BEFORE and AFTER treatment

Group		BEFORE treatment	AFTER treatment
All patients		4,8	2,8
Gender	Women	4,9	2,8
	Men	4,5	2,8
Age	up to 30 years	4,6	2,7
	31-40 years	4,5	2,7
	41-50 years	5,1	3,0
	51-60 years	4,7	2,9
	over 60 years	4,6	2,7

5.7 Sleep complaints

5.7.1 Complaint status at the start of treatment

The following graph shows the proportion of patients - differentiated according to the various patient groups - who suffered from sleep complaints before treatment.

SLEEP COMPLAINTS
Proportion of patients who had symptoms at the start of treatment

Group		Complaints	None / no significant complaints
All patients		70%	30%
Gender	Women	72%	28%
	Men	68%	32%
Age	up to 30 years	66%	34%
	31-40 years	72%	28%
	41-50 years	77%	23%
	51-60 years	69%	31%
	over 60 years	62%	38%

5.7.2 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression of symptoms in terms of severity and frequency in those patients who initially complained of sleep problems (scale levels 2-7 for frequency and/or severity) and underwent the ATLANTOtec®
- treatment.

SLEEP COMPLAINTS
Progression of complaint frequency and severity
in different patient groups

Category		Complaint-free	improvement	No change	Deterioration
Frequency	All patients	18%	55%	24%	3%
	Women	19%	59%	21%	2%
	Men up	17%	49%	29%	4%
	to 30 years	19%	54%	23%	4%
	31-40 years	22%	49%	24%	5%
	41-50 years	18%	61%	20%	2%
	51-60 years	16%	61%	24%	0
	over 60 years	17%	42%	39%	3%
Strength	All patients	18%	50%	29%	3%
	Women	19%	51%	29%	2%
	Men up	17%	48%	31%	3%
	to 30 years	19%	49%	29%	3%
	31-40 years	22%	44%	29%	5%
	41-50 years	18%	55%	25%	3%
	51-60 years	16%	53%	32%	0%
	over 60 years	17%	44%	39%	0%

* The treatment can lead to the following results: In the best case, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

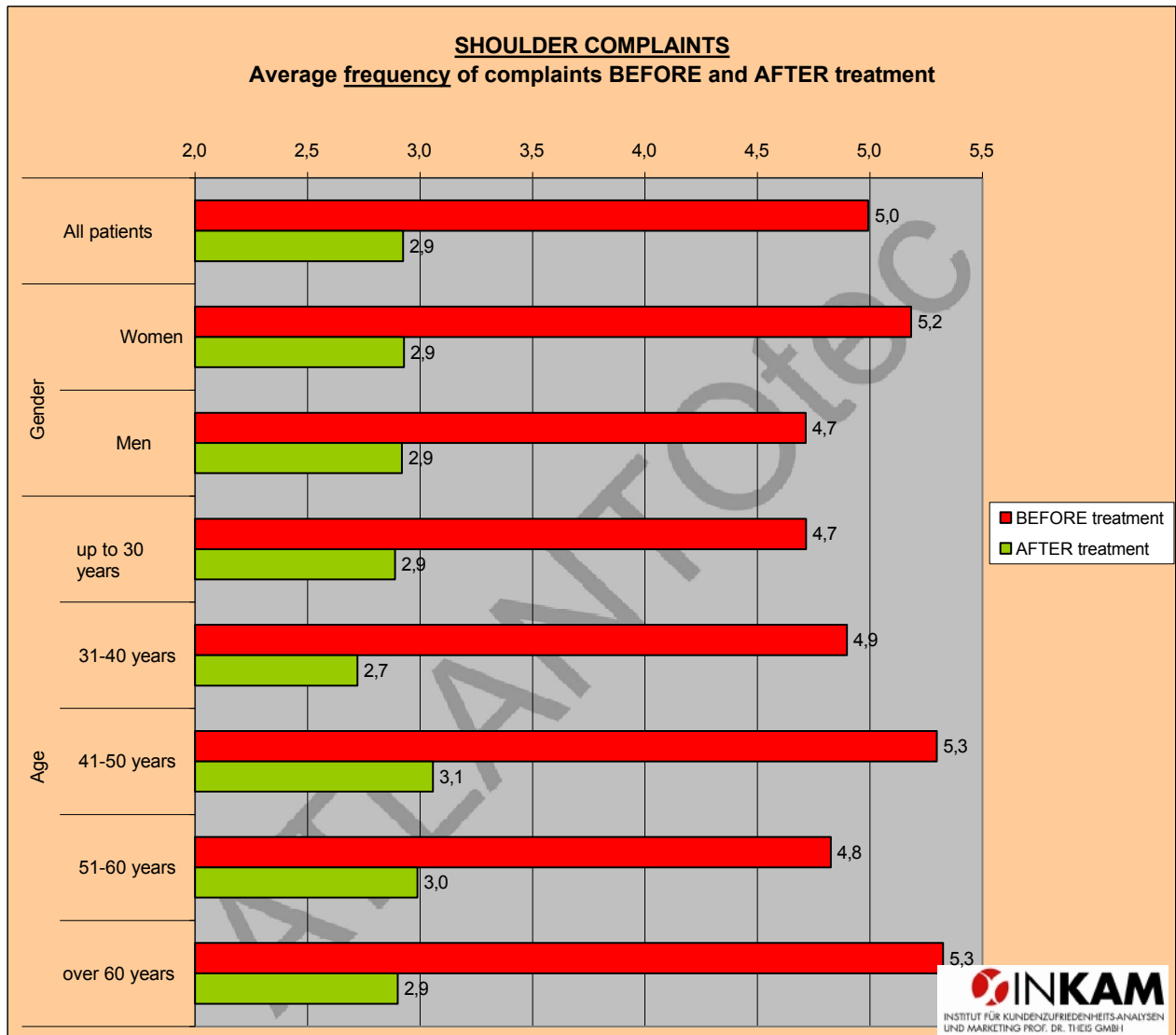### 5.7.3 Effects of treatment with different complaint intensity

The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have with different complaint intensities (complaint frequencies and severity) in the complaint area of sleep complaints?

The following figure provides information about the results. It , for example, the change the frequency of complaints in those patients who indicated **level 5** on the frequency scale before treatment: There was no improvement in **8%** of all respondents. For **26%**, the frequency of complaints was reduced by one level, for **28%** by two levels, for **28%** by three levels and for **9%** by four levels. Consequently, 9% of all level 5 patients are symptom-free (no/no significant complaints).

SLEEP COMPLAINTS
Treatment success depending on the
frequency and severity of symptoms

Frequency	No improvement	1 Level	2 Steps	3 Steps	4 Steps	5 Steps	6 Steps
7	8%	15%	20%	13%	23%	13%	10%
6	21%	15%	17%	19%	17%	10%	
5	8%	26%	28%	28%	9%		
4	19%	23%	42%	16%			
3	22%	52%	26%				
2	63%	37%					

Strength	No improvement	1 Level	2 Steps	3 Steps	4 Steps	5 Steps	6 Steps
7	11%	7%	25%	11%	18%	25%	4%
6	22%	14%	12%	16%	25%	12%	
5	11%	18%	21%	38%	13%		
4	24%	26%	32%	18%			
3	24%	54%	21%				
2	68%	32%					

Legend:
- ■ No improvement
- ■ 1 Level
- □ 2 Steps
- □ 3 Steps
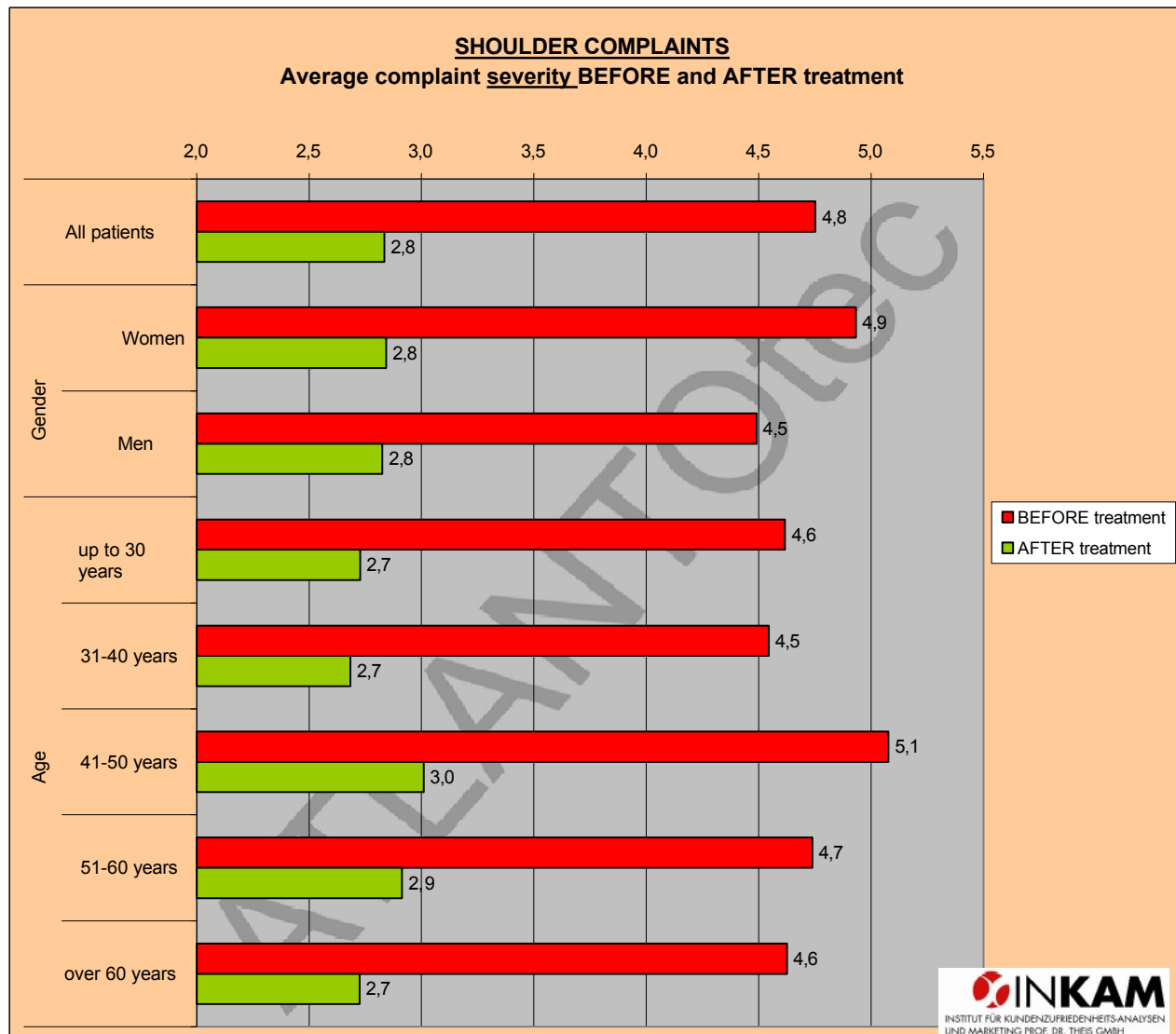- ■ 4 Steps
- ■ 5 Steps
- ■ 6 Steps

5.7.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the average frequency of *sleep complaints* has changed across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

SLEEP COMPLAINTS
Average frequency of complaints BEFORE and AFTER treatment

Group	BEFORE treatment	AFTER treatment
All patients	4,2	2,7
Gender - Women	4,3	2,7
Gender - Men	4,1	2,7
Age - up to 30 years	4,2	2,5
Age - 31-40 years	4,1	2,5
Age - 41-50 years	4,4	2,7
Age - 51-60 years	4,3	2,8
Age - over 60 years	4,2	3,3

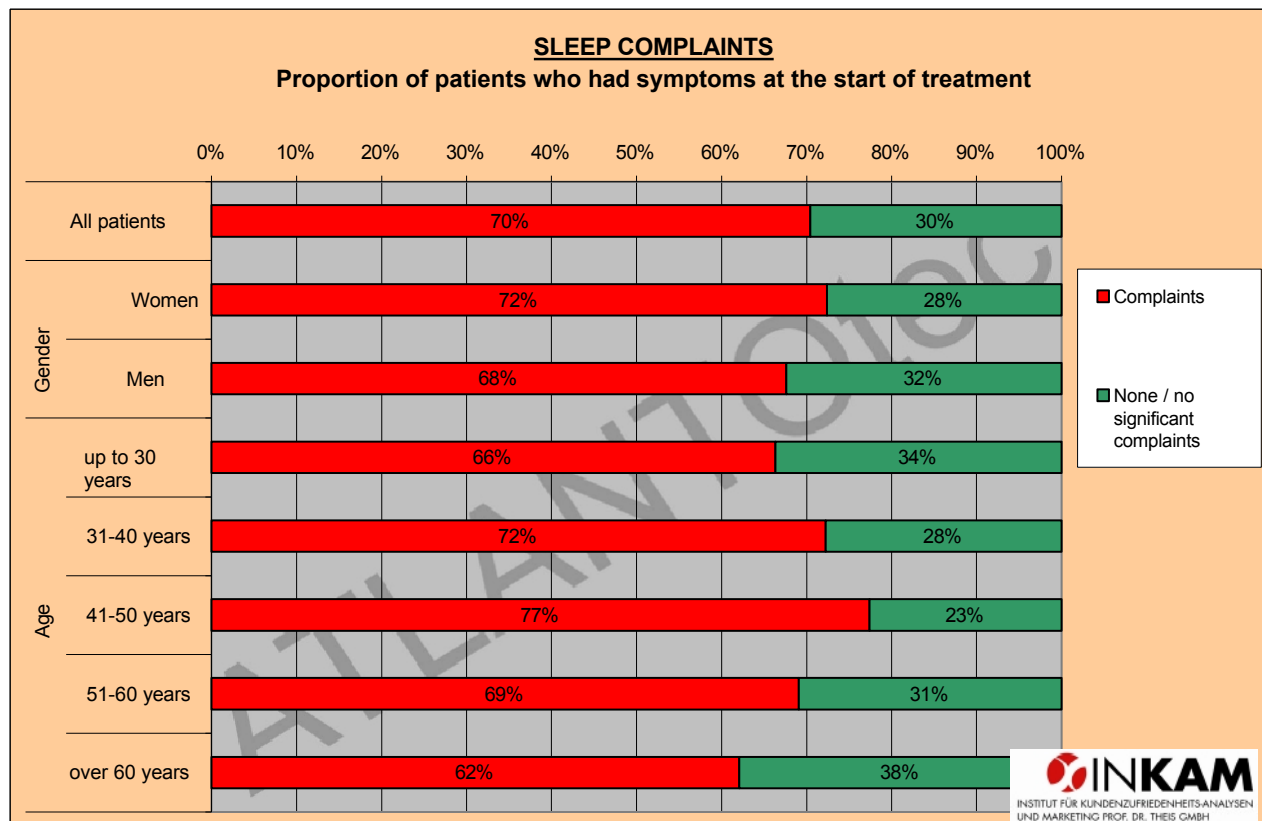## 5.7.5 Average complaint severity BEFORE and AFTER the treatment

The following graph shows - differentiated according to the various patient groups - how the severity of *sleep complaints* has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

SLEEP COMPLAINTS
Average complaint severity BEFORE and AFTER treatment

Group		BEFORE treatment	AFTER treatment
	All patients	4,0	2,6
Gender	Women	4,1	2,6
	Men	4,0	2,6
Age	up to 30 years	4,0	2,4
	31-40 years	3,9	2,5
	41-50 years	4,3	2,6
	51-60 years	4,1	2,6
	over 60 years	4,0	2,8

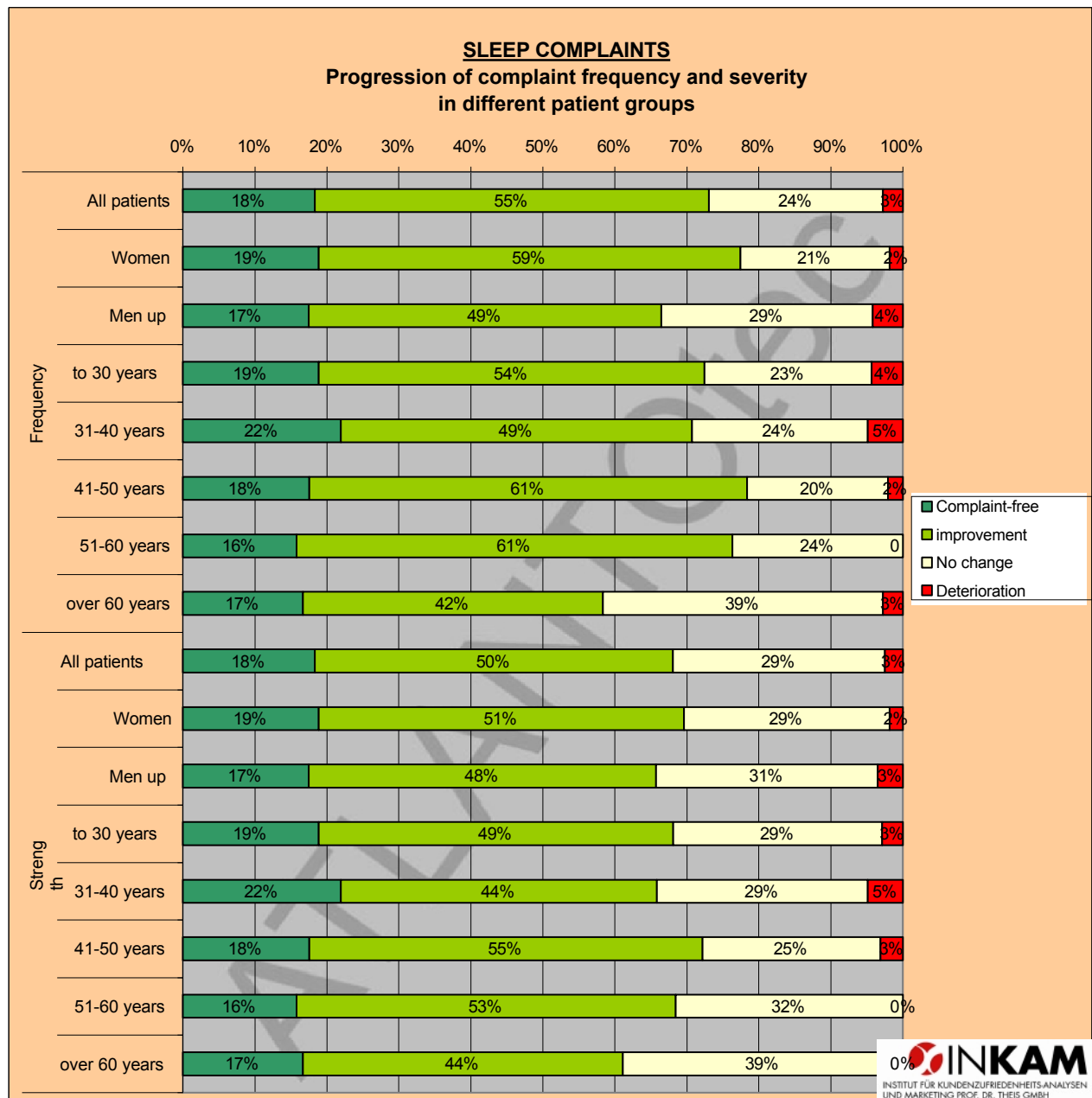## 5.8 Gastrointestinal complaints

5.8.1 Complaint status at the start of treatment

The following graph shows the proportion of patients - differentiated according to the various patient groups - who suffered from gastrointestinal complaints before treatment.
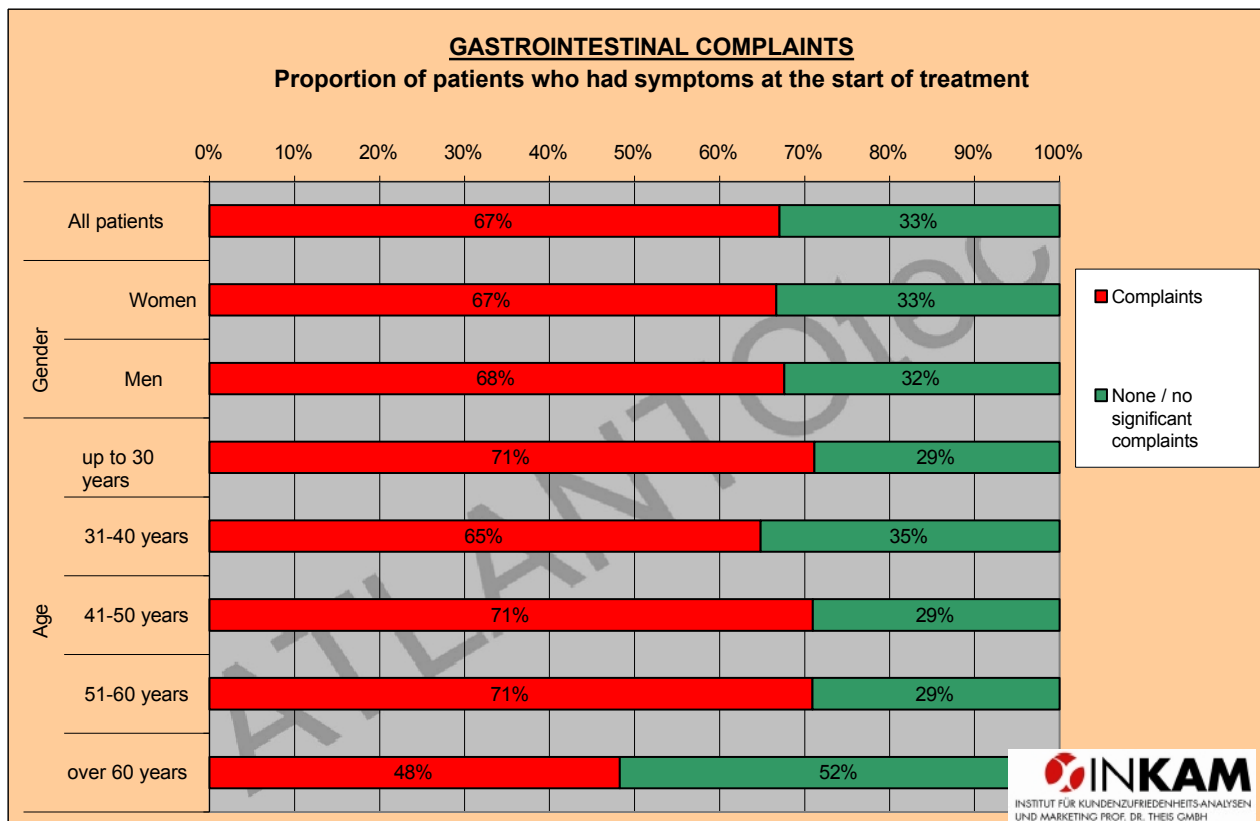
5.8.2 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression of symptoms in terms of severity and frequency in those patients who initially complained of gastrointestinal symptoms (scale levels 2-7 for frequency and/or severity) and underwent AT-LANTOtec® treatment.

GASTROINTESTINAL COMPLAINTS
Progression of complaint frequency and severity in different patient groups

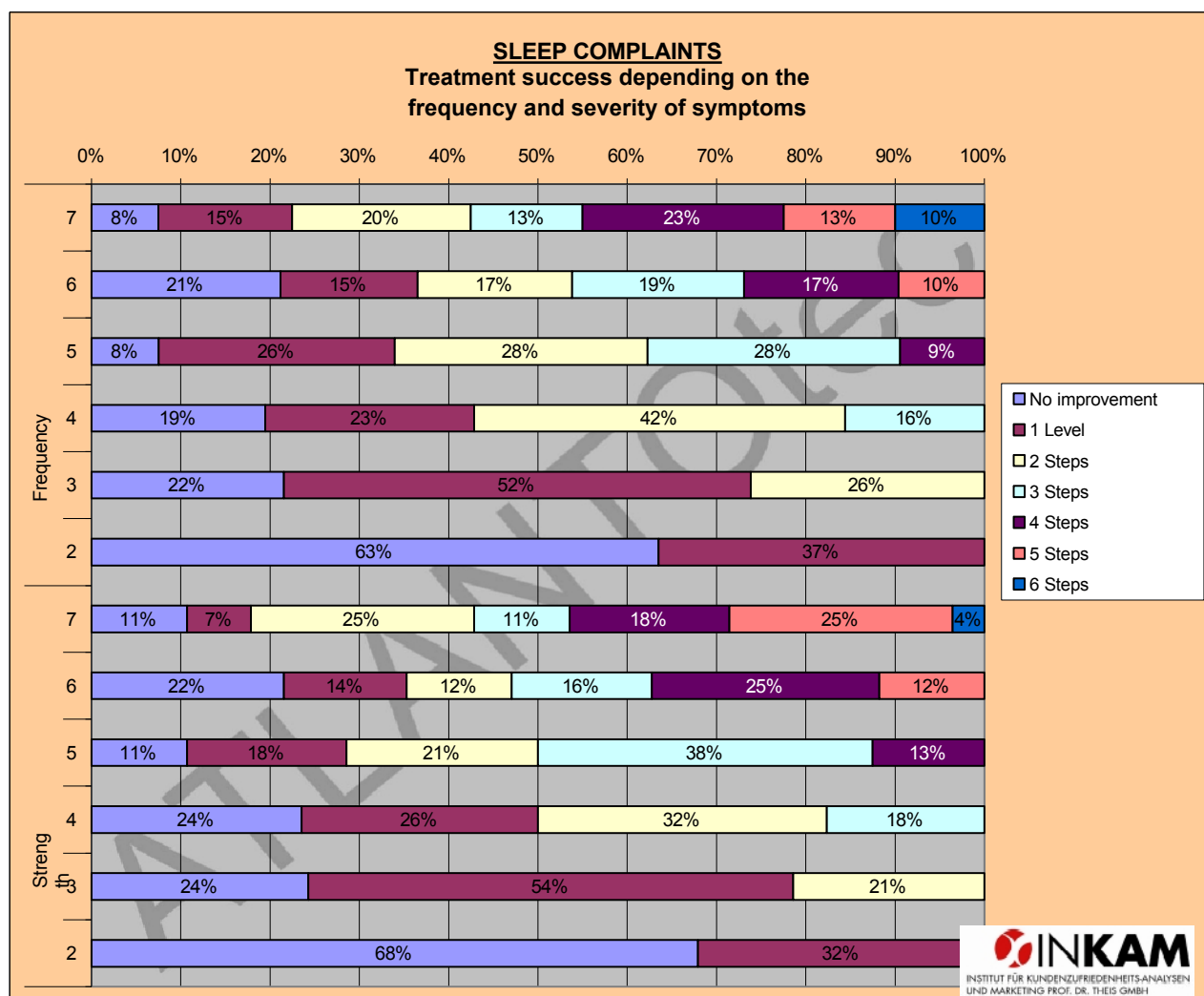|	Complaint-free	improvement	No change	Deterioration
Frequency				
All patients	20%	48%	28%	3%
Women	21%	49%	26%	3%
Men	20%	46%	31%	3%
up to 30 years	24%	50%	26%	0%
31-40 years	29%	46%	23%	3%
41-50 years	17%	51%	27%	6%
51-60 years	14%	46%	37%	4%
over 60 years	21%	45%	31%	3%
Strength				
All patients	20%	41%	34%	4%
Women	21%	42%	33%	4%
Men	20%	40%	36%	4%
up to 30 years	24%	41%	35%	0%
31-40 years	29%	43%	26%	3%
41-50 years	17%	46%	32%	6%
51-60 years	14%	41%	39%	6%
over 60 years	21%	28%	45%	7%

* The treatment can lead to the following results: In the best case scenario, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

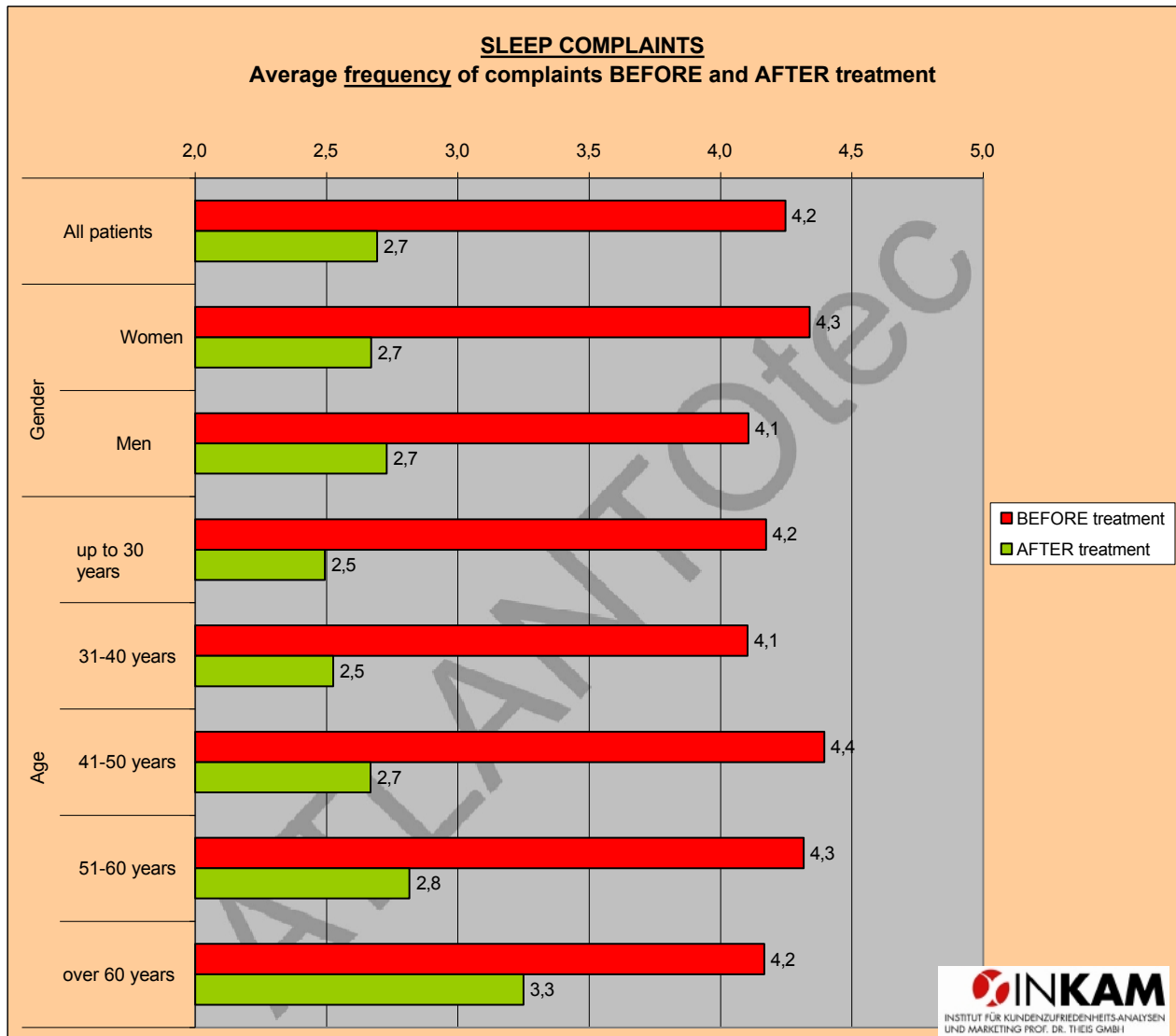### 5.8.3 Effects of treatment with different complaint intensity

The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have on different levels of intensity (frequency and severity of complaints) in the area of gastrointestinal complaints?

The following figure provides information about the results. It shows, for example, the change in the frequency of complaints in those patients indicated **level 5** on the frequency scale before treatment: There was no improvement in **15%** of all respondents. For **10%**, the frequency of complaints was reduced by one level, for **38%** by two levels, for **16%** by three levels and for **21%** by four levels. Consequently, 21% of all level 5 patients are symptom-free (no/no significant complaints).

GASTROINTESTINAL COMPLAINTS
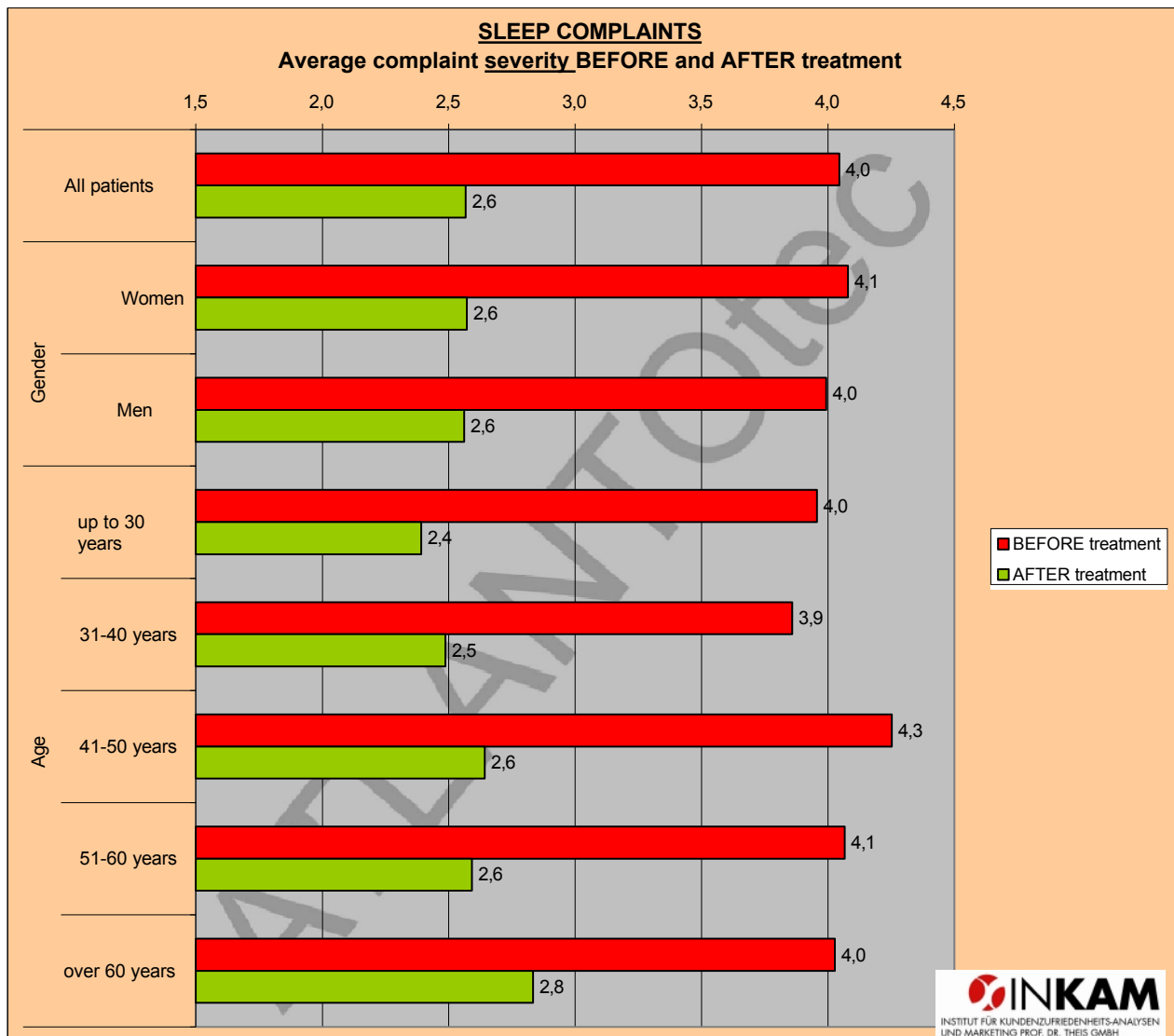Treatment success depending on the frequency and severity of symptoms
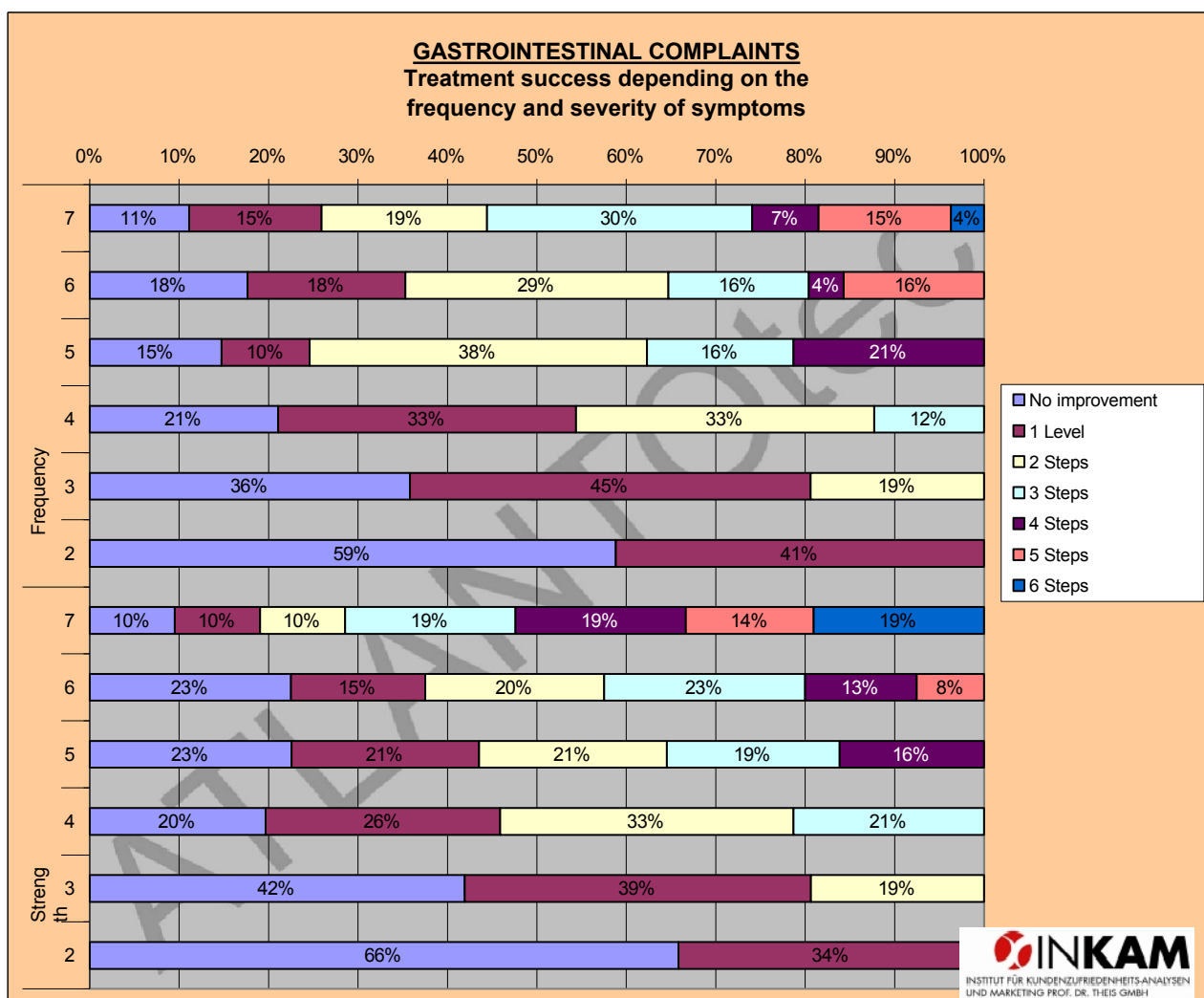
5.8.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of *gastrointestinal* complaints has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

GASTROINTESTINAL COMPLAINTS
Average frequency of complaints BEFORE and AFTER treatment

Patient group	BEFORE treatment	AFTER treatment
All patients	4,1	2,7
Women	4,3	2,8
Men	3,8	2,6
up to 30 years	4,2	2,7
31-40 years	4,1	2,6
41-50 years	4,1	2,7
51-60 years	4,1	2,9
over 60 years	4,0	2,7

## 5.8.5 Average complaint severity BEFORE and AFTER the treatment

The following graph shows - differentiated according to the various patient groups - how the severity of *gastrointestinal* complaints has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

GASTROINTESTINAL COMPLAINTS
Average complaint severity BEFORE and AFTER treatment

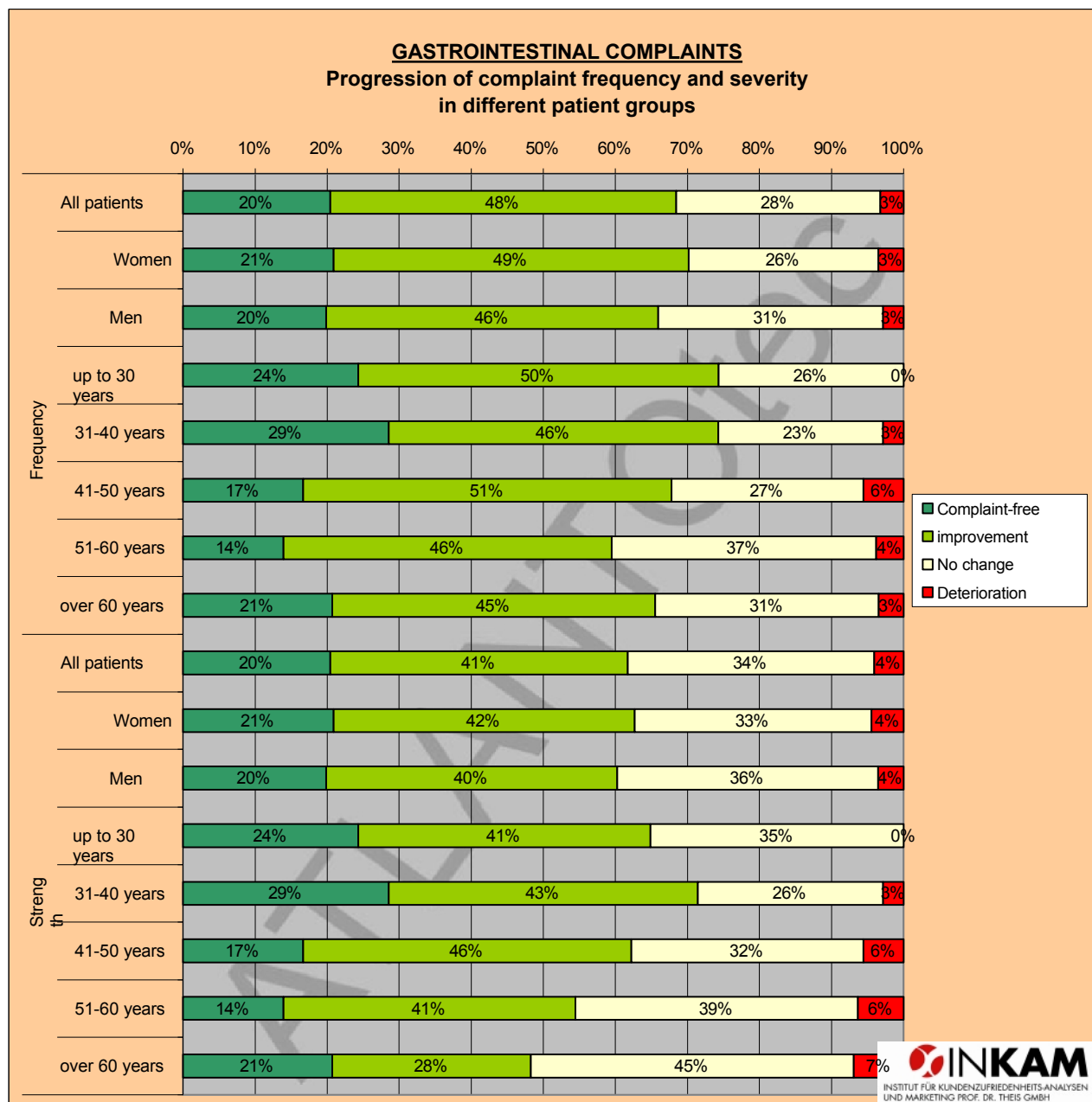| Group		BEFORE treatment	AFTER treatment
	All patients	3,9	2,6
Gender	Women	4,1	2,8
	Men	3,6	2,5
Age	up to 30 years	3,9	2,5
	31-40 years	3,9	2,4
	41-50 years	4,1	2,7
	51-60 years	3,9	2,9
	over 60 years	3,8	2,9

5.9 Dizziness

5.9.1 Complaint status at the start of treatment

The following graph shows the proportion of patients - differentiated according to the various patient groups - who suffered from dizziness before treatment.

SCHWINDEL
Proportion of patients who had symptoms at the start of treatment

Patient group	Complaints	None / no significant complaints
All patients	65%	35%
Women	69%	31%
Men	60%	40%
up to 30 years	68%	32%
31-40 years	64%	36%
41-50 years	73%	27%
51-60 years	61%	39%
over 60 years	57%	43%

5.9.2 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression symptoms in terms of <u>severity and frequency </u>in those patients who initially complained of dizziness (scale levels 2-7 for frequency and/or severity) and underwent the ATLANTOtec® treatment.


SCHWINDEL
Progression of complaint frequency and severity in different patient groups

	Complaint-free	improvement	No change	Deterioration
Frequency				
All patients	29%	52%	17%	2%
Women	28%	52%	18%	2%
Men	31%	52%	15%	2%
up to 30 years	27%	51%	19%	3%
31-40 years	38%	39%	22%	1%
41-50 years	24%	58%	17%	1%
51-60 years	23%	61%	12%	4%
over 60 years	38%	47%	12%	3%
Strength				
All patients	29%	46%	21%	4%
Women	28%	48%	20%	4%
Men	31%	43%	24%	2%
up to 30 years	27%	41%	27%	4%
31-40 years	38%	41%	19%	3%
41-50 years	24%	54%	19%	2%
51-60 years	23%	49%	22%	6%
over 60 years	38%	38%	21%	3%

* The treatment can lead to the following results: In the best case scenario, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

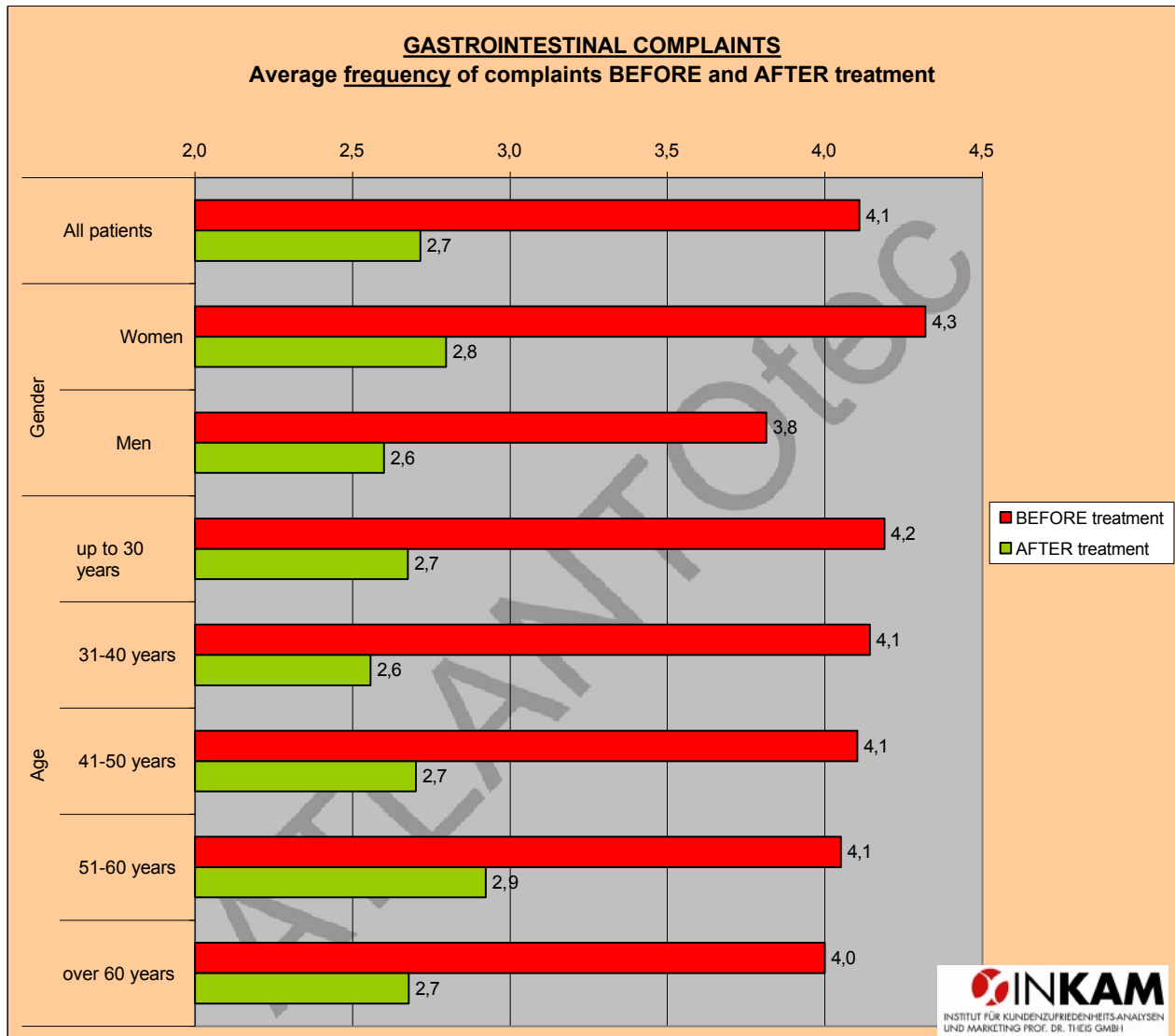## 5.9.3 Effects of treatment with different complaint intensity

The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have with different complaint intensities (complaint frequencies and severity) in the complaint area of dizziness?

The following figure provides information about the results. It shows, for example, the change in the frequency of complaints in those patients indicated **level 5** on the frequency scale before treatment: There was no improvement in **11%** of all respondents. For **13%**, the frequency of complaints was reduced by one level, for **25%** by two levels, for **36%** by three levels and for **16%** by four levels. Consequently, 16% of all level 5 patients are symptom-free (no/no significant complaints).

SCHWINDEL
Success of treatment depending on the frequency and severity of symptoms
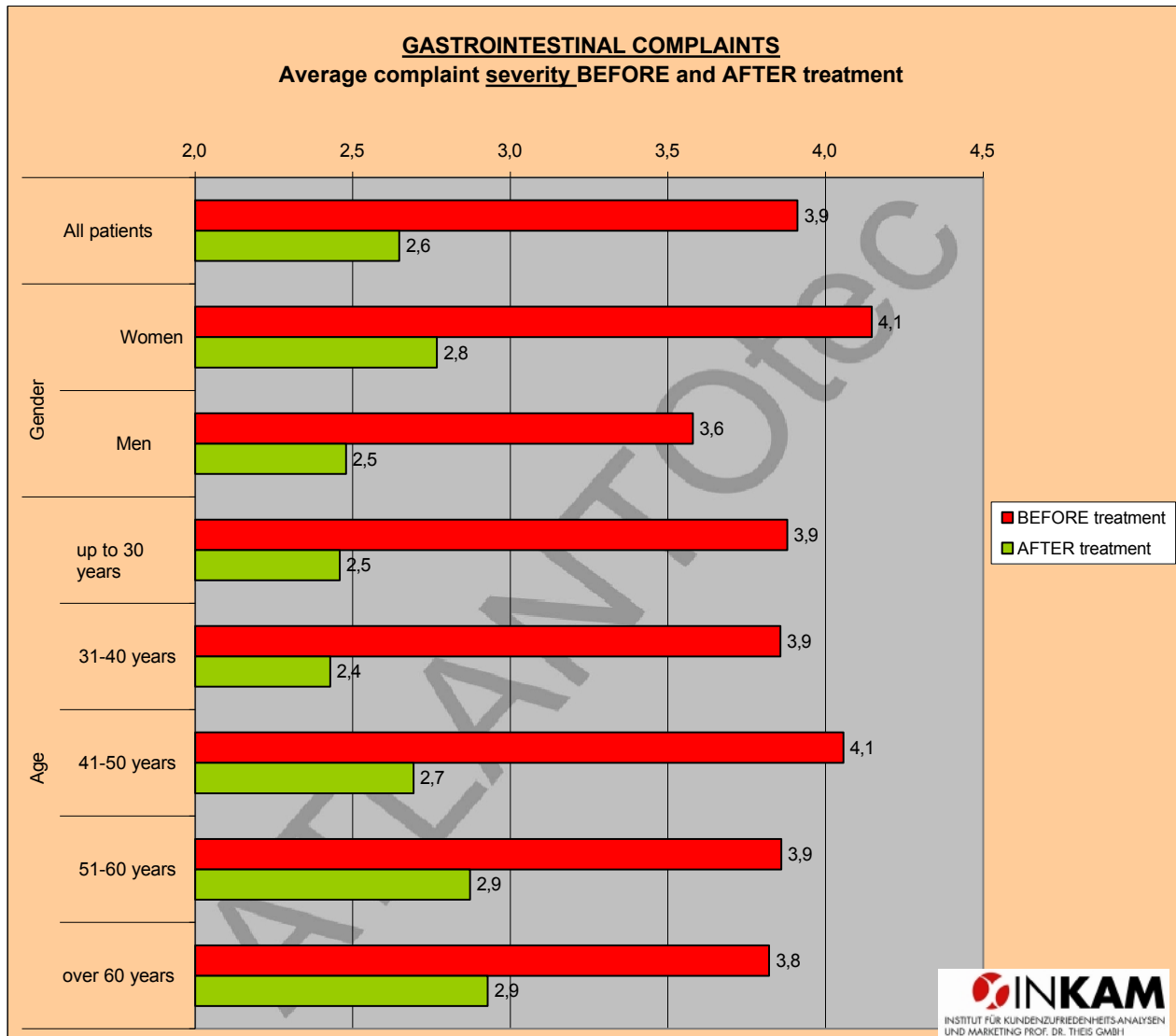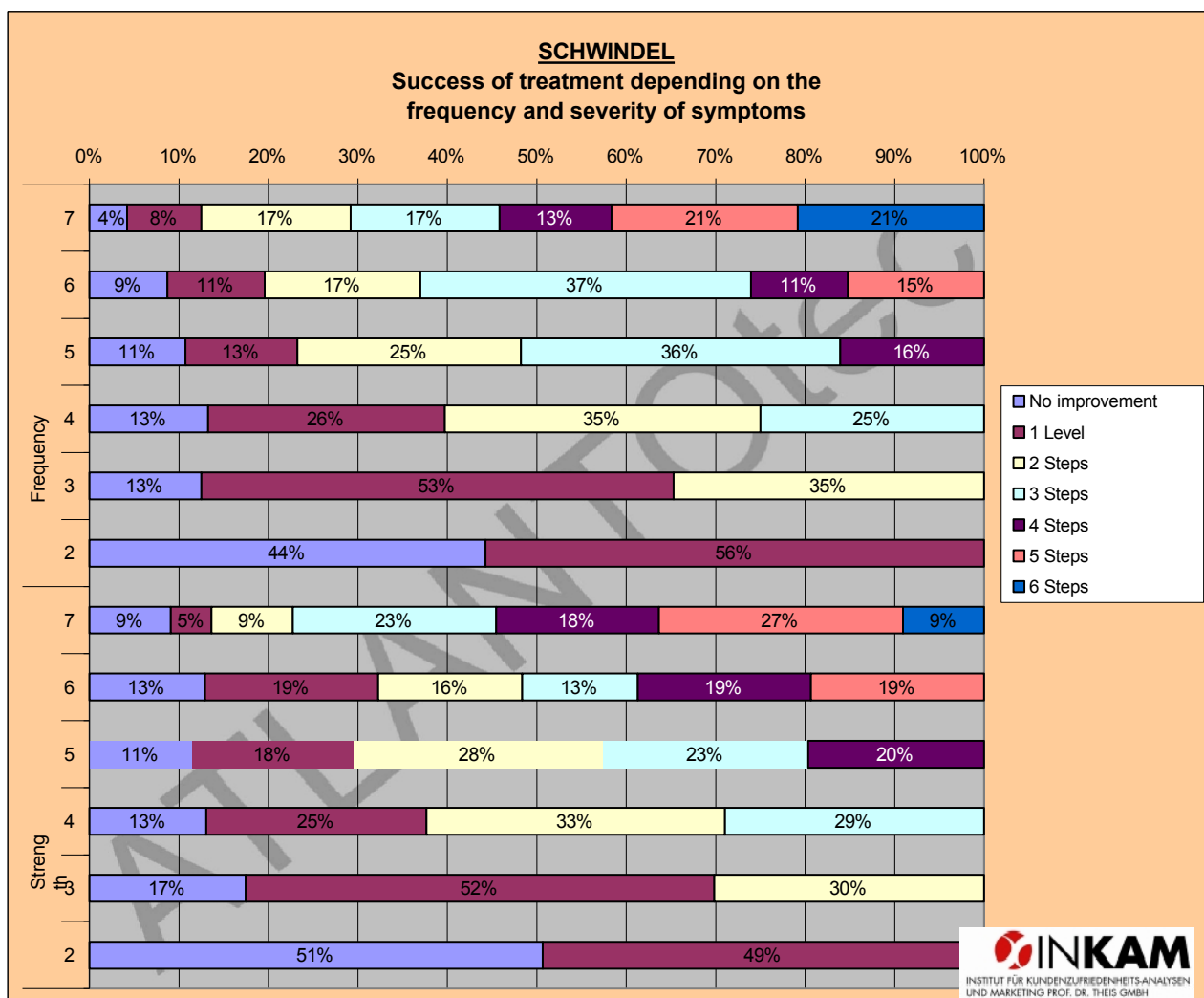
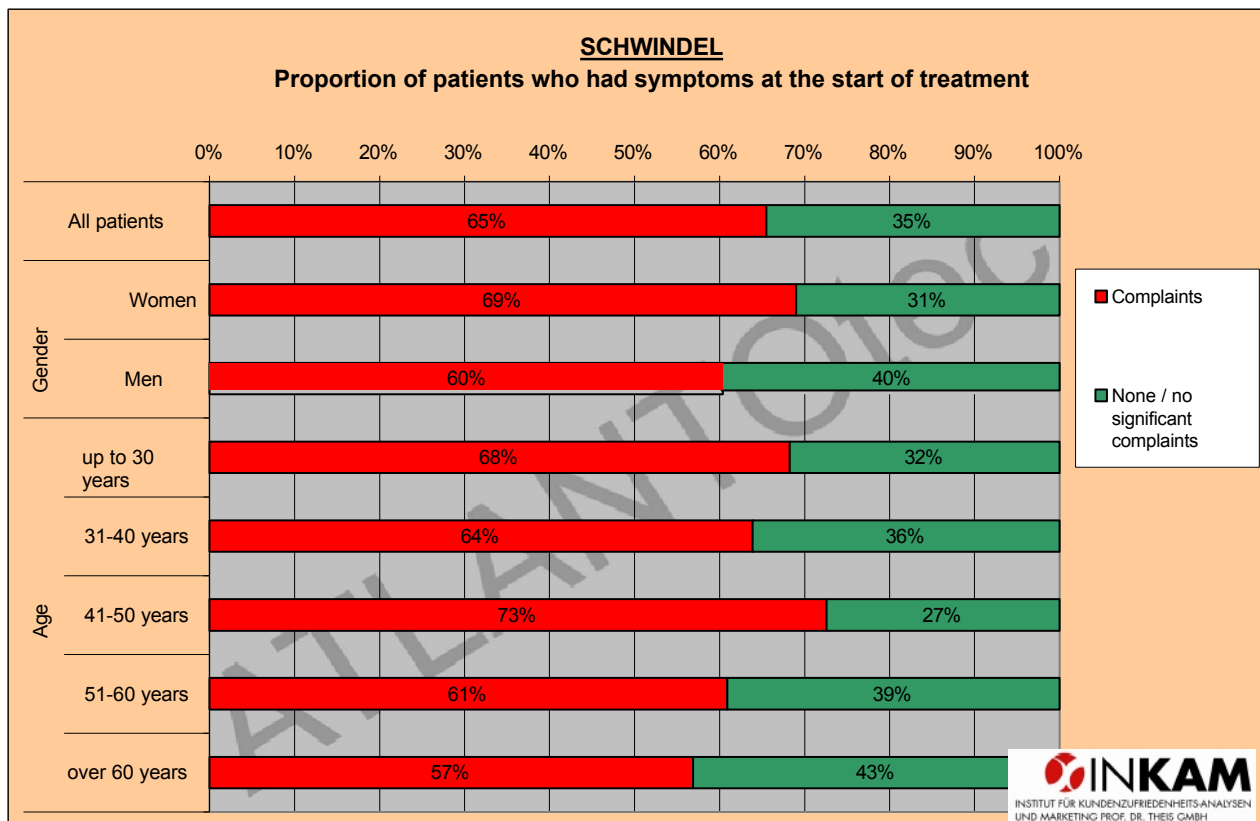## 5.9.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of complaints of *dizziness* has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

SCHWINDEL
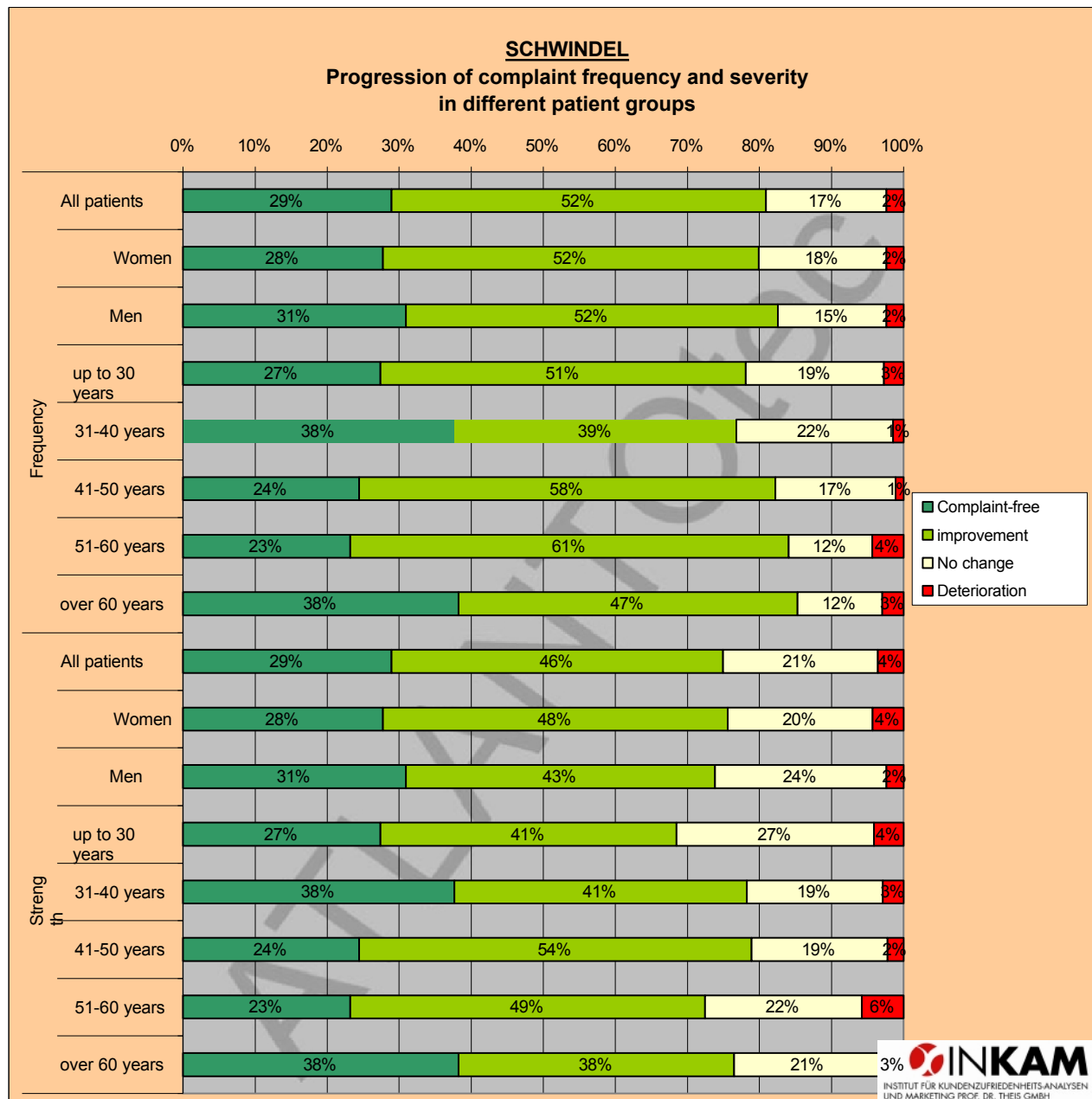Average frequency of complaints BEFORE and AFTER treatment

Patient group	BEFORE treatment	AFTER treatment
All patients	4,1	2,3
Women (Gender)	4,2	2,3
Men (Gender)	3,9	2,3
up to 30 years (Age)	3,9	2,2
31-40 years (Age)	3,9	2,1
41-50 years (Age)	4,3	2,4
51-60 years (Age)	4,1	2,5
over 60 years (Age)	3,9	2,2
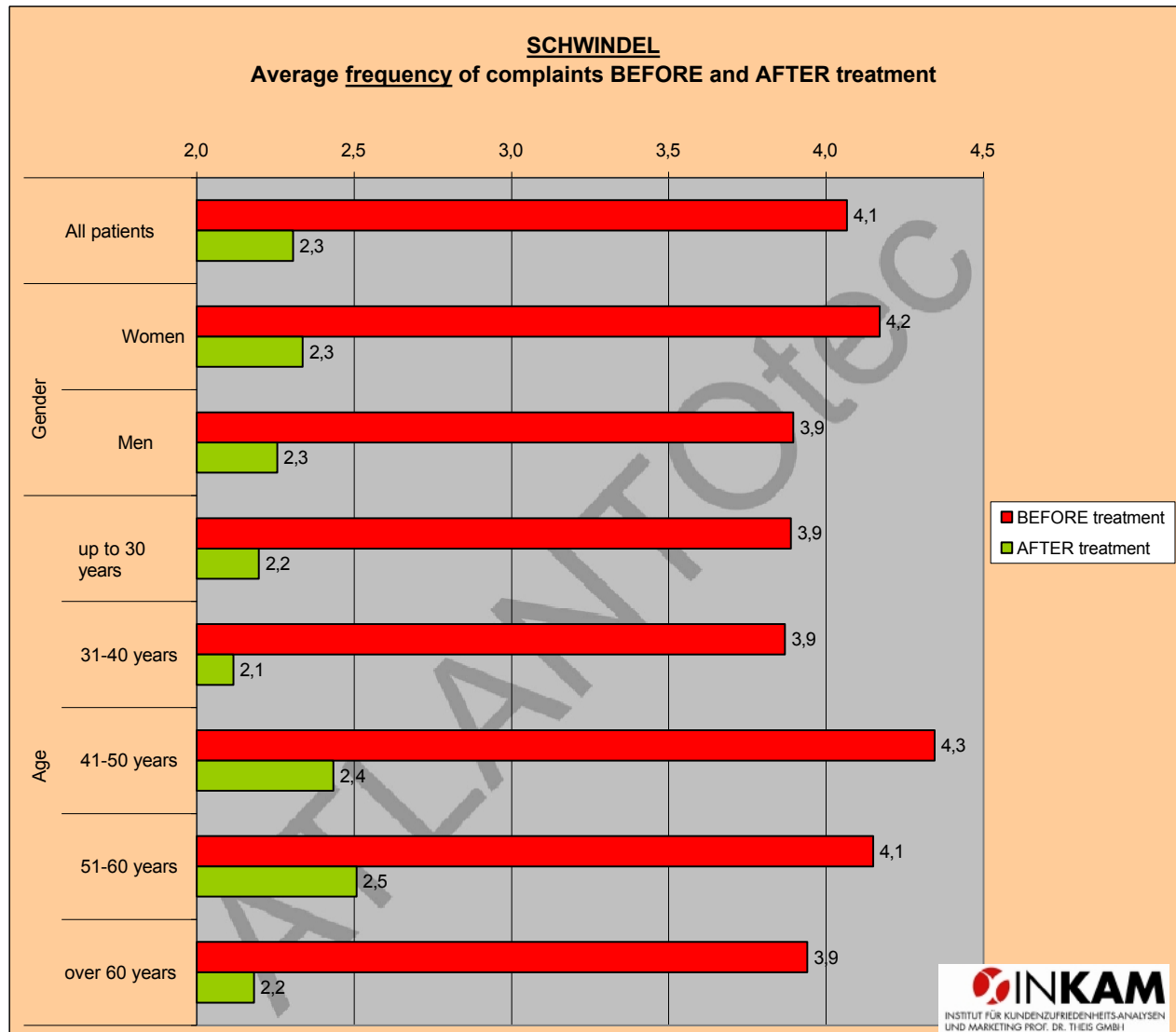
5.9.5 Average complaint severity BEFORE and AFTER the treatment

The following graph shows - differentiated according to the various patient groups - how the severity of *dizziness* symptoms has changed on average across all patients (with symptoms before treatment) as a result of ATLANTOtec® treatment.

SCHWINDEL
Average complaint severity BEFORE and AFTER treatment

Group		BEFORE treatment	AFTER treatment
	All patients	3,9	2,3
Gender	Women	4,0	2,4
	Men	3,8	2,3
Age	up to 30 years	3,7	2,2
	31-40 years	3,8	2,3
	41-50 years	4,2	2,5
	51-60 years	3,8	2,4
	over 60 years	3,7	2,2

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5.10 Nervousness

5.10.1 Complaint status at the start of treatment

The following graph shows the proportion of patients - differentiated according to the various patient groups - who suffered from nervousness before treatment.

NERVOSITY
Proportion of patients who had symptoms at the start of treatment

Group	Complaints	None / no significant complaints
All patients	31%	69%
Women	33%	67%
Men	27%	73%
up to 30 years	29%	71%
31-40 years	31%	69%
41-50 years	31%	69%
51-60 years	32%	68%
over 60 years	29%	71%
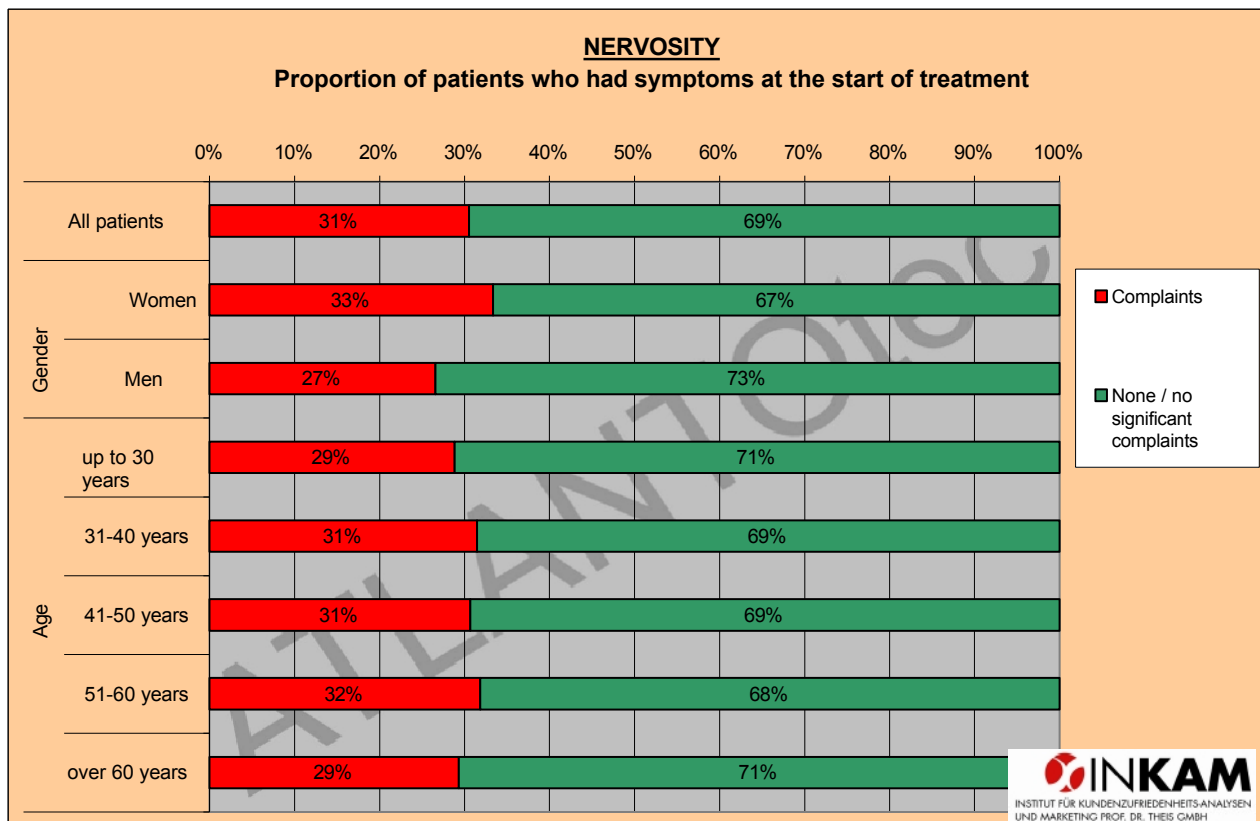
5.10.2 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression of symptoms in terms of severity and frequency in those patients who initially complained of nervousness (scale levels 2-7 for frequency and/or severity) and underwent the ATLANTOtec® treatment.

* The treatment can lead to the following results: In the best case scenario, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

5.10.3 Effects of treatment with different complaint intensity

The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have with different complaint intensities (complaint frequencies and severity) in the complaint area of nervousness?

The following figure provides information about the results. It shows, for example, the change in the frequency of complaints in those patients indicated **level 5** on the frequency scale before treatment: There was no improvement in **10%** of all respondents. For **10%**, the frequency of complaints was reduced by one level, for **40%** by two levels, for **40%** by three levels and for **0%** by four levels. Consequently, 0% of all level 5 patients are symptom-free (no/no significant complaints).
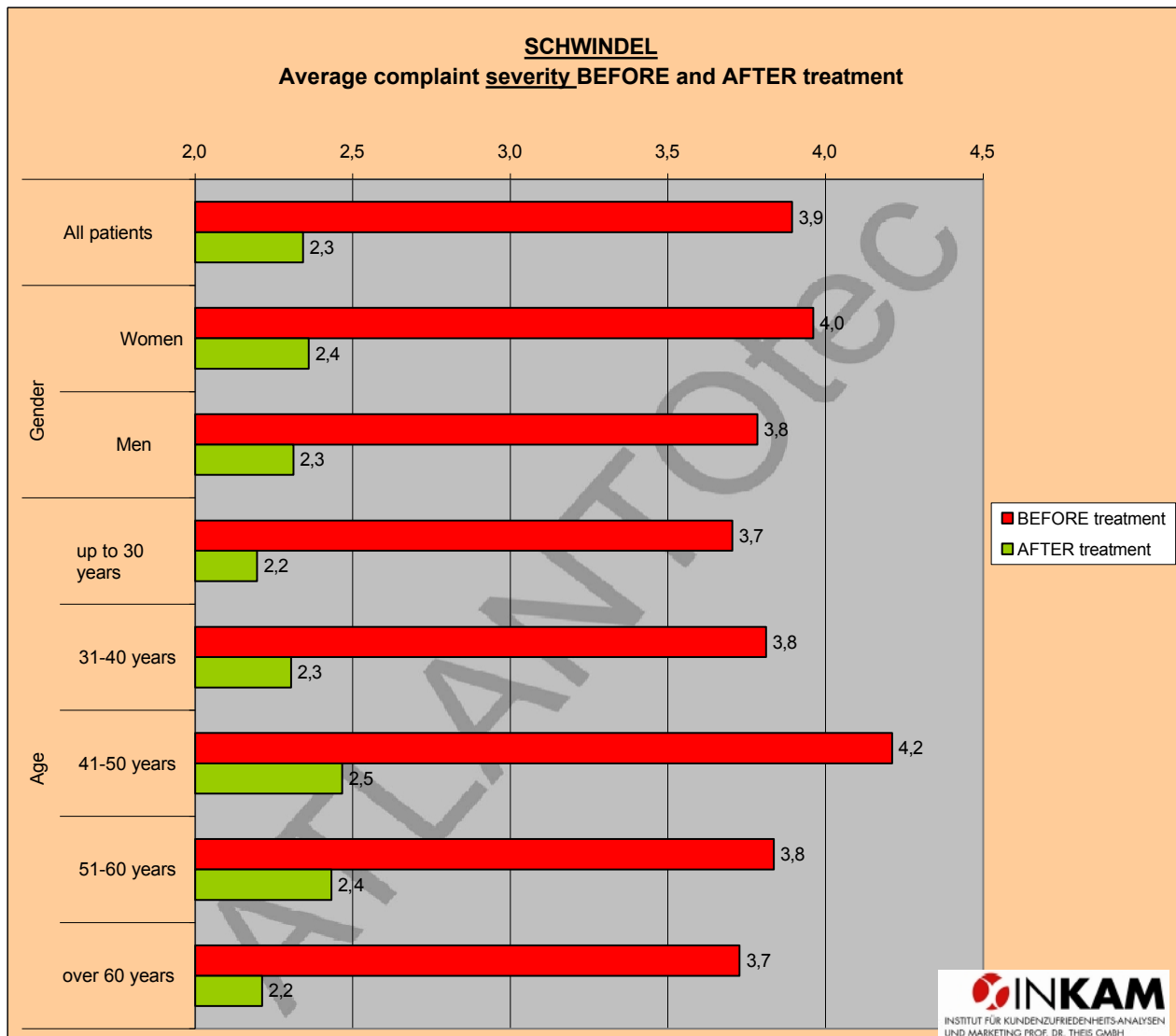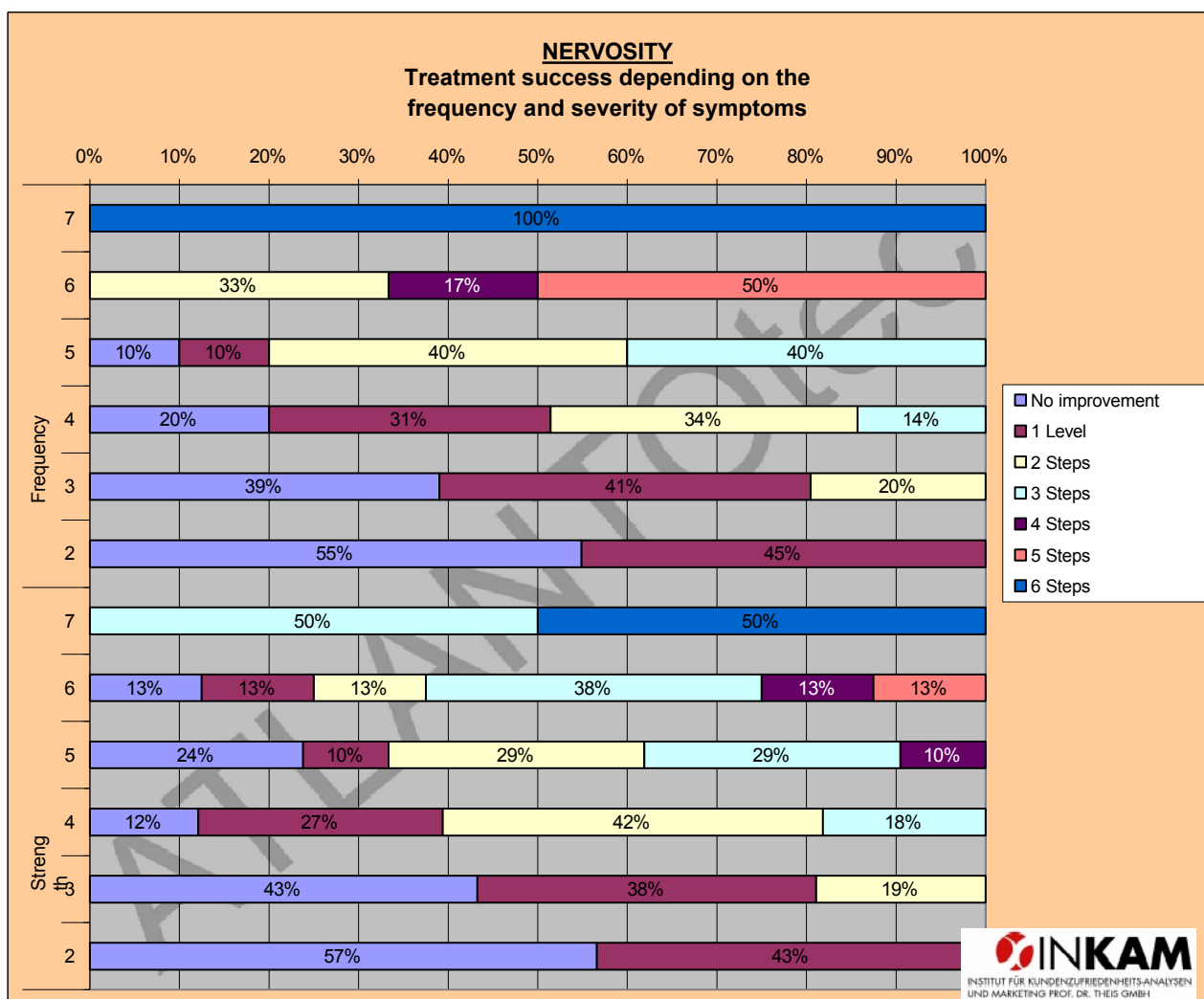
5.10.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of complaints of *nervousness* has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

NERVOSITY
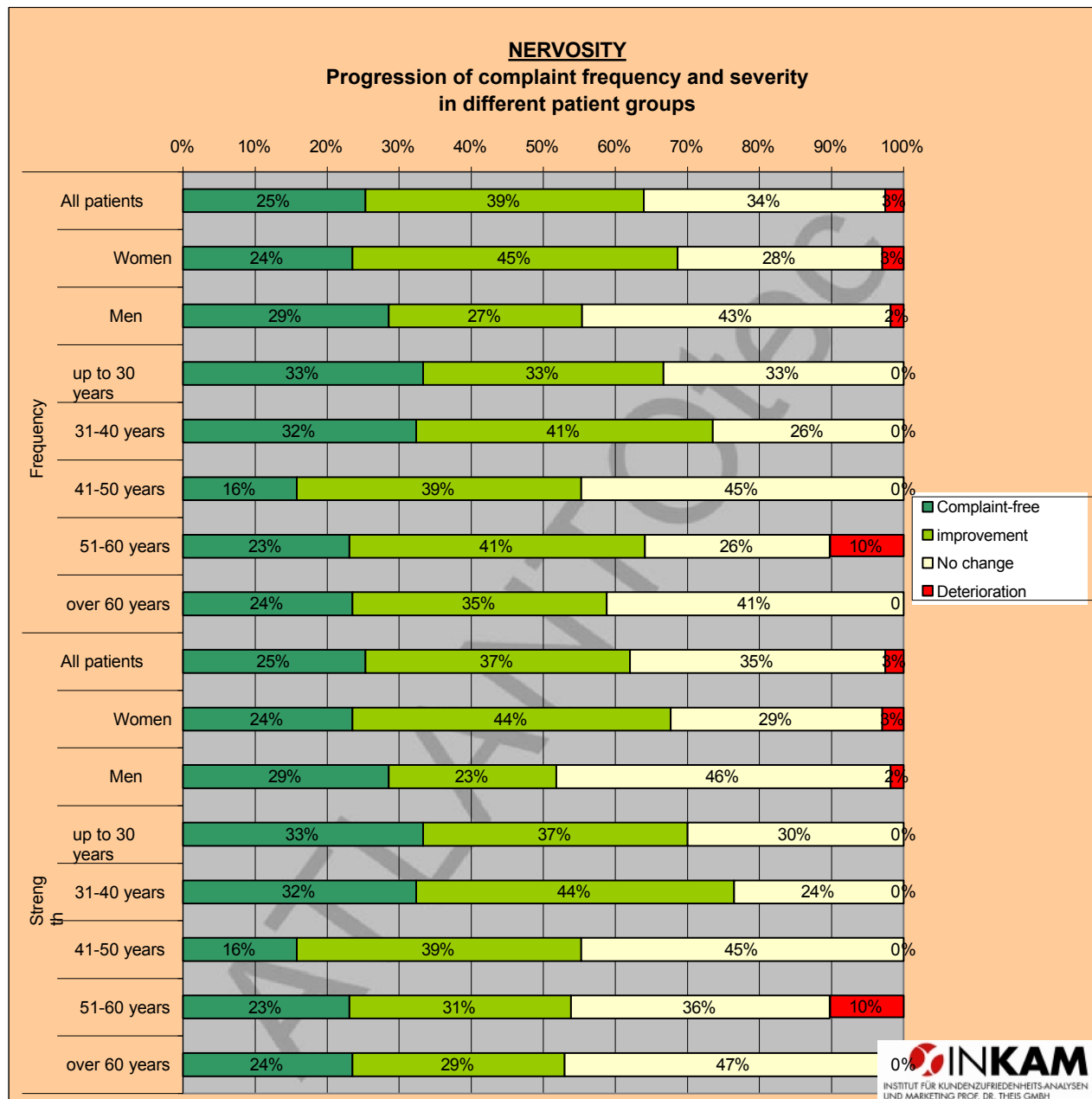**Average frequency of complaints BEFORE and AFTER treatment**

Group		BEFORE treatment	AFTER treatment
	All patients	3,3	2,1
Gender	Women	3,5	2,2
	Men	3,0	2,1
Age	up to 30 years	3,3	2,2
	31-40 years	3,6	2,1
	41-50 years	3,3	2,3
	51-60 years	3,2	2,0
	over 60 years	3,1	2,2
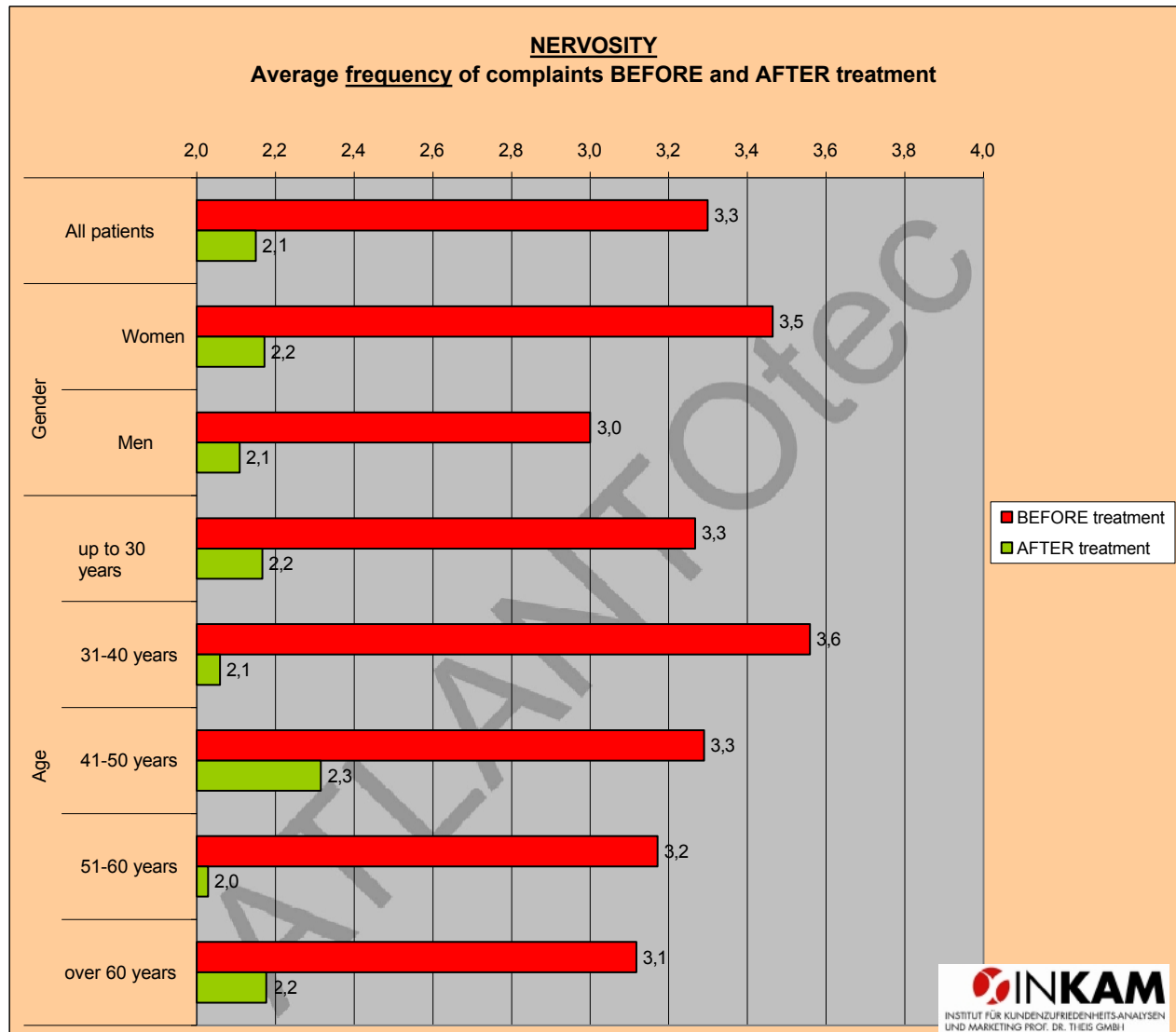
5.10.5 Average complaint severity BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the severity of symptoms of *nervousness* has changed on average across all patients (with symptoms before treatment) as a result of the ATLANTOtec® treatment.

NERVOSITY
Average complaint severity BEFORE and AFTER treatment

Group	BEFORE treatment	AFTER treatment
All patients	3,4	2,2
Gender — Women	3,5	2,2
Gender — Men	3,0	2,2
Age — up to 30 years	3,5	2,2
Age — 31-40 years	3,7	2,2
Age — 41-50 years	3,4	2,5
Age — 51-60 years	3,0	2,0
Age — over 60 years	2,9	2,0
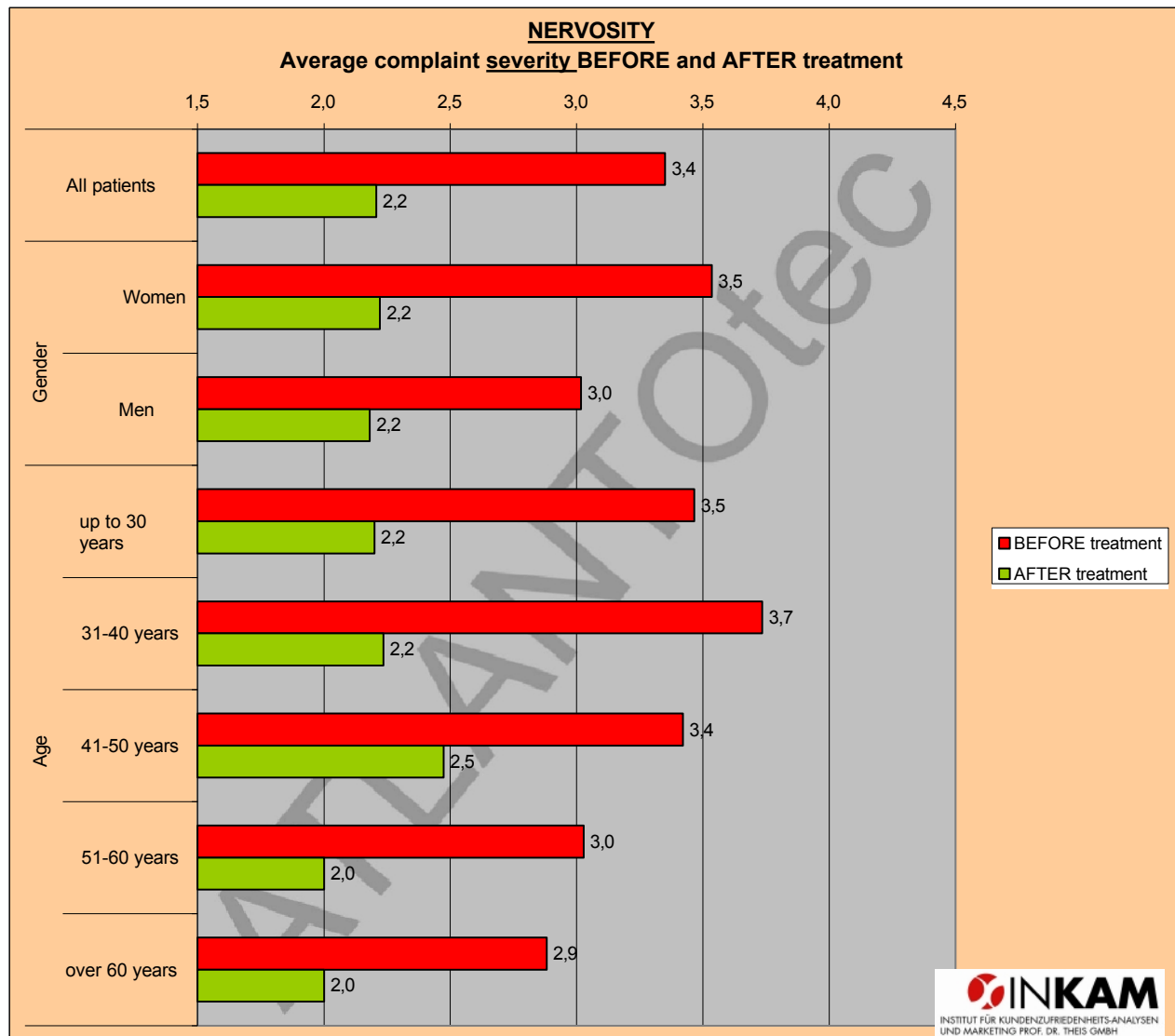
5.11 Circulatory problems

5.11.1 Complaint status at the start of treatment

The following graph shows the proportion of patients - differentiated according to the various patient groups - who suffered from circulatory problems before treatment.

CIRCULATORY COMPLAINTS
Proportion of patients who had symptoms at the start of treatment

Group	Complaints	None / no significant complaints
All patients	60%	40%
Women	64%	36%
Men	55%	45%
up to 30 years	62%	38%
31-40 years	60%	40%
41-50 years	64%	36%
51-60 years	58%	42%
over 60 years	55%	45%
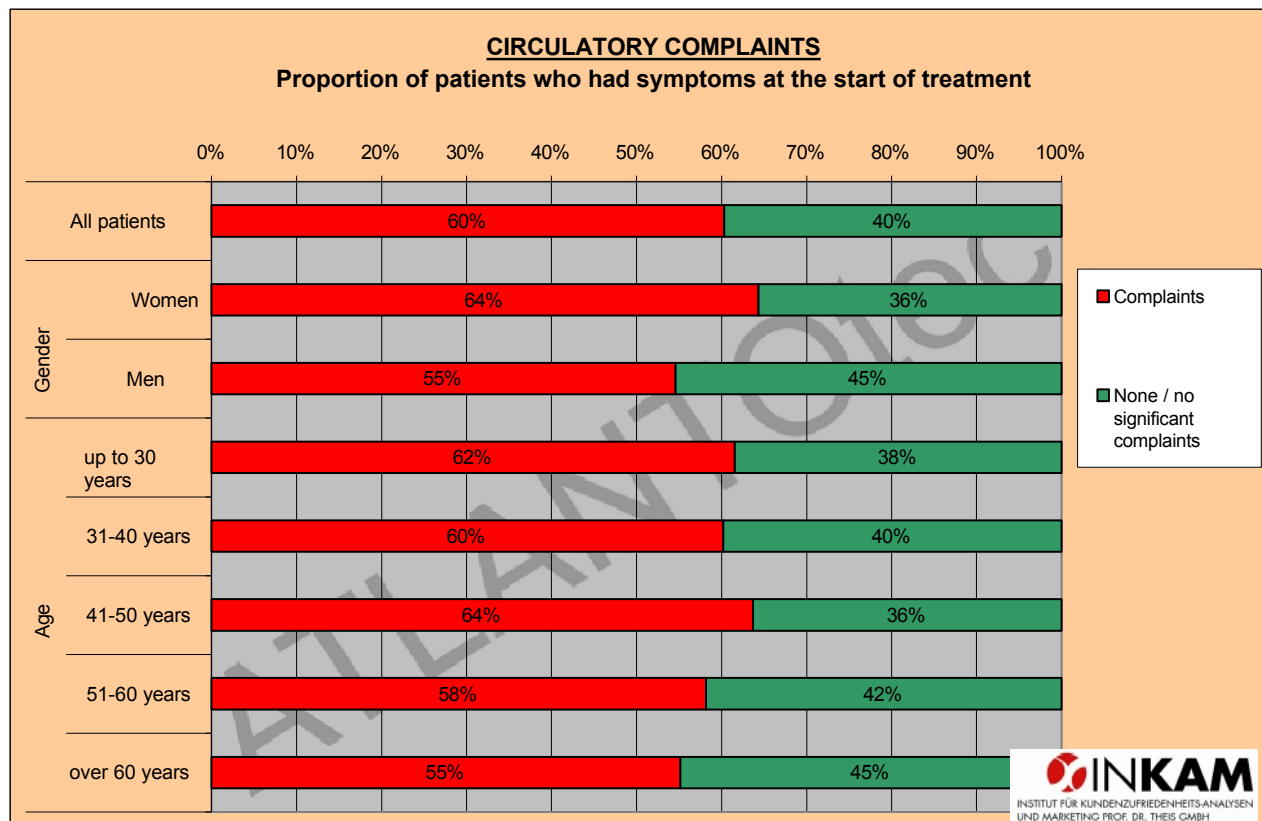
5.11.2 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression of symptoms in terms of severity and frequency in those patients who initially complained of circulatory symptoms (scale levels 2-7 for frequency and/or severity) and underwent *ATLANTO-* tec® treatment.

CIRCULATORY COMPLAINTS
Progression of complaint frequency and severity in different patient groups

Frequency	Complaint-free	improvement	No change	Deterioration
All patients	22%	42%	34%	3%
Women	22%	48%	27%	3%
Men	22%	31%	44%	3%
up to 30 years	13%	47%	38%	3%
31-40 years	32%	42%	26%	0%
41-50 years	25%	38%	36%	1%
51-60 years	13%	46%	34%	6%
over 60 years	28%	34%	34%	3%

Strength	Complaint-free	improvement	No change	Deterioration
All patients	22%	37%	40%	2%
Women	22%	44%	33%	2%
Men	22%	26%	50%	2%
up to 30 years	13%	41%	47%	0%
31-40 years	32%	40%	28%	0%
41-50 years	25%	33%	41%	1%
51-60 years	13%	42%	40%	4%
over 60 years	28%	25%	44%	3%

* The treatment can lead to the following results: In the best case scenario, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

5.11.3 Effects of treatment with different complaint intensity

The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have with different complaint intensities (frequency and severity of complaints) in the area of circulatory complaints?

The following figure provides information about the results. It shows, for example, the change in the frequency of complaints in those patients indicated **level 5** on the frequency scale before treatment: There was no improvement in **16%** of all respondents. For **24%**, the frequency of complaints was reduced by one level, for **32%** by two levels, for **18%** by three levels and for **11%** by four levels. Consequently, 11% of all level 5 patients are symptom-free (no/no significant complaints).

CIRCULATORY COMPLAINTS
Treatment success depending on the frequency and severity of symptoms

Legend:
- No improvement
- 1 Level
- 2 Steps
- 3 Steps
- 4 Steps
- 5 Steps
- 6 Steps

Frequency:
- 7: 4% | 13% | 21% | 13% | 25% | 17% | 8%
- 6: 15% | 10% | 25% | 28% | 8% | 15%
- 5: 16% | 24% | 32% | 18% | 11%
- 4: 29% | 23% | 30% | 18%
- 3: 44% | 32% | 24%
- 2: 61% | 39%

Strength:
- 7: 6% | 6% | 19% | 25% | 31% | 13%
- 6: 16% | 16% | 22% | 19% | 6% | 22%
- 5: 13% | 24% | 26% | 32% | 5%
- 4: 32% | 21% | 30% | 18%
- 3: 43% | 31% | 25%
- 2: 69% | 31%

5.11.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of symptoms *of circulatory complaints* has changed on average across all patients (with symptoms before treatment) as a result of the ATLANTOtec® treatment.

CIRCULATORY COMPLAINTS
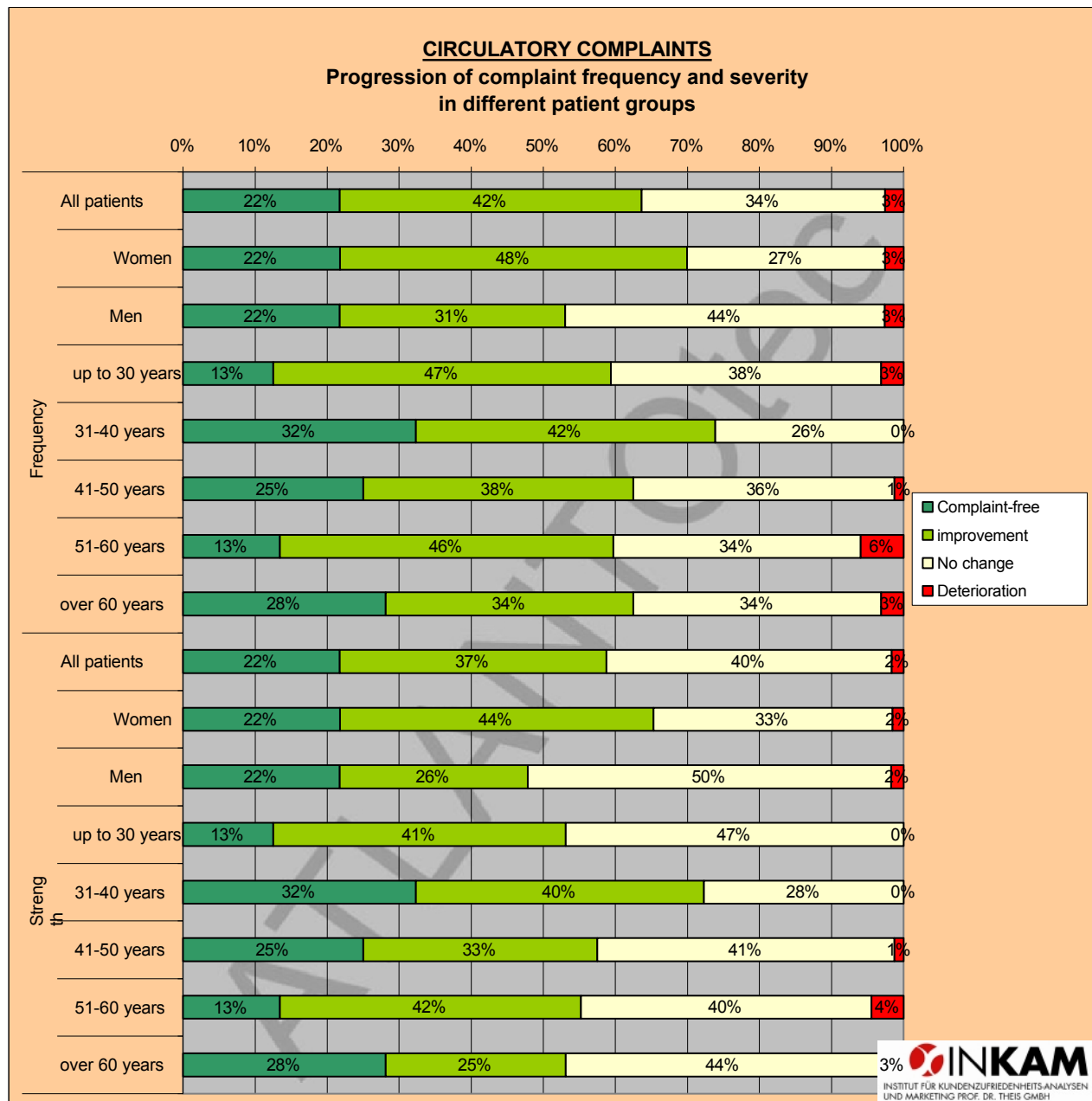**Average frequency of complaints BEFORE and AFTER treatment**

Group		BEFORE treatment	AFTER treatment
	All patients	3,9	2,7
Gender	Women	4,2	2,7
	Men	3,4	2,6
Age	up to 30 years	3,9	3,2
	31-40 years	4,0	2,4
	41-50 years	4,0	2,5
	51-60 years	3,8	2,7
	over 60 years	3,9	2,6

5.11.5 Average complaint severity BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the severity of symptoms of *circulatory complaints* has changed on average across all patients (with symptoms before treatment) as a result of the ATLANTOtec® treatment.

CIRCULATORY COMPLAINTS
Average complaint severity BEFORE and AFTER treatment

Group	BEFORE	AFTER
All patients	3,7	2,4
Gender — Women	3,9	2,5
Gender — Men	3,2	2,3
Age — up to 30 years	3,6	2,5
Age — 31-40 years	3,7	2,2
Age — 41-50 years	3,9	2,5
Age — 51-60 years	3,5	2,5
Age — over 60 years	3,3	2,4

Legend: ■ BEFORE ■ treatment AFTER treatment

INKAM
INSTITUT FÜR KUNDENZUFRIEDENHEITS-ANALYSEN
UND MARKETING PROF. DR. THEIS GMBH

5.12 Hip complaints

5.12.1 Complaint status at the start of treatment

The following graph shows the proportion of patients - differentiated according to the various patient groups - who suffered from hip complaints before treatment.

HIP COMPLAINTS
Proportion of patients who had symptoms at the start of treatment

Group	Complaints	None / no significant complaints
All patients	53%	47%
Women	56%	44%
Men	49%	51%
up to 30 years	47%	53%
31-40 years	45%	55%
41-50 years	58%	42%
51-60 years	54%	46%
over 60 years	64%	36%
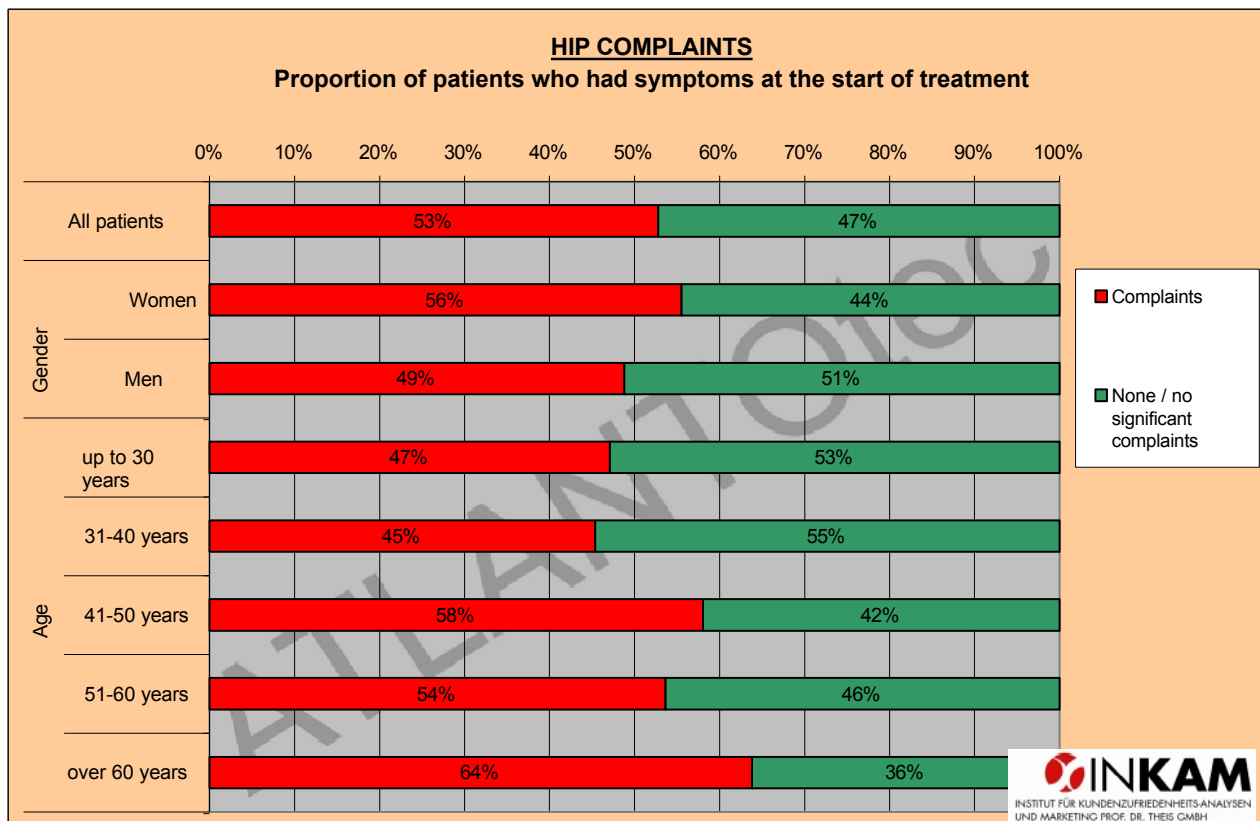
5.12.2 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression of symptoms in terms of <u>severity and frequency</u> in those patients who initially complained of hip pain (scale levels 2-7 for frequency and/or severity) and underwent the ATLANTOtec®
- treatment.

HIP COMPLAINTS
Progression of complaint frequency and severity
in different patient groups

Category		Complaint-free	improvement	No change	Deterioration
Frequency	All patients	25%	46%	24%	5%
	Women	28%	52%	14%	6%
	Men	21%	36%	40%	3%
	up to 30 years	24%	47%	29%	0%
	31-40 years	27%	49%	22%	2%
	41-50 years	25%	47%	25%	4%
	51-60 years	19%	45%	27%	8%
	over 60 years	35%	41%	14%	11%
Strength	All patients	25%	44%	26%	4%
	Women	28%	48%	19%	5%
	Men	21%	38%	38%	3%
	up to 30 years	24%	45%	31%	0%
	31-40 years	27%	45%	27%	2%
	41-50 years	25%	45%	26%	4%
	51-60 years	19%	45%	26%	10%
	over 60 years	35%	38%	22%	5%

* The treatment can lead to the following results: In the best case, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

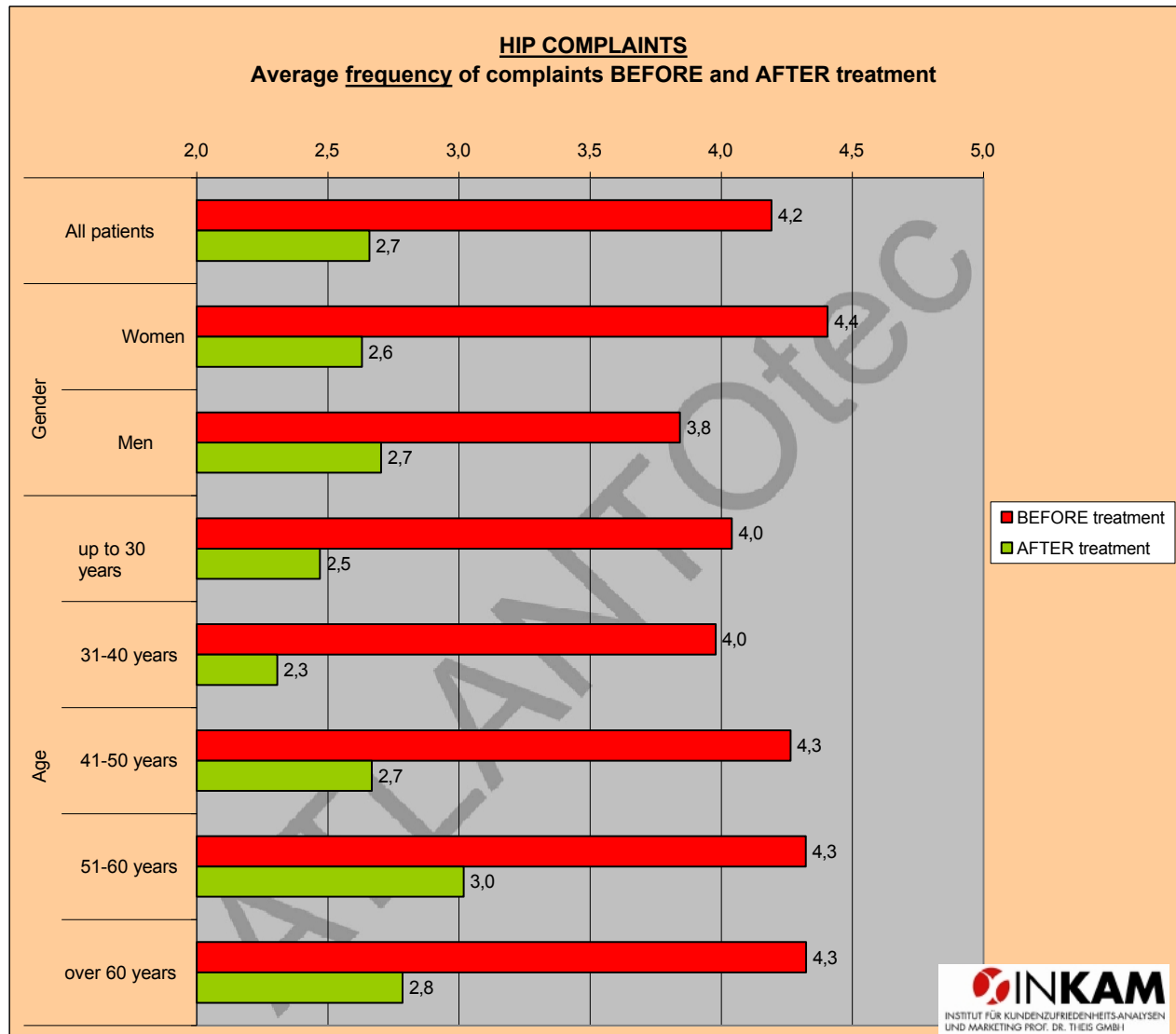## 5.12.3 Effects of treatment with different complaint intensity

The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have with different complaint intensities (complaint frequencies and severity) in the complaint area of hip complaints?

The following figure provides information about the results. It shows, for example, the change in the frequency of complaints in those patients indicated **level 5** on the frequency scale before treatment: There was no improvement in **11%** of all respondents. For **16%**, the frequency of complaints was reduced by one level, for **40%** by two levels, for **13%** by three levels and for **20%** by four levels. Consequently, 20% of all level 5 patients are symptom-free (no/no significant complaints).

HIP COMPLAINTS
Treatment success depending on the frequency and severity of symptoms
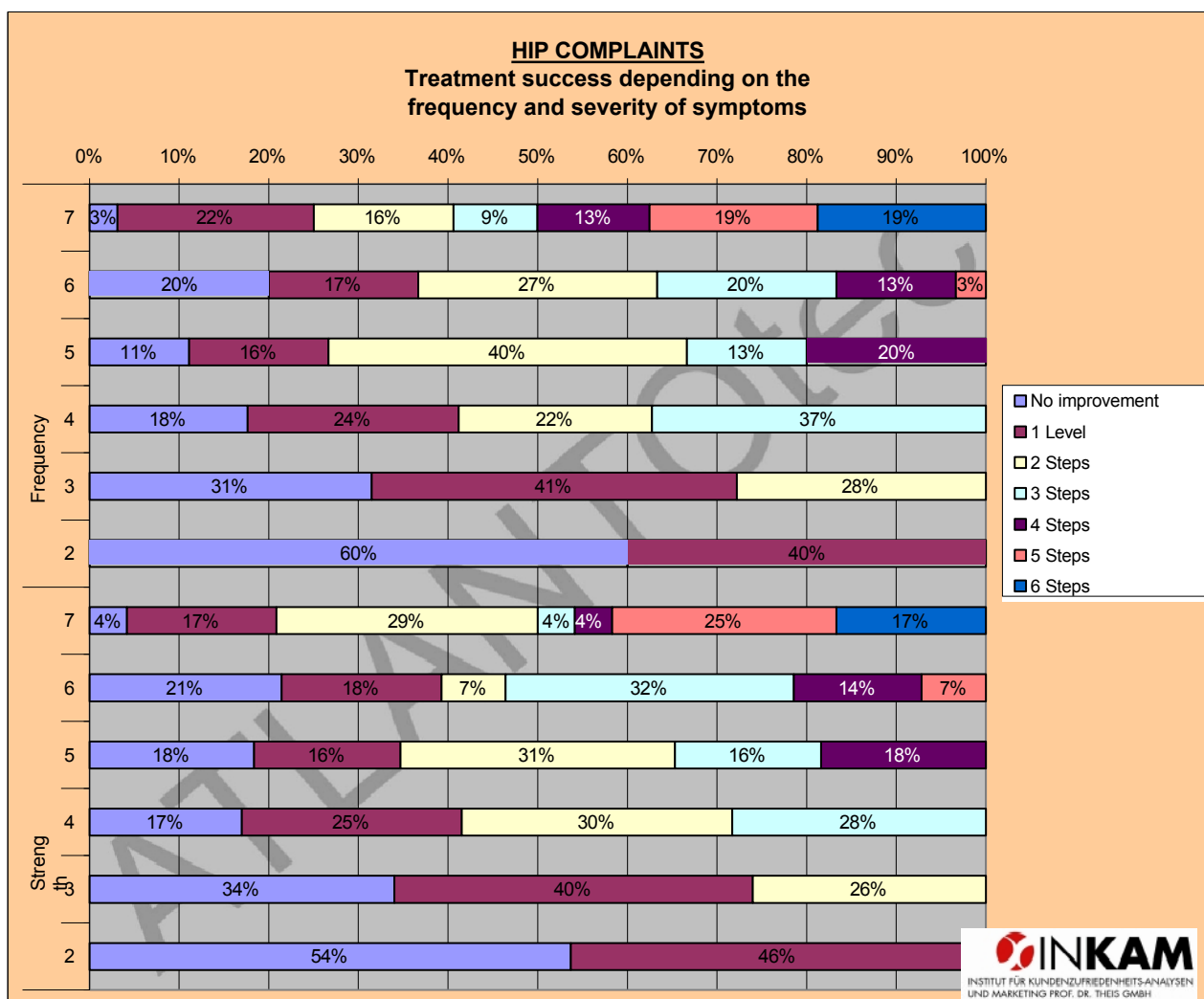
5.12.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of *hip complaints* has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

HIP COMPLAINTS
Average frequency of complaints BEFORE and AFTER treatment

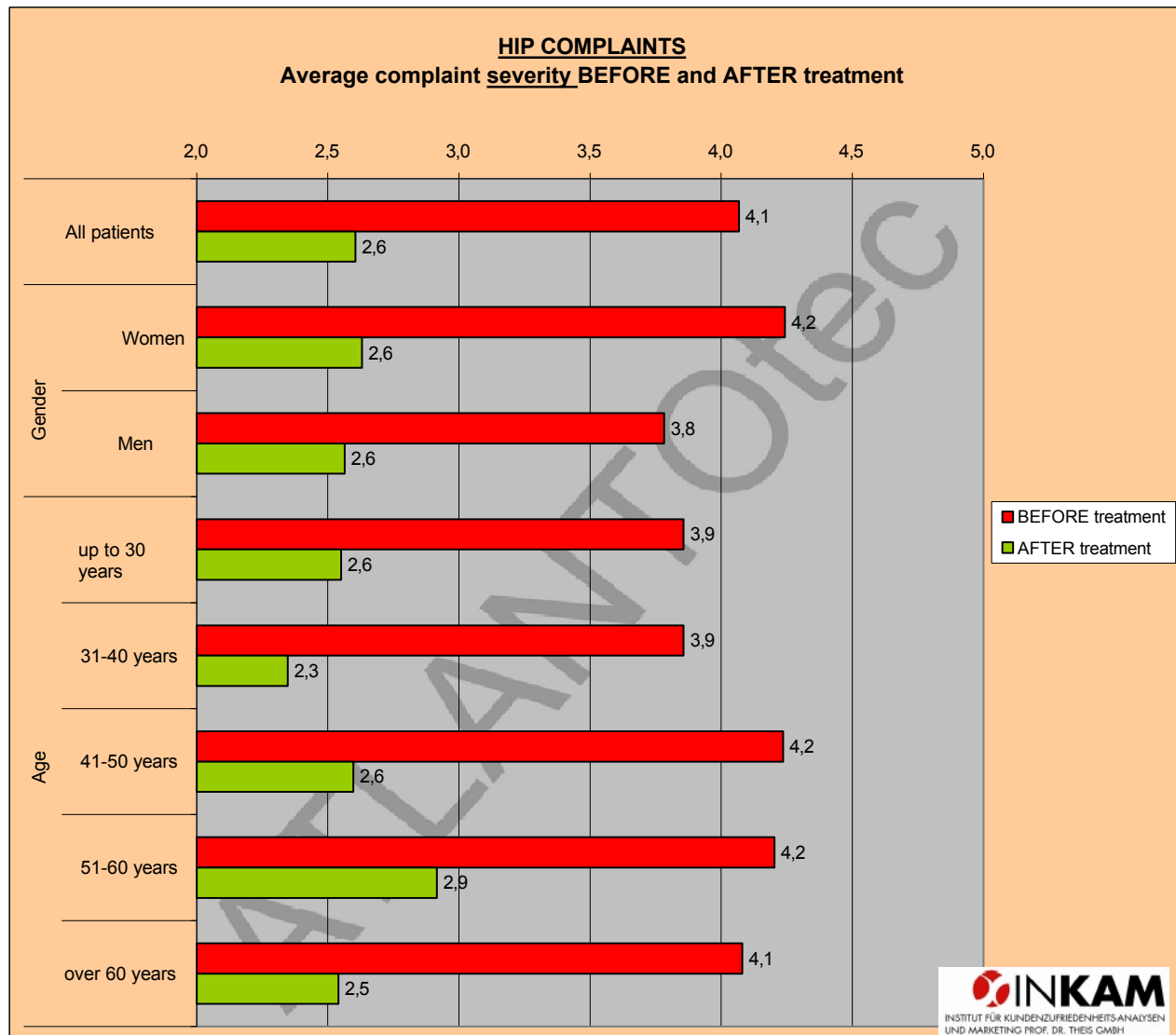| Patient group	BEFORE treatment	AFTER treatment
All patients	4,2	2,7
Women	4,4	2,6
Men	3,8	2,7
up to 30 years	4,0	2,5
31-40 years	4,0	2,3
41-50 years	4,3	2,7
51-60 years	4,3	3,0
over 60 years	4,3	2,8

5.12.5 Average complaint severity BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the severity of *hip complaints* has changed on average across all patients (with complaints prior to treatment) as a result of the ATLANTOtec® treatment.

HIP COMPLAINTS
Average complaint severity BEFORE and AFTER treatment

Patient group	BEFORE treatment	AFTER treatment
All patients	4,1	2,6
Women	4,2	2,6
Men	3,8	2,6
up to 30 years	3,9	2,6
31-40 years	3,9	2,3
41-50 years	4,2	2,6
51-60 years	4,2	2,9
over 60 years	4,1	2,5

5.13 Knee complaints
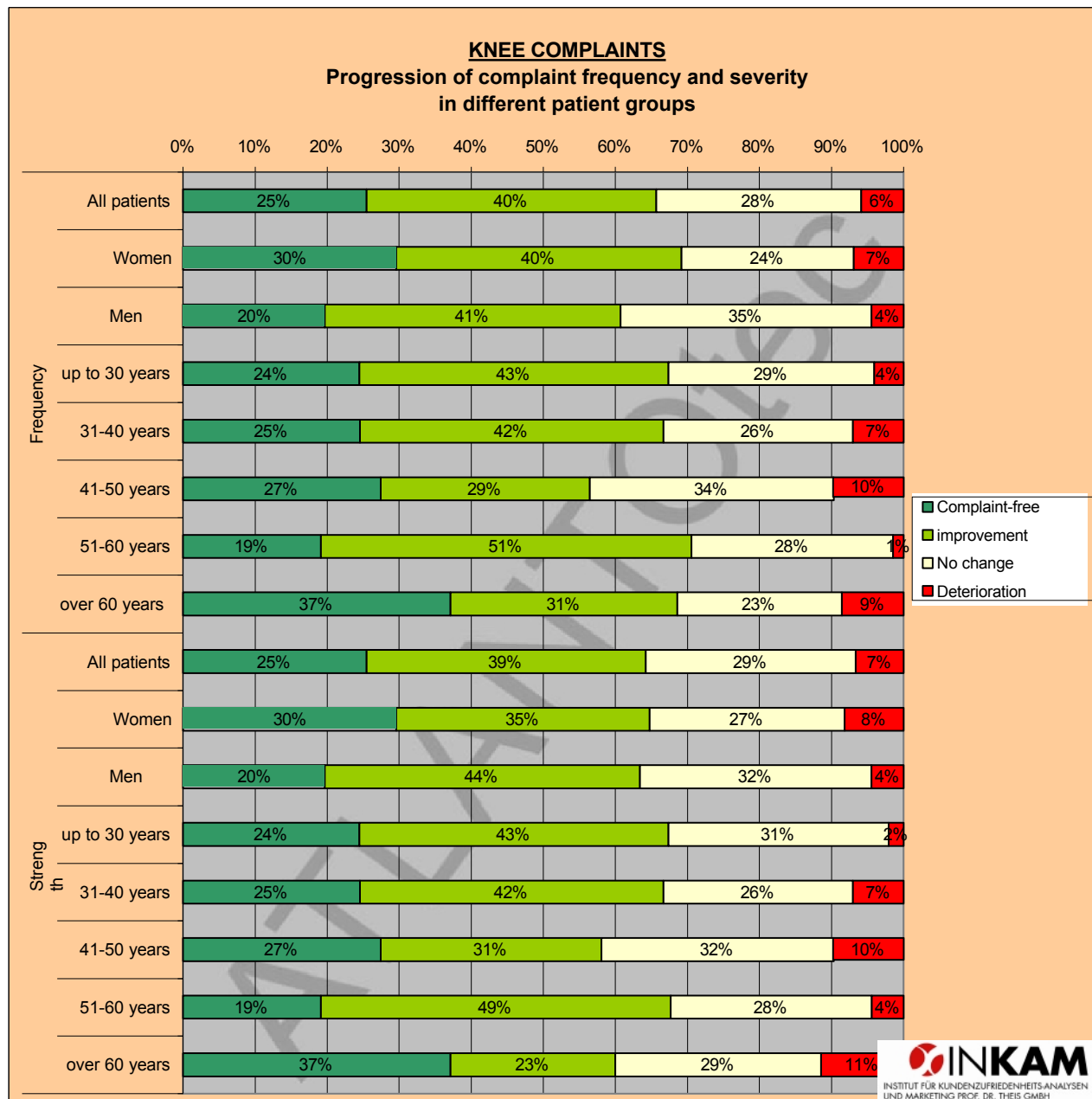
5.13.1 Complaint status at the start of treatment

The following graph shows the proportion of patients - differentiated according to the various patient groups - who suffered from knee pain before treatment.
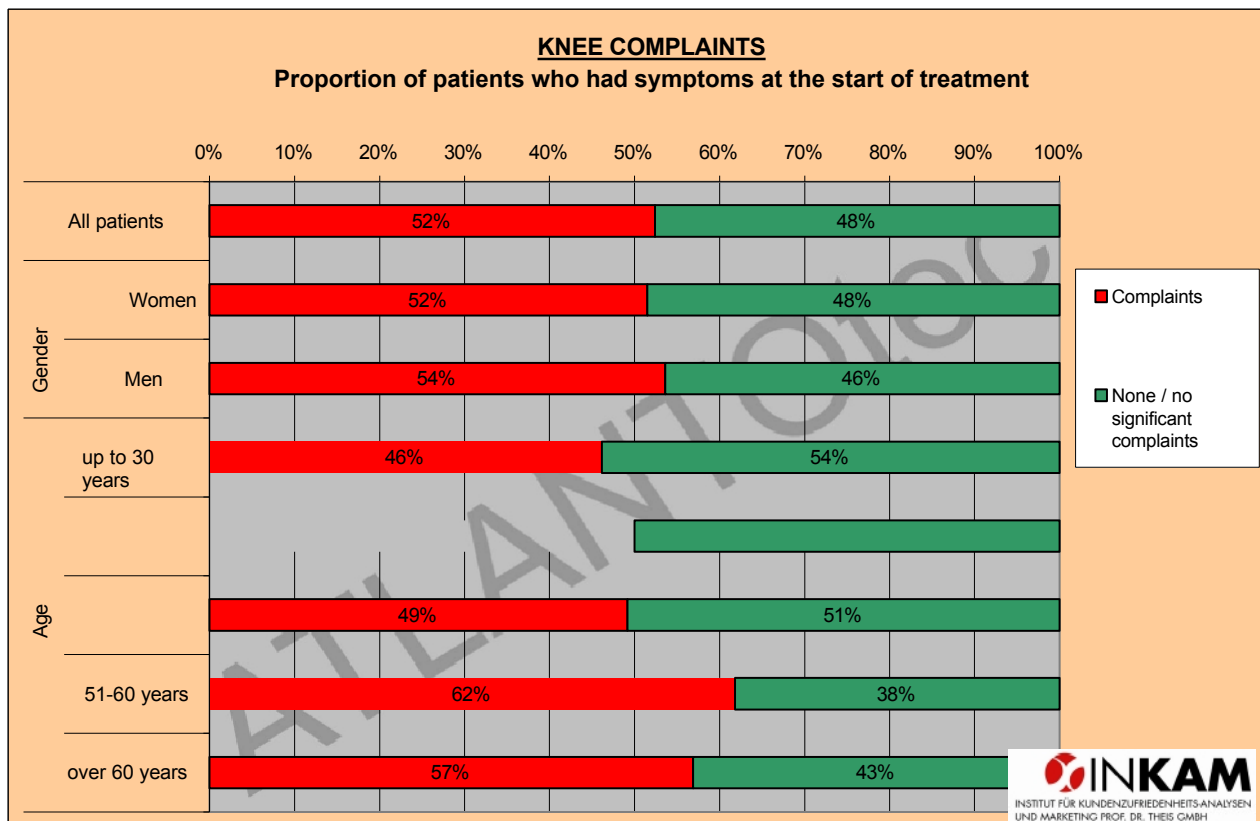
5.13.2 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression of symptoms in terms of severity and frequency in those patients who initially complained of knee pain (scale levels 2-7 for frequency and/or severity) and underwent the ATLANTOtec®
- treatment.

* The treatment can lead to the following results: In the best case, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

5.13.3 Effects of treatment with different complaint intensity

The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have with different complaint intensities (complaint frequencies and severity) in the complaint area of knee complaints?

The following figure provides information about the results. It shows, for example, the change in the frequency of complaints in those patients indicated **level 5** on the frequency scale before treatment: There was no improvement in **16%** of all respondents. For **19%**, the frequency of complaints was reduced by one level, for **35%** by two levels, for **19%** by three levels and for **11%** by four levels. Consequently, 11% of all level 5 patients are symptom-free (no/no significant complaints).
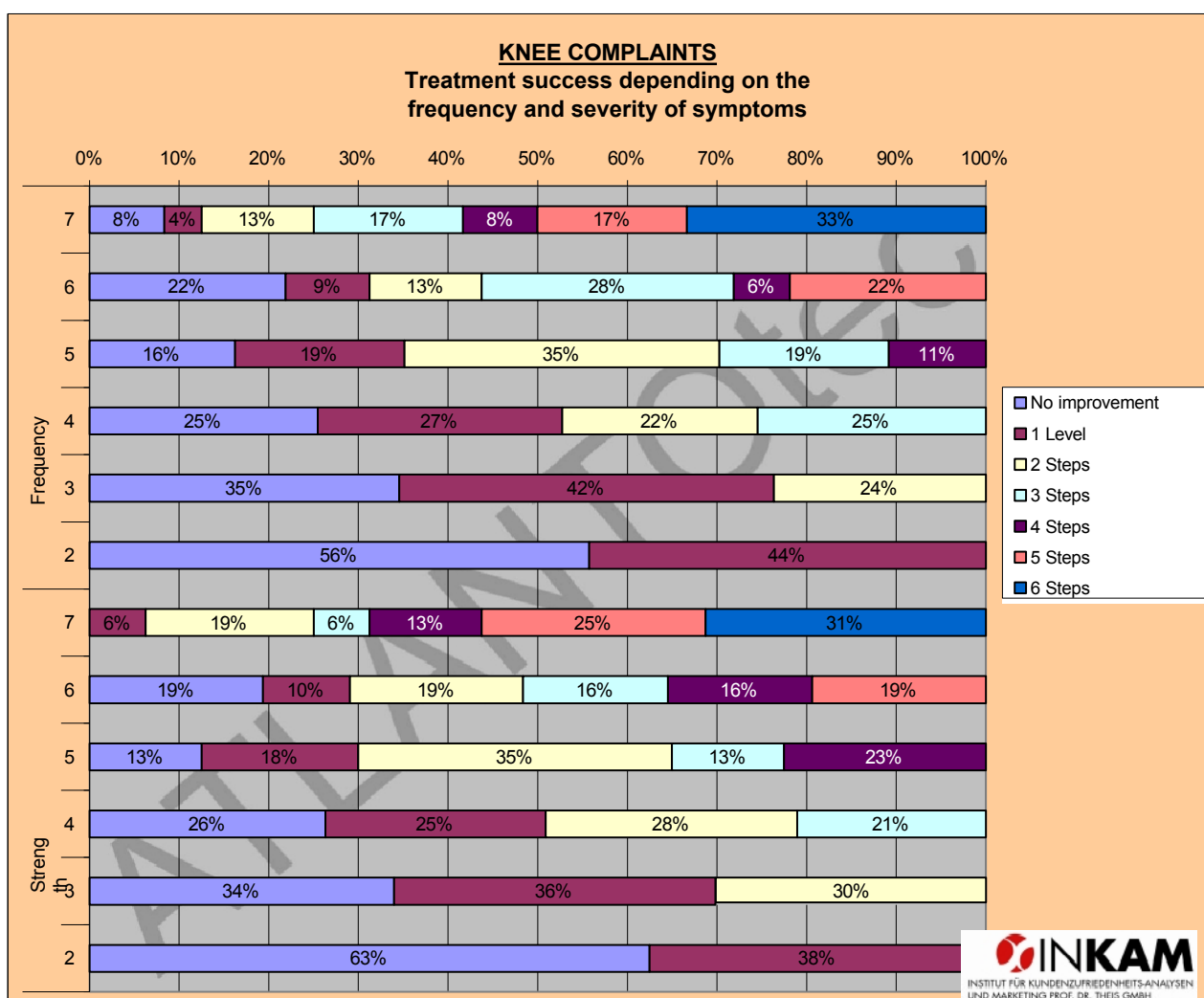
5.13.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of *knee* complaints has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

KNEE COMPLAINTS
Average frequency of complaints BEFORE and AFTER treatment

Group	BEFORE treatment	AFTER treatment
All patients	4,0	2,6
Gender - Women	4,2	2,5
Gender - Men	3,9	2,6
Age - up to 30 years	3,7	2,4
Age - 31-40 years	3,9	2,3
Age - 41-50 years	4,1	2,8
Age - 51-60 years	4,2	2,7
Age - over 60 years	4,2	2,6
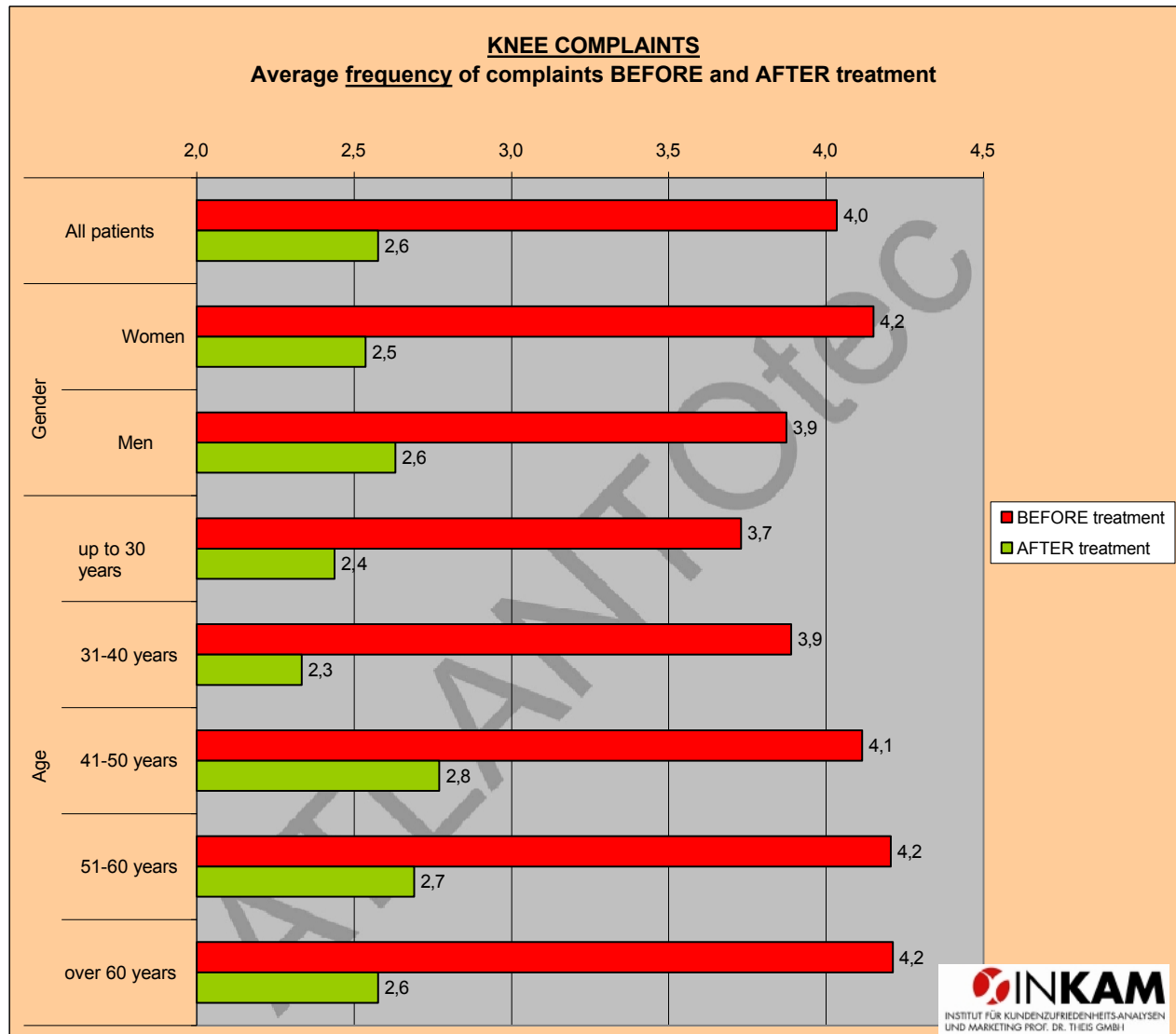
5.13.5 Average complaint severity BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the severity of *knee* complaints has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

KNEE COMPLAINTS
Average complaint severity BEFORE and AFTER treatment

Patient group	BEFORE treatment	AFTER treatment
All patients	3,9	2,5
Women	3,9	2,5
Men	3,9	2,6
up to 30 years	3,8	2,3
31-40 years	3,7	2,3
41-50 years	4,0	2,7
51-60 years	4,1	2,6
over 60 years	3,9	2,5
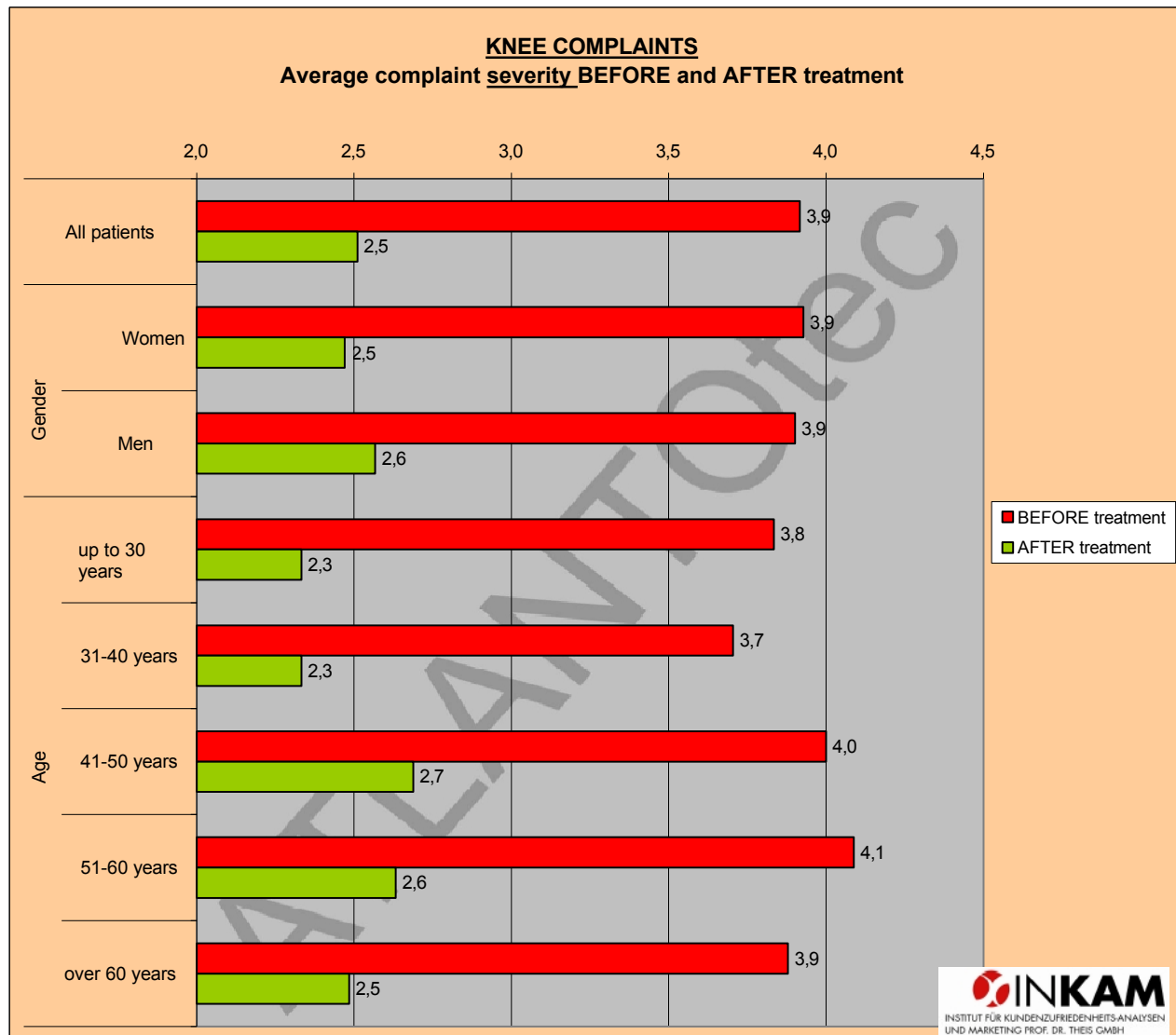
5.14 Depression

5.14.1 Complaint status at the start of treatment

The following chart shows the proportion of patients - differentiated according to the various patient groups - who suffered from depression before treatment.
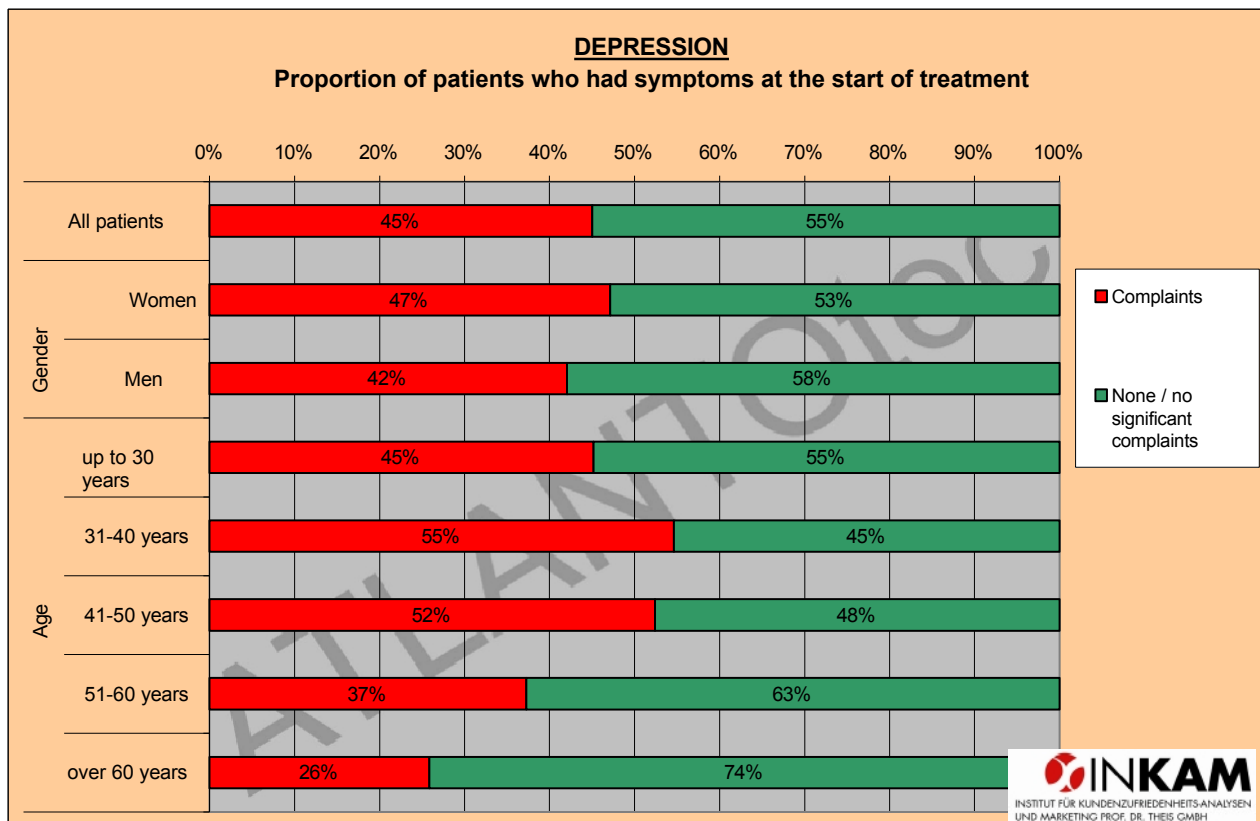
5.14.2 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression of symptoms in terms of <u>severity and frequency</u> in those patients who initially complained of depression (scale levels 2-7 for frequency and/or severity) and underwent ATLANTOtec® treatment.

DEPRESSION
Progression of complaint frequency and severity in different patient groups

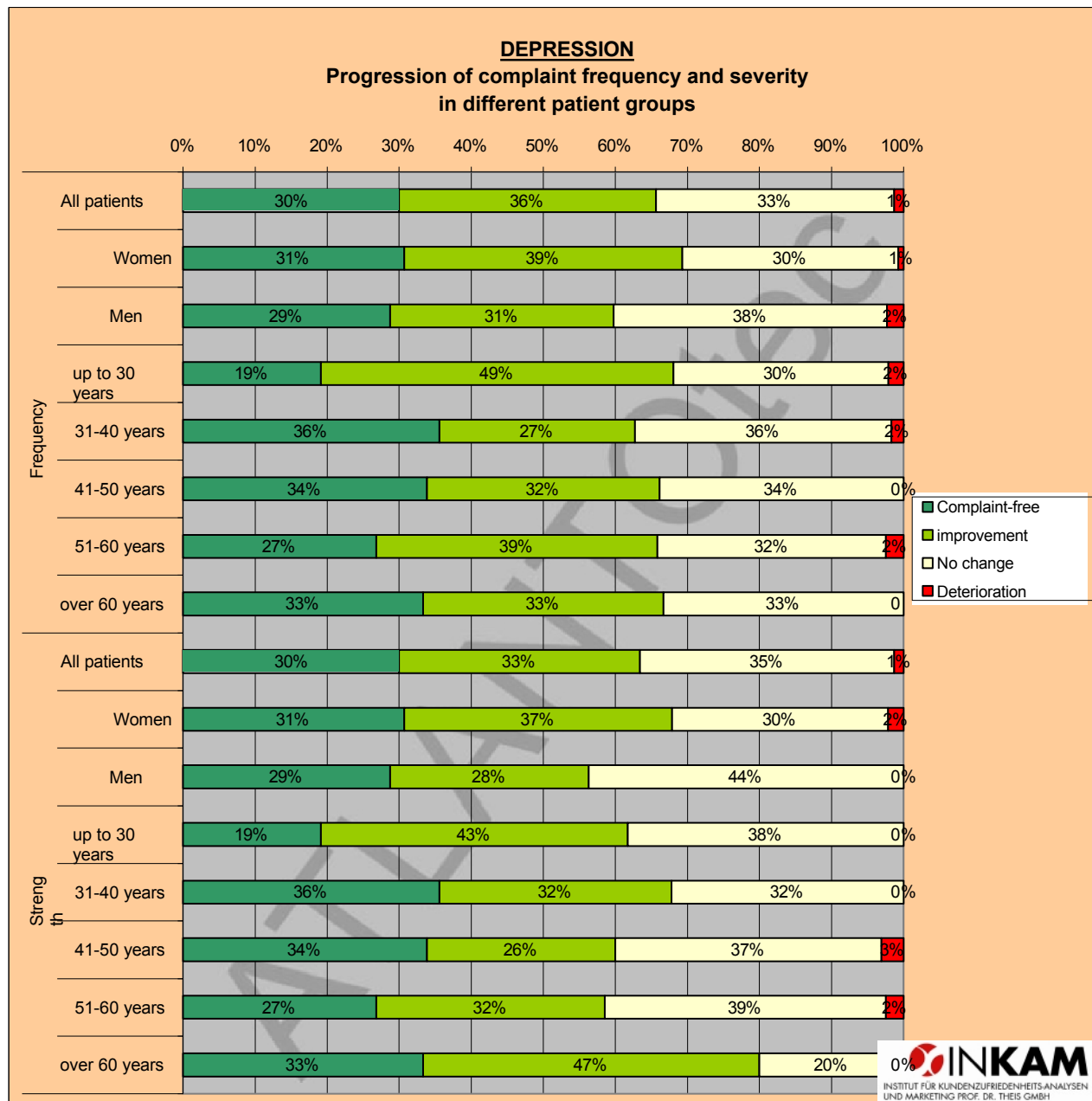| Frequency	Complaint-free	improvement	No change	Deterioration
All patients	30%	36%	33%	1%
Women	31%	39%	30%	1%
Men	29%	31%	38%	2%
up to 30 years	19%	49%	30%	2%
31-40 years	36%	27%	36%	2%
41-50 years	34%	32%	34%	0%
51-60 years	27%	39%	32%	2%
over 60 years	33%	33%	33%	0

Strength	Complaint-free	improvement	No change	Deterioration
All patients	30%	33%	35%	1%
Women	31%	37%	30%	2%
Men	29%	28%	44%	0%
up to 30 years	19%	43%	38%	0%
31-40 years	36%	32%	32%	0%
41-50 years	34%	26%	37%	3%
51-60 years	27%	32%	39%	2%
over 60 years	33%	47%	20%	0%

* The treatment can lead to the following results: In the best case scenario, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

5.14.3 Effects of treatment with different complaint intensity

The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have with different complaint intensities (complaint frequencies and severity) in the complaint area of depression?

The following figure provides information about the results. It shows, for example, the change in the frequency of complaints in those patients indicated **level 5** on the frequency scale before treatment: There was no improvement in **19%** of all respondents. For **5%**, the frequency of complaints was reduced by one level, for **38%** by two levels, for **38%** by three levels and for **0%** by four levels. Consequently, 0% of all level 5 patients are symptom-free (no/no significant complaints).

5.14.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of symptoms of *depression* has changed on average across all patients (with symptoms before treatment) as a result of ATLANTOtec® treatment.

DEPRESSION
Average frequency of complaints BEFORE and AFTER treatment

Group	BEFORE treatment	AFTER treatment
All patients	3,2	2,1
Women	3,3	2,1
Men	3,0	2,1
up to 30 years	3,4	2,2
31-40 years	3,1	2,1
41-50 years	3,3	2,0
51-60 years	3,0	2,1
over 60 years	2,8	1,8

5.14.5 Average complaint severity BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the severity of symptoms of *depression* has changed on average across all patients (with symptoms before treatment) as a result of ATLANTOtec® treatment.
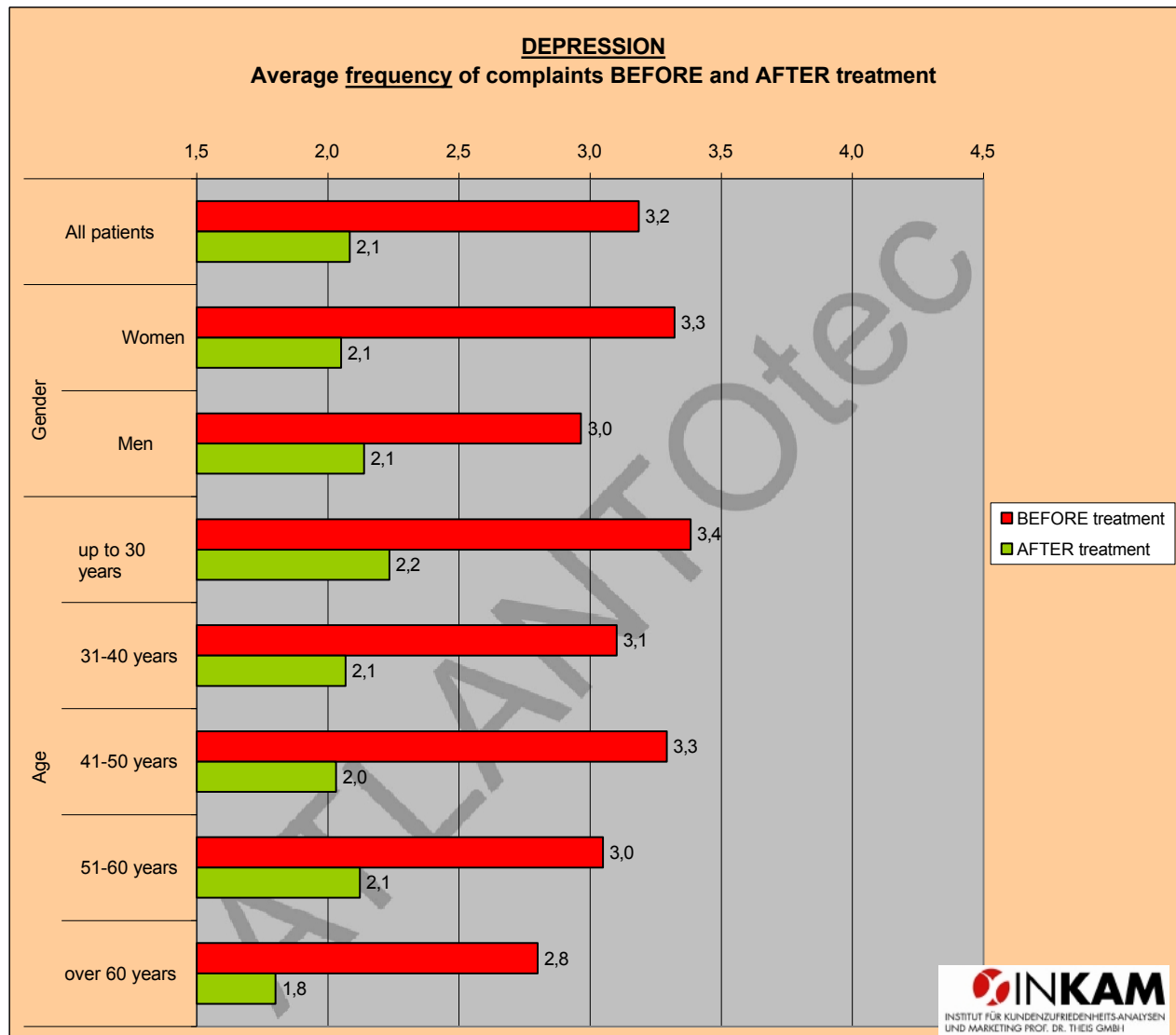
DEPRESSION
Average complaint severity BEFORE and AFTER treatment

Group		BEFORE treatment	AFTER treatment
	All patients	3,3	2,1
Gender	Women	3,4	2,2
	Men	3,1	2,1
Age	up to 30 years	3,4	2,3
	31-40 years	3,5	2,2
	41-50 years	3,2	2,2
	51-60 years	3,2	2,1
	over 60 years	2,8	1,7
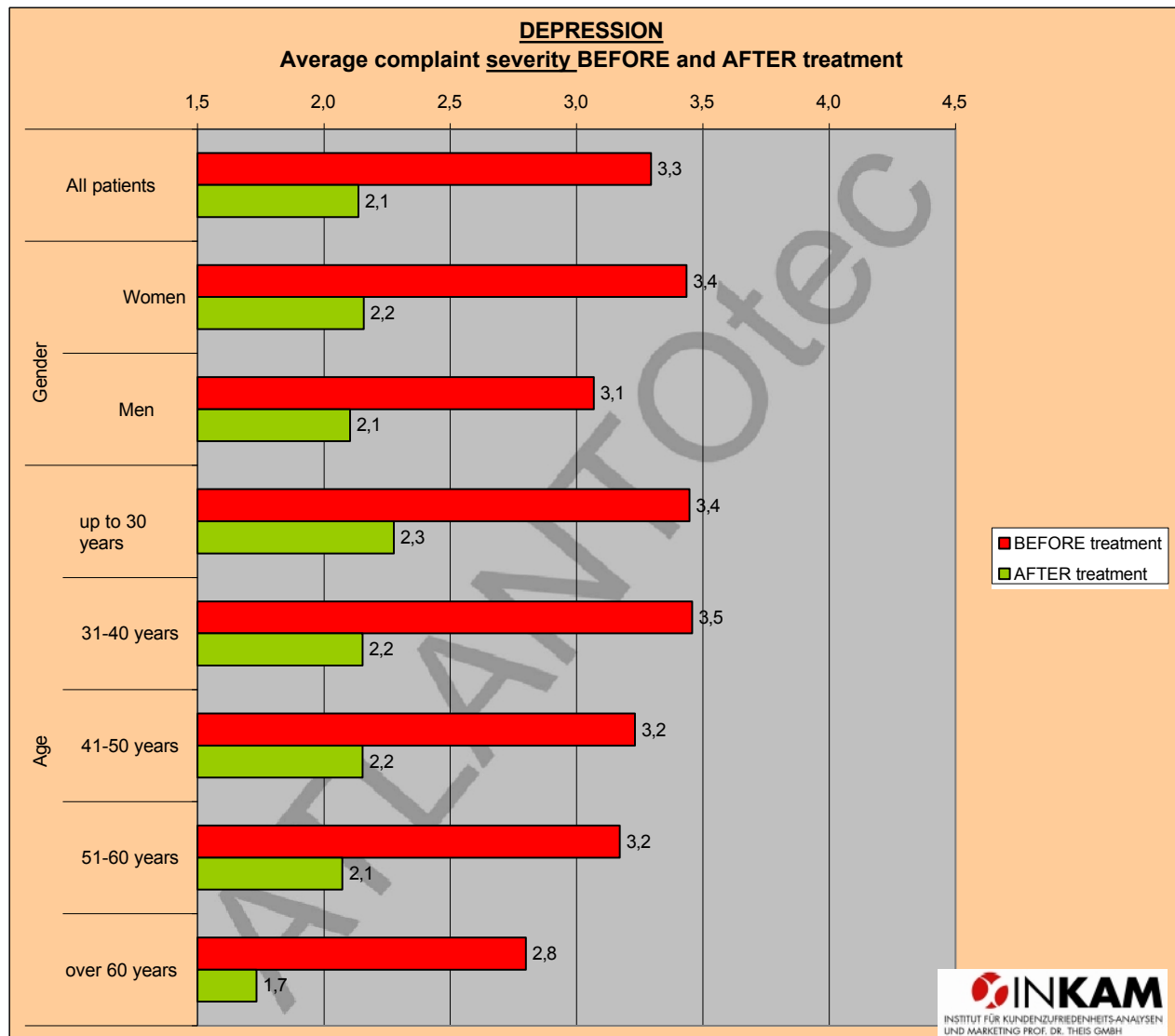
5.15 Migraine

5.15.1 Complaint status at the start of treatment
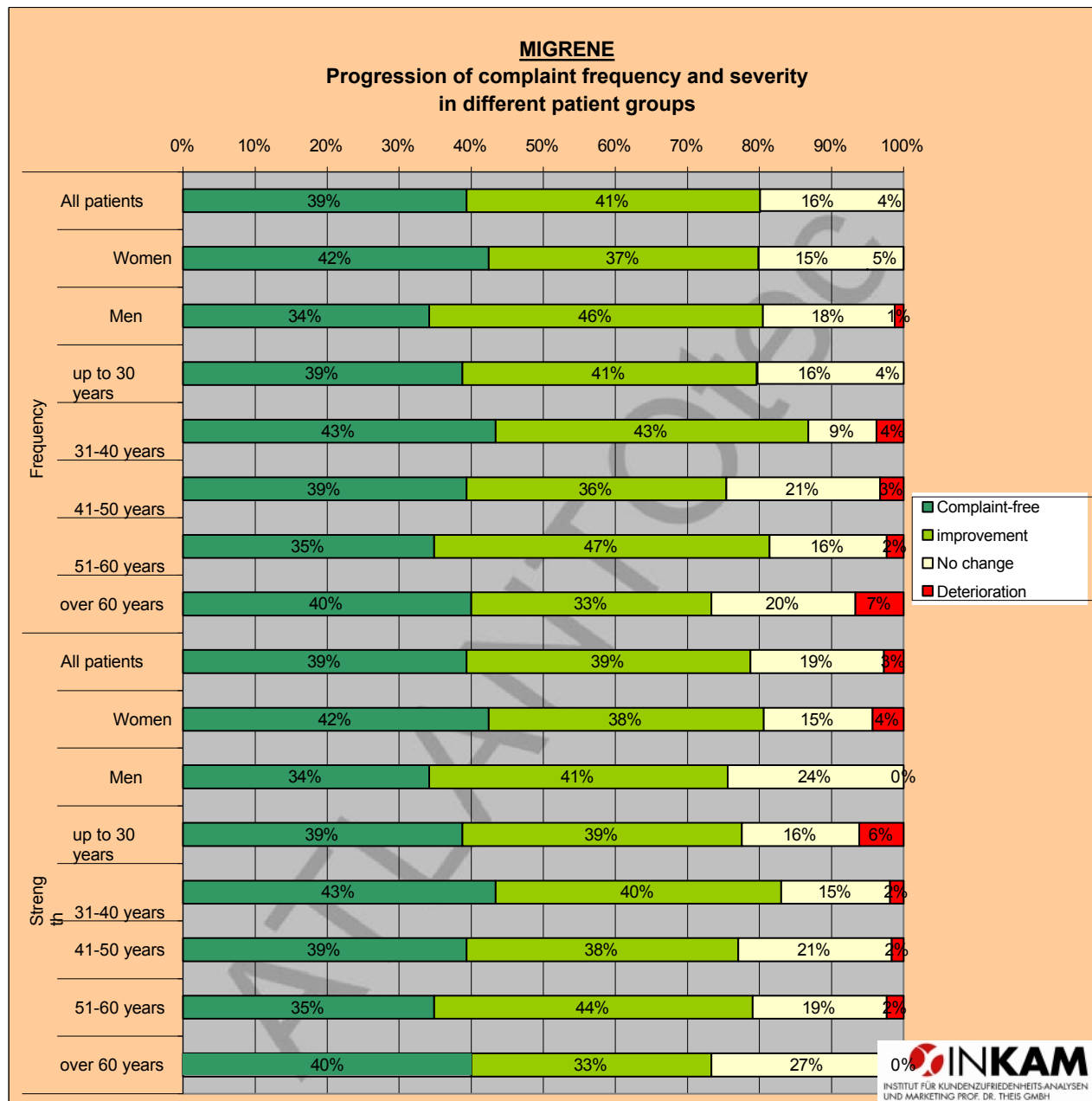
The following graph shows the proportion of patients - differentiated according to the various patient groups - who suffered from migraine before treatment.
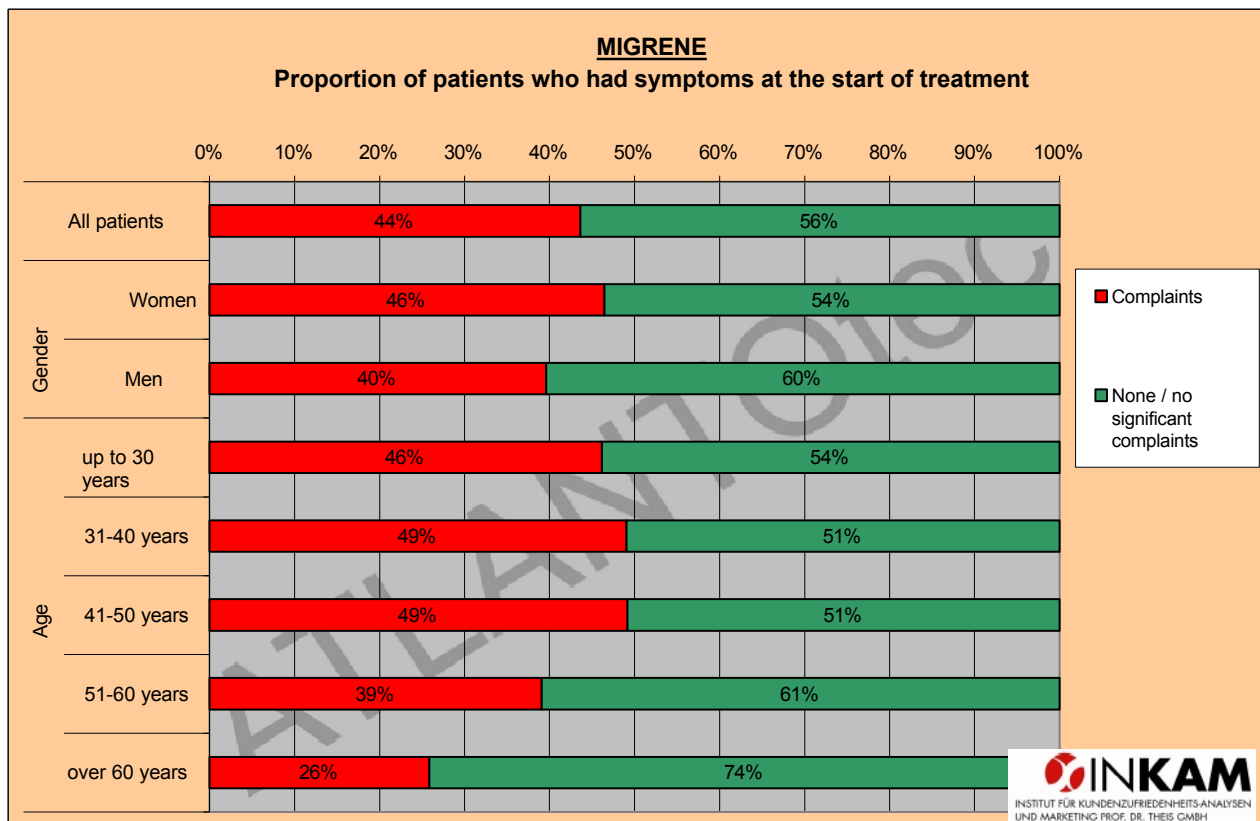
5.15.2 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression of symptoms in terms of severity and frequency in those patients who initially complained of migraine (scale levels 2-7 for frequency and/or severity) and underwent the ATLANTOtec® treatment.

MIGRENE
Progression of complaint frequency and severity
in different patient groups

Group	Complaint-free	improvement	No change	Deterioration
Frequency				
All patients	39%	41%	16%	4%
Women	42%	37%	15%	5%
Men	34%	46%	18%	1%
up to 30 years	39%	41%	16%	4%
31-40 years	43%	43%	9%	4%
41-50 years	39%	36%	21%	3%
51-60 years	35%	47%	16%	2%
over 60 years	40%	33%	20%	7%
Strength				
All patients	39%	39%	19%	3%
Women	42%	38%	15%	4%
Men	34%	41%	24%	0%
up to 30 years	39%	39%	16%	6%
31-40 years	43%	40%	15%	2%
41-50 years	39%	38%	21%	2%
51-60 years	35%	44%	19%	2%
over 60 years	40%	33%	27%	0%

* The treatment can lead to the following results: In the best case scenario, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

5.15.3 Effects of treatment with different complaint intensity

The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have on migraine symptoms of varying intensity (frequency and severity of symptoms)?

The following figure provides information about the results. It shows, for example, the change in the frequency of complaints in those patients indicated **level 5** on the frequency scale before treatment: There was no improvement in **0%** of all respondents. For **6%**, the frequency of complaints was reduced by one level, for **24%** by two levels, for **36%** by three levels and for **33%** by four levels. Consequently, 33% of all level 5 patients are symptom-free (no/no significant complaints).
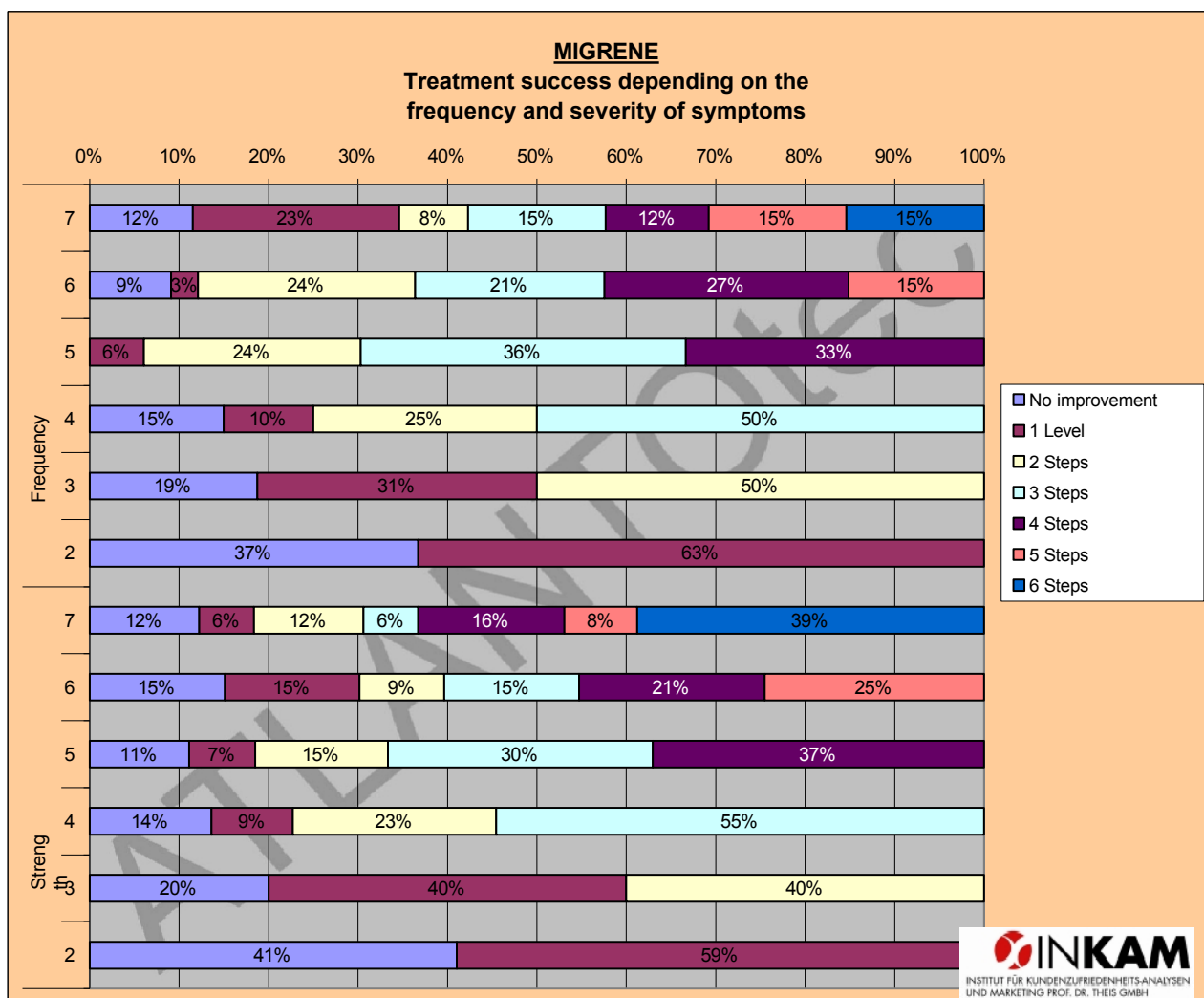
5.15.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of *migraine* symptoms has changed on average across all patients (with symptoms before treatment) as a result of ATLANTOtec® treatment.

MIGRENE
Average frequency of complaints BEFORE and AFTER treatment

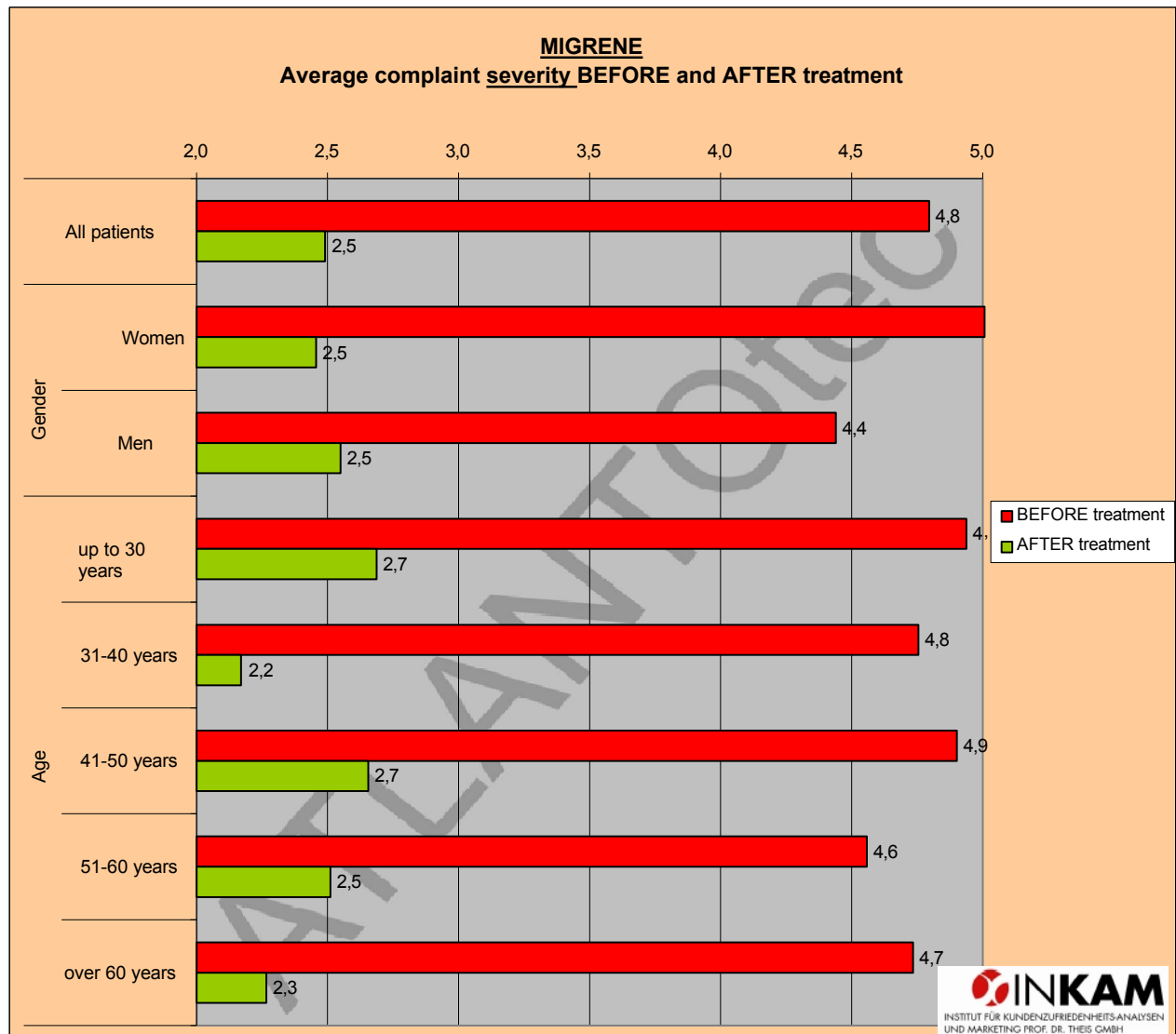| Group		BEFORE treatment	AFTER treatment
Gender	All patients	4,2	2,3
	Women	4,3	2,3
	Men	4,1	2,2
Age	up to 30 years	4,4	2,3
	31-40 years	4,1	
	41-50 years	4,1	2,4
	51-60 years	4,2	2,4
	over 60 years	4,2	2,3
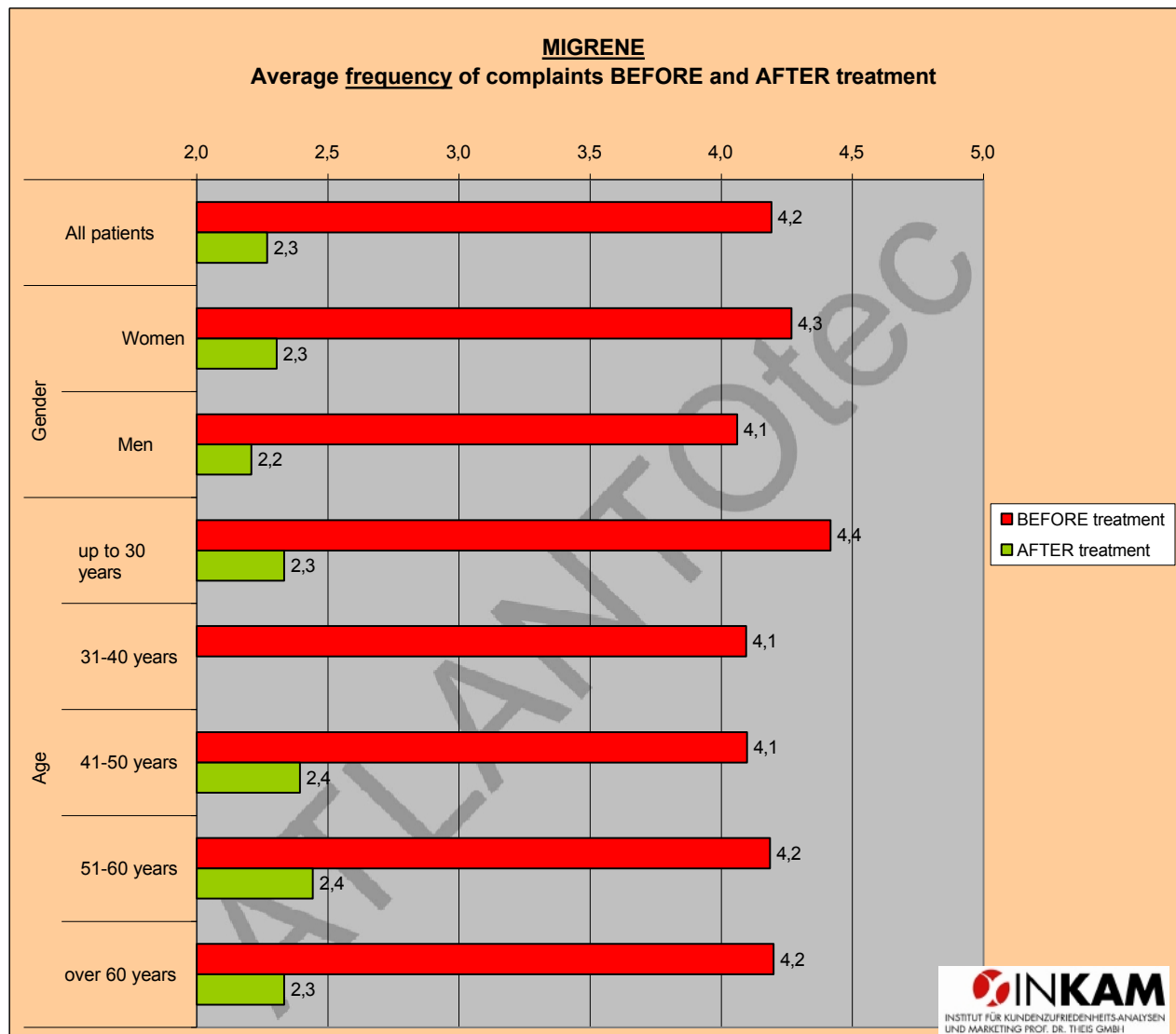
5.15.5 Average complaint severity BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the severity of *migraine* symptoms has changed on average across all patients (with symptoms before treatment) as a result of ATLANTOtec® treatment.

MIGRENE
Average complaint severity BEFORE and AFTER treatment

Group		BEFORE treatment	AFTER treatment
	All patients	4,8	2,5
Gender	Women	5,0	2,5
	Men	4,4	2,5
Age	up to 30 years	4,	2,7
	31-40 years	4,8	2,2
	41-50 years	4,9	2,7
	51-60 years	4,6	2,5
	over 60 years	4,7	2,3

5.16   Tinnitus (ringing in the ears)

5.16.1 Complaint status at the start of treatment

The following graph shows the proportion of patients - differentiated according to the various patient groups - who suffered from tinnitus before treatment.

TINNITUS
Proportion of patients who had symptoms at the start of treatment

Group	Complaints	None / no significant complaints
All patients	39%	61%
Women	39%	61%
Men	39%	61%
up to 30 years	35%	65%
31-40 years	36%	64%
41-50 years	40%	60%
51-60 years	48%	52%
over 60 years	31%	69%
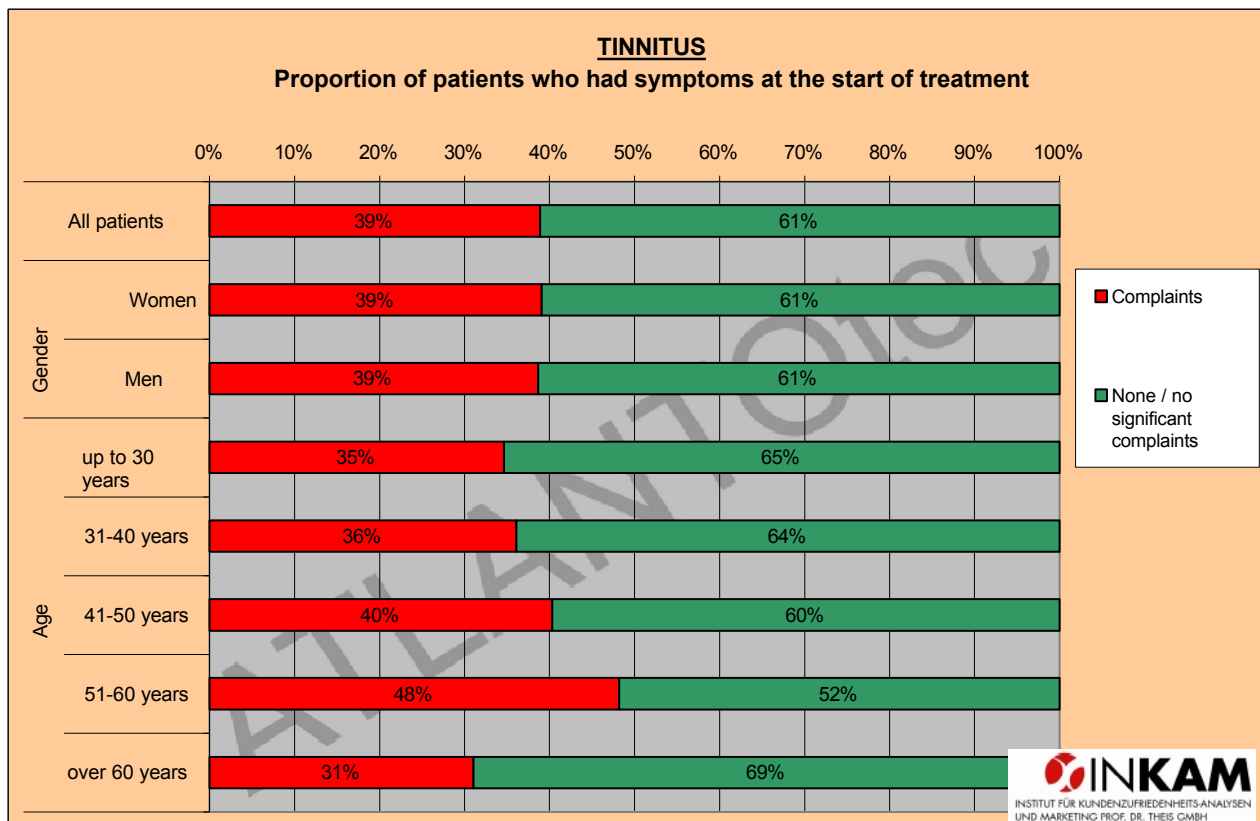
5.16.2 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression of the symptoms in terms of severity and frequency in those patients who initially complained of tinnitus (scale levels 2-7 for frequency and/or severity) and underwent ATLANTOtec® treatment.
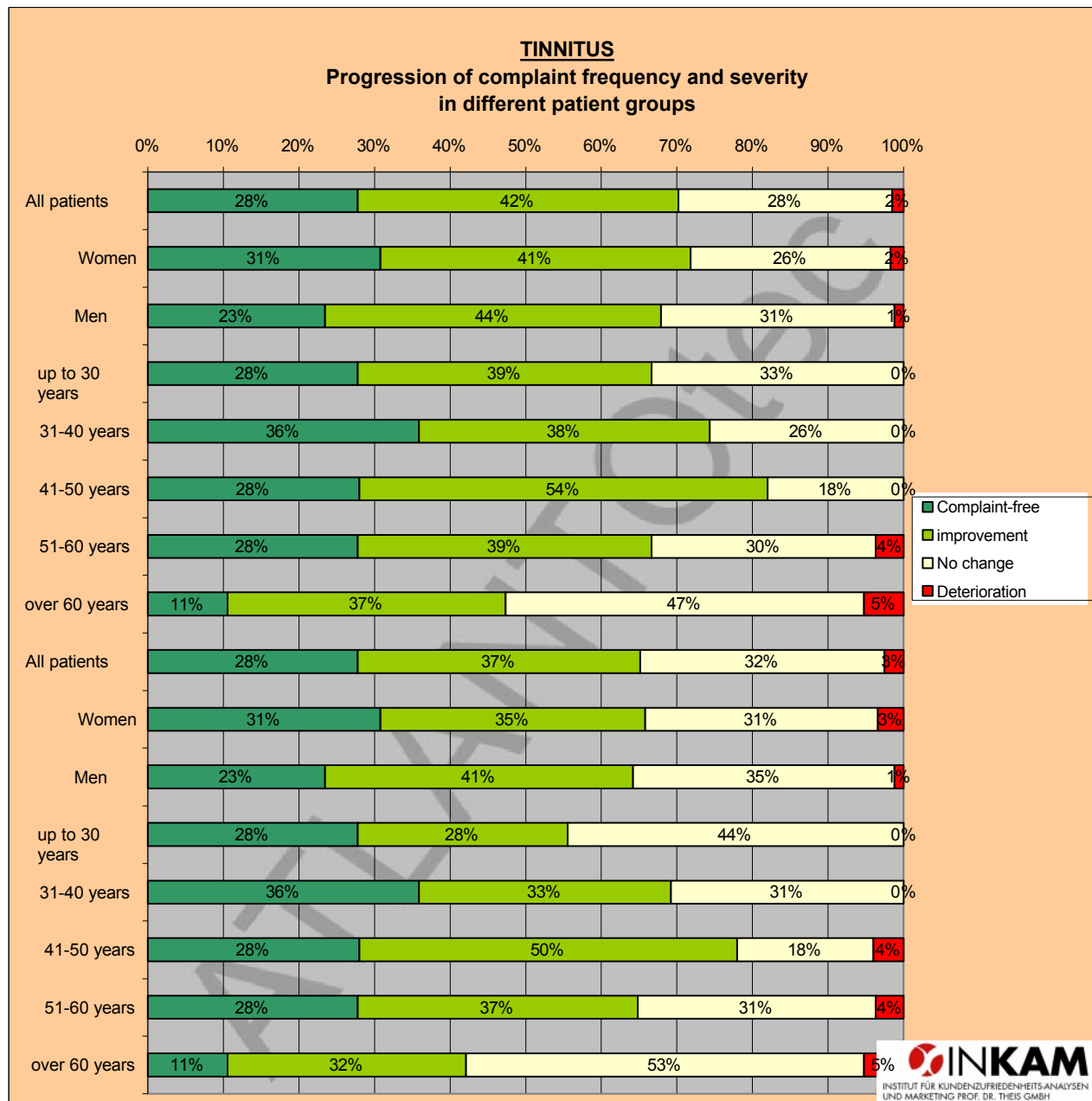
TINNITUS
Progression of complaint frequency and severity in different patient groups

| Patient group	Complaint-free	improvement	No change	Deterioration
All patients	28%	42%	28%	2%
Women	31%	41%	26%	2%
Men	23%	44%	31%	1%
up to 30 years	28%	39%	33%	0%
31-40 years	36%	38%	26%	0%
41-50 years	28%	54%	18%	0%
51-60 years	28%	39%	30%	4%
over 60 years	11%	37%	47%	5%
All patients	28%	37%	32%	3%
Women	31%	35%	31%	3%
Men	23%	41%	35%	1%
up to 30 years	28%	28%	44%	0%
31-40 years	36%	33%	31%	0%
41-50 years	28%	50%	18%	4%
51-60 years	28%	37%	31%	4%
over 60 years	11%	32%	53%	5%

* The treatment can lead to the following results: In the best case, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

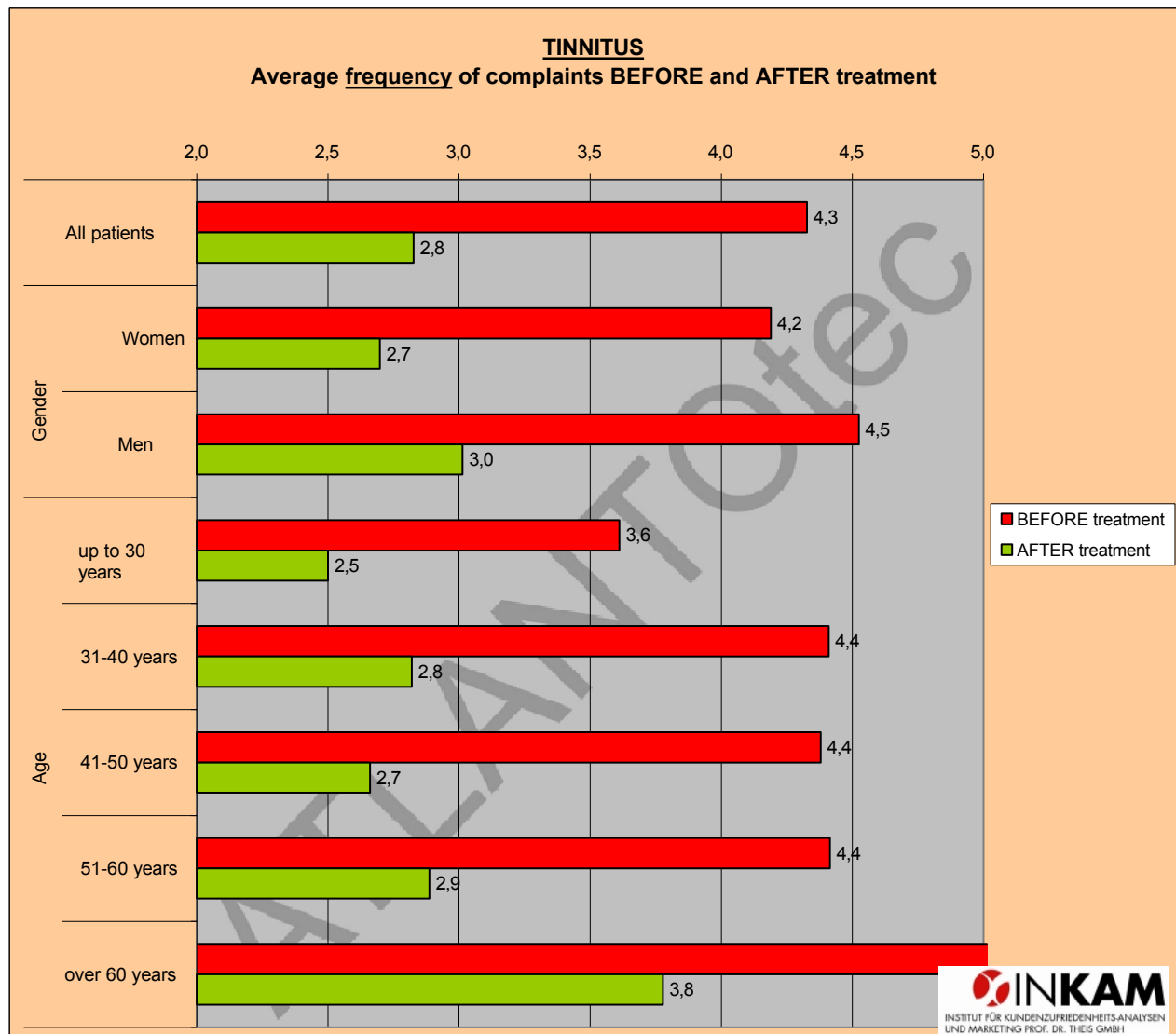## 5.16.3 Effects of treatment with different complaint intensity

The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have with different levels of intensity (frequency and severity of complaints) in the tinnitus complaint area?

The following figure provides information about the results. It shows, for example, the change in the frequency of complaints in those patients indicated **level 5** on the frequency scale before treatment: There was no improvement in **27%** of all respondents. For **18%**, the frequency of complaints was reduced by one level, for **18%** by two levels, for **14%** by three levels and for **23%** by four levels. Consequently, 23% of all level 5 patients are symptom-free (no/no significant complaints).

TINNITUS
Treatment success depending on the
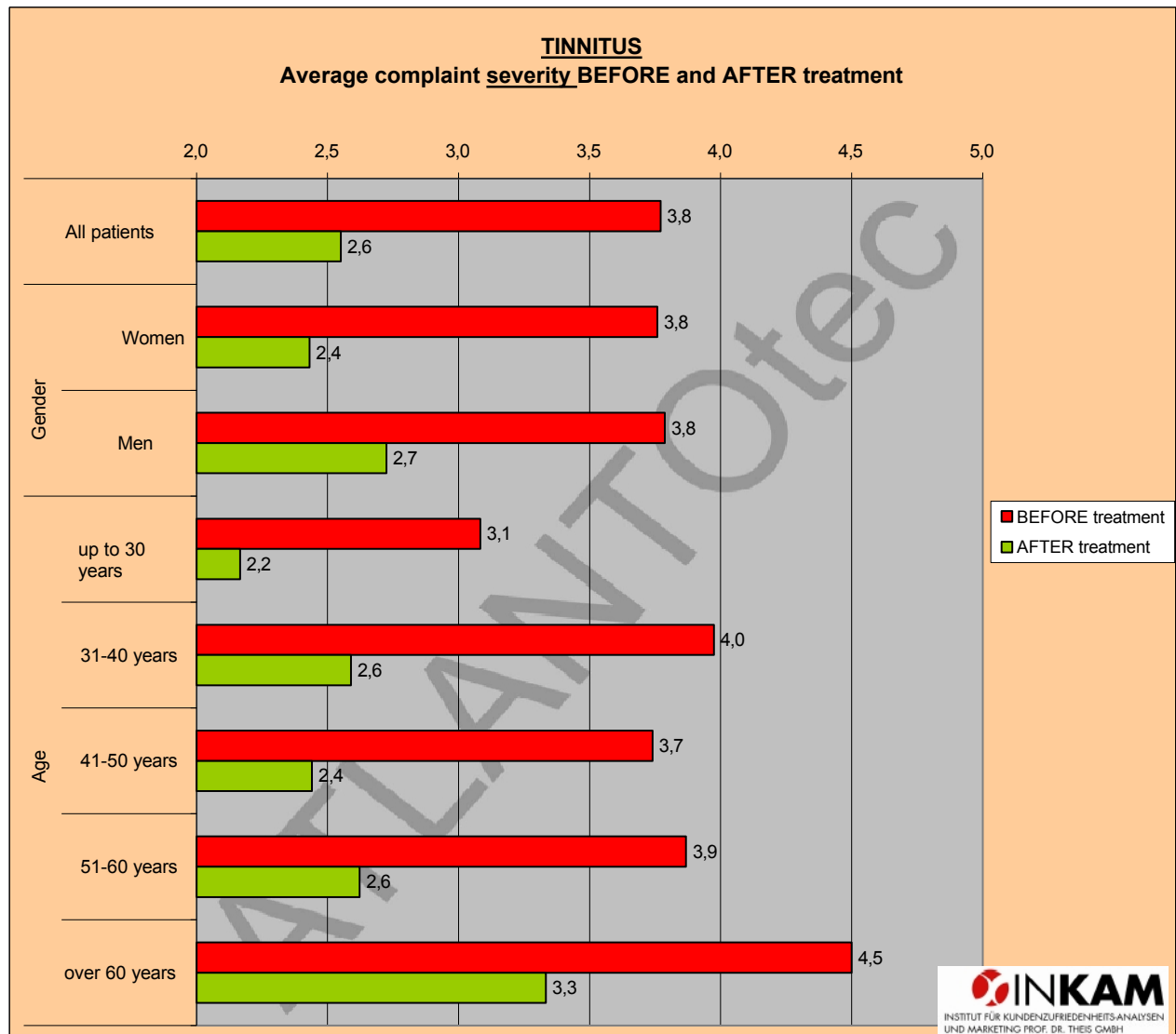frequency and severity of symptoms
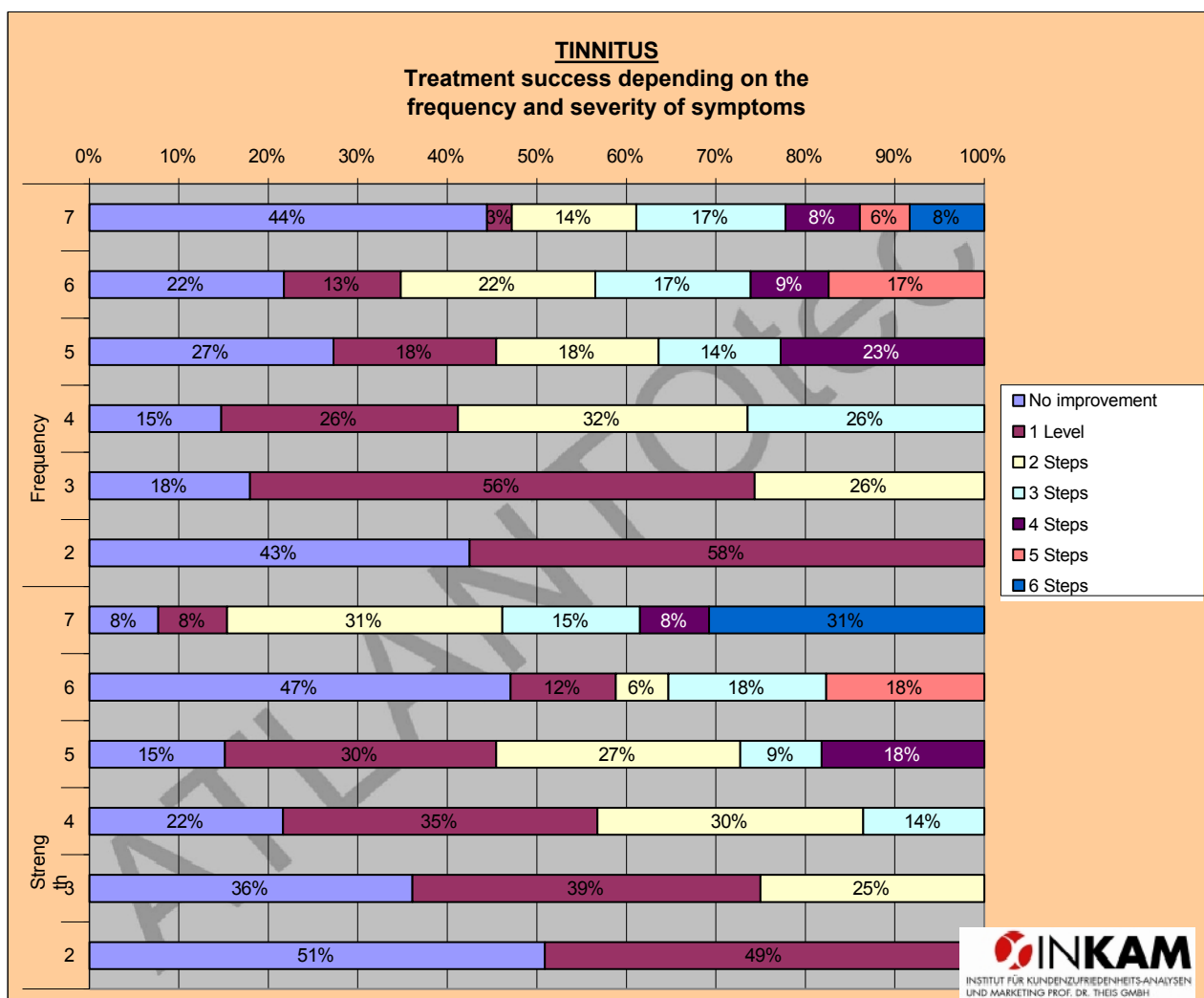
5.16.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of *tinnitus* complaints has changed on average across all patients (with complaints before treatment) as a result of ATLANTOtec® treatment.

TINNITUS
Average frequency of complaints BEFORE and AFTER treatment

Group		BEFORE treatment	AFTER treatment
	All patients	4,3	2,8
Gender	Women	4,2	2,7
	Men	4,5	3,0
Age	up to 30 years	3,6	2,5
	31-40 years	4,4	2,8
	41-50 years	4,4	2,7
	51-60 years	4,4	2,9
	over 60 years		3,8

## 5.16.5 Average complaint severity BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the severity of *tinnitus* symptoms has changed on average across all patients (with symptoms before treatment) as a result of ATLANTOtec® treatment.

TINNITUS
Average complaint severity BEFORE and AFTER treatment

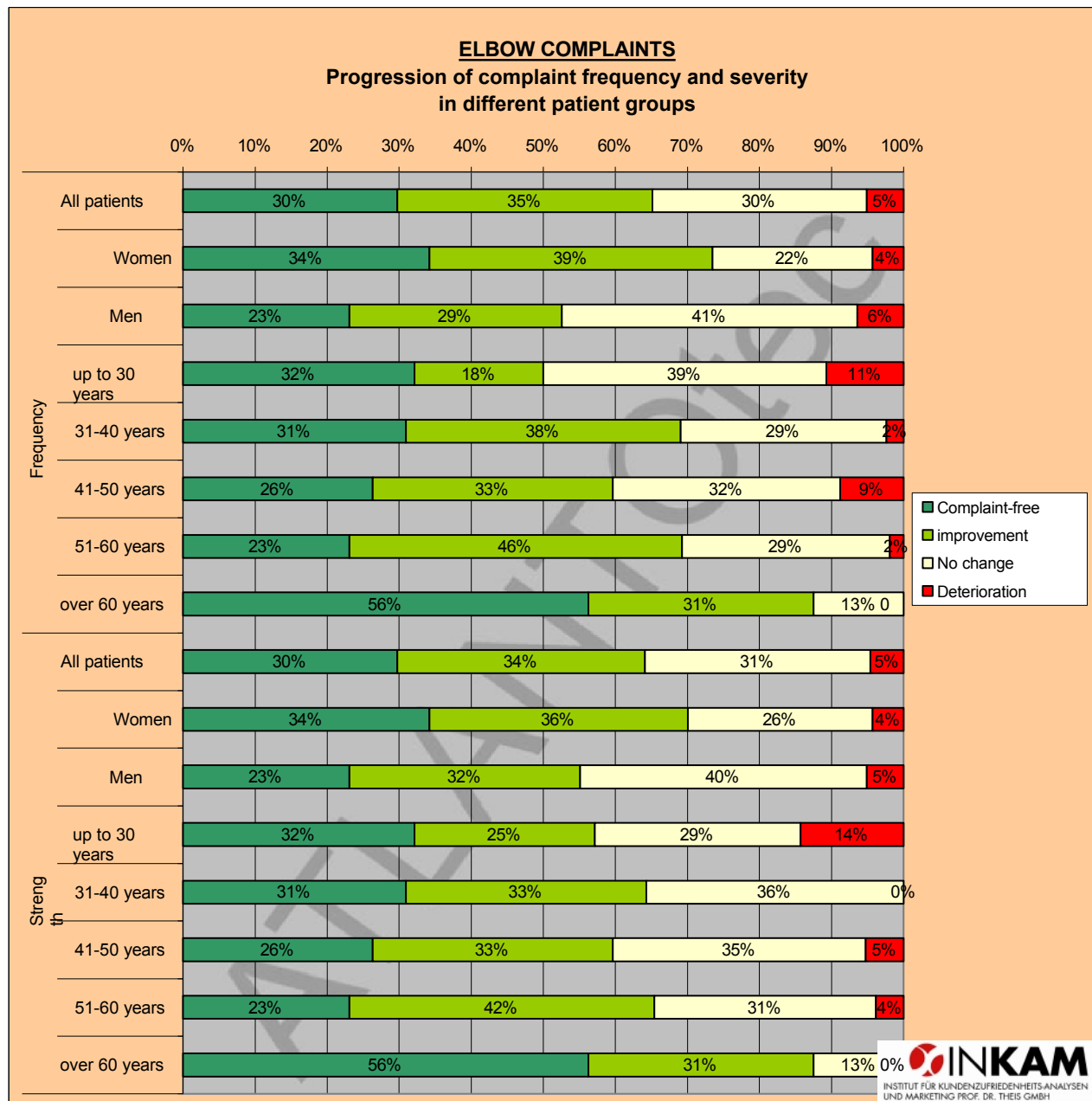| Group		BEFORE treatment	AFTER treatment
	All patients	3,8	2,6
Gender	Women	3,8	2,4
	Men	3,8	2,7
Age	up to 30 years	3,1	2,2
	31-40 years	4,0	2,6
	41-50 years	3,7	2,4
	51-60 years	3,9	2,6
	over 60 years	4,5	3,3

5.17 Elbow complaints

5.17.1 Complaint status at the start of treatment

The following graph shows the proportion of patients - differentiated according to the various patient groups - who suffered from elbow pain before treatment.
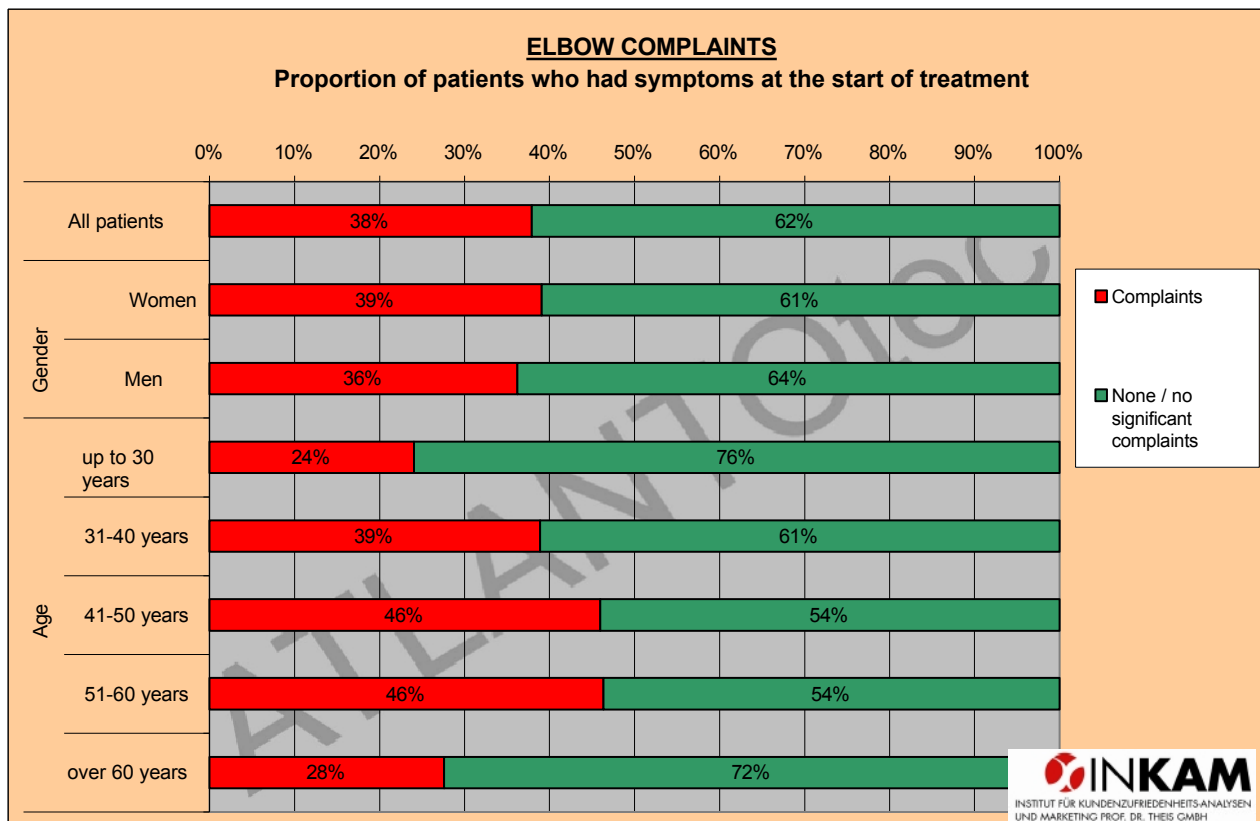
5.17.2 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression of symptoms in terms of severity and frequency in those patients who initially complained of elbow pain (scale levels 2-7 for frequency and/or severity) and underwent *ATLAN-* TOtec® treatment.

ELBOW COMPLAINTS
Progression of complaint frequency and severity in different patient groups

Frequency				
All patients	30%	35%	30%	5%
Women	34%	39%	22%	4%
Men	23%	29%	41%	6%
up to 30 years	32%	18%	39%	11%
31-40 years	31%	38%	29%	2%
41-50 years	26%	33%	32%	9%
51-60 years	23%	46%	29%	2%
over 60 years	56%	31%	13%	0

Legend:
- ■ Complaint-free
- ■ improvement
- □ No change
- ■ Deterioration

| Strength				
All patients	30%	34%	31%	5%
Women	34%	36%	26%	4%
Men	23%	32%	40%	5%
up to 30 years	32%	25%	29%	14%
31-40 years	31%	33%	36%	0%
41-50 years	26%	33%	35%	5%
51-60 years	23%	42%	31%	4%
over 60 years	56%	31%	13%	0%

* The treatment can lead to the following results: In the best case scenario, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

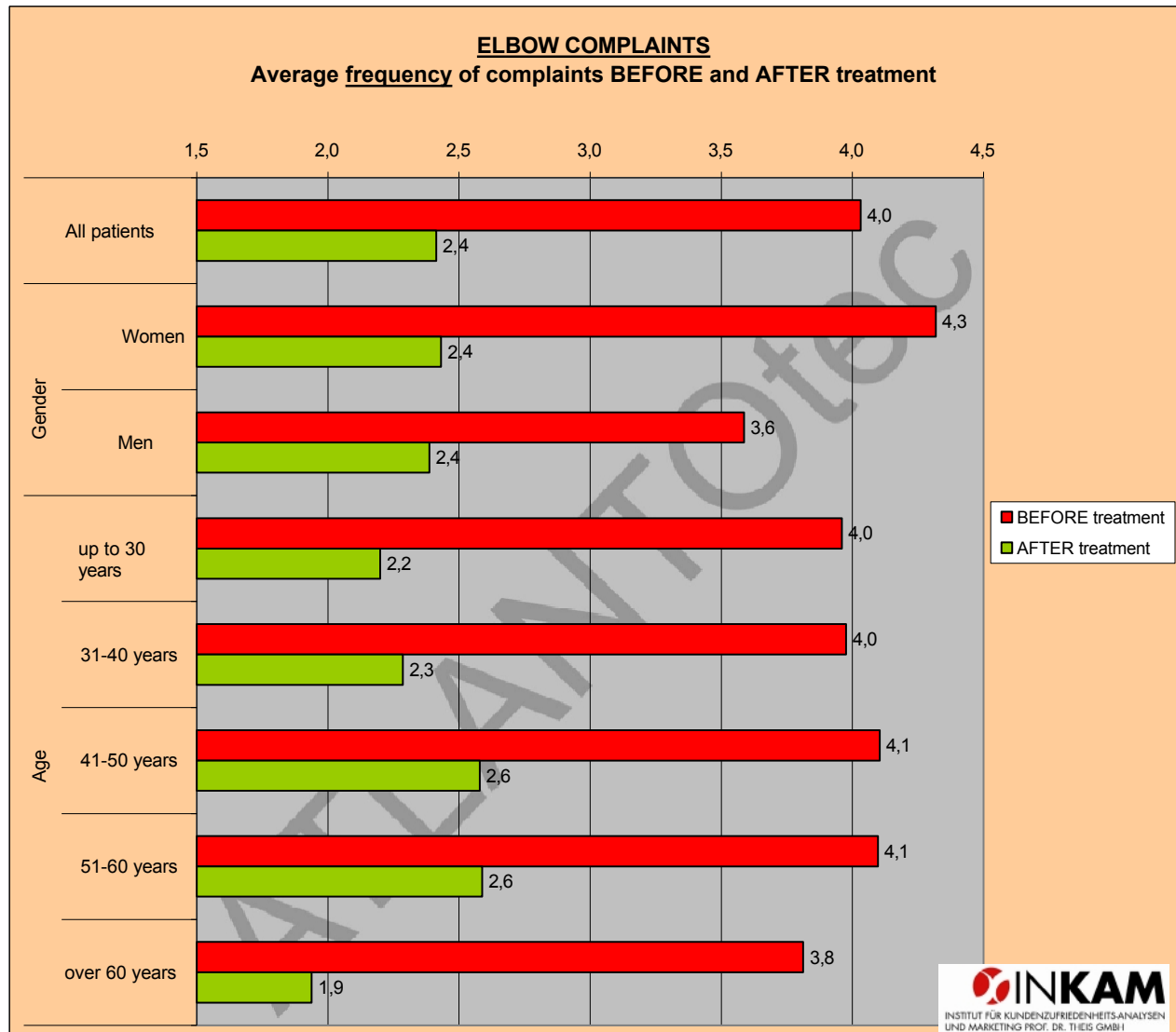### 5.17.3 Effects of treatment with different complaint intensity

The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have on different levels of intensity (frequency and severity of complaints) in the area of elbow complaints?

The following figure provides information about the results. It , for example, the change the frequency of complaints in those patients who indicated **level 5** on the frequency scale before treatment: There was no improvement in **5%** of all respondents. For **10%**, the frequency of complaints was reduced by one level, for **19%** by two levels, for **19%** by three levels and for **48%** by four levels. Consequently, 48% of all level 5 patients are symptom-free (no/no significant complaints).

ELBOW COMPLAINTS
Success of treatment depending on the frequency and severity of symptoms
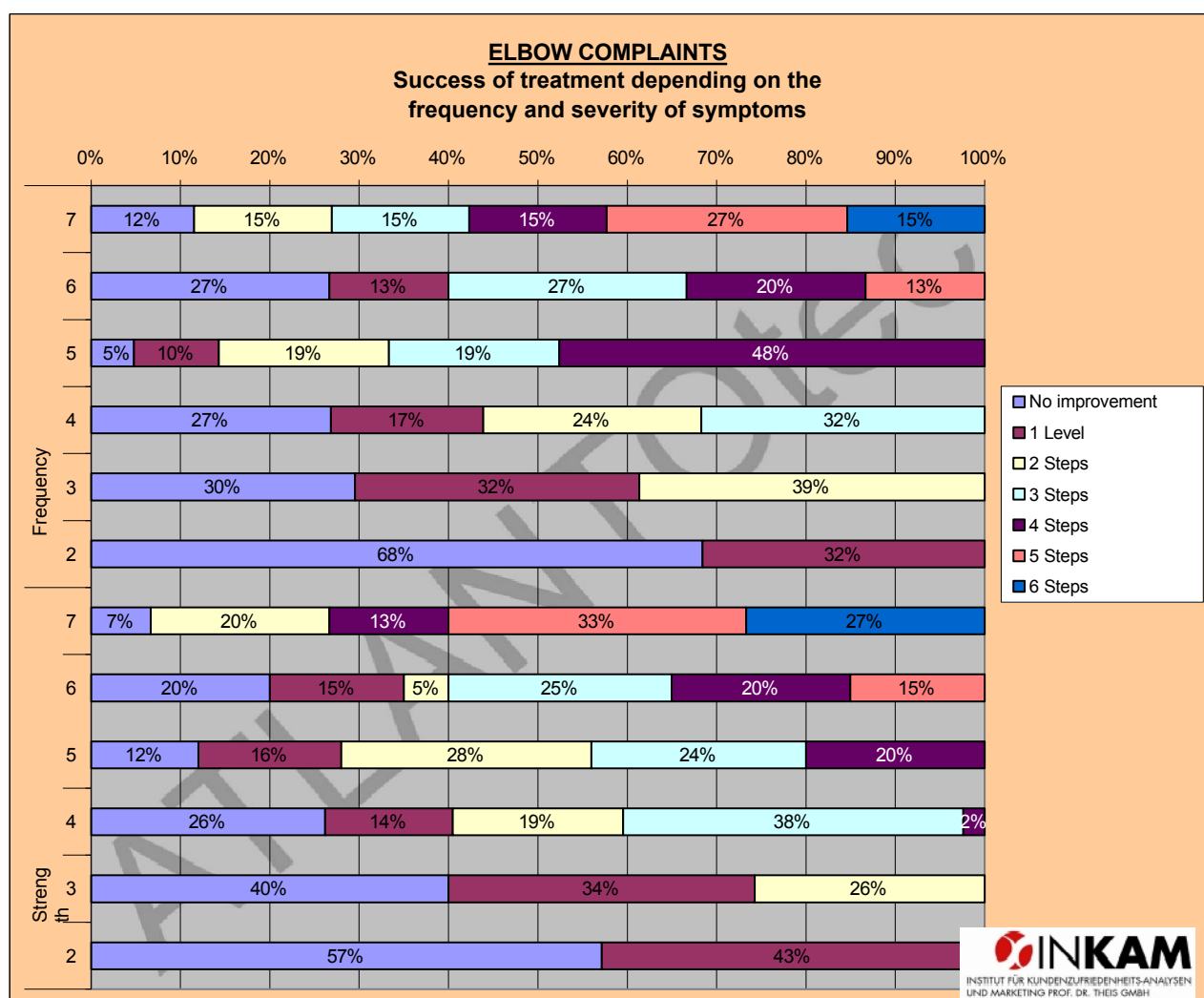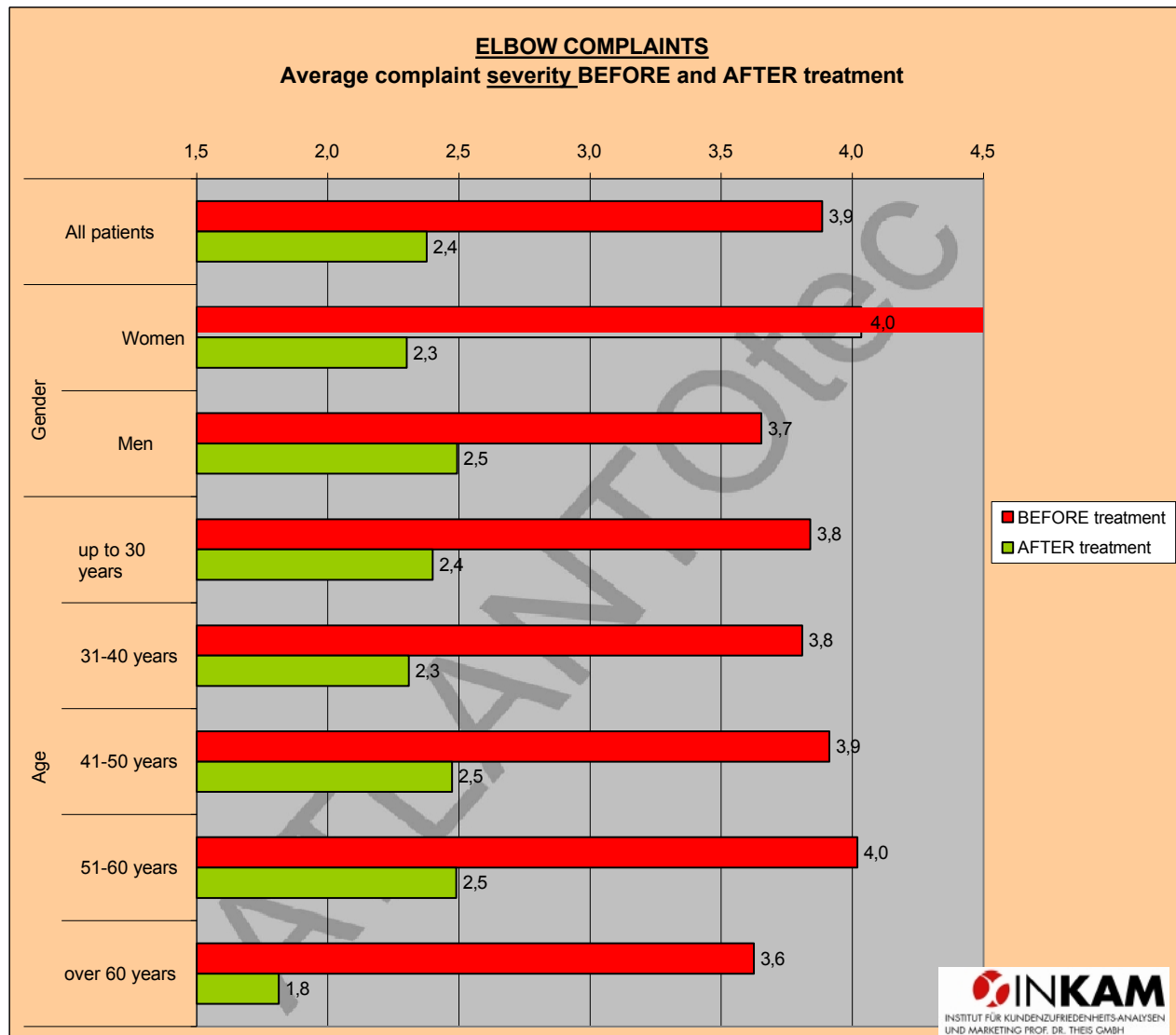
5.17.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of *elbow* complaints has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

ELBOW COMPLAINTS
Average frequency of complaints BEFORE and AFTER treatment

Group	BEFORE treatment	AFTER treatment
All patients	4,0	2,4
Women	4,3	2,4
Men	3,6	2,4
up to 30 years	4,0	2,2
31-40 years	4,0	2,3
41-50 years	4,1	2,6
51-60 years	4,1	2,6
over 60 years	3,8	1,9

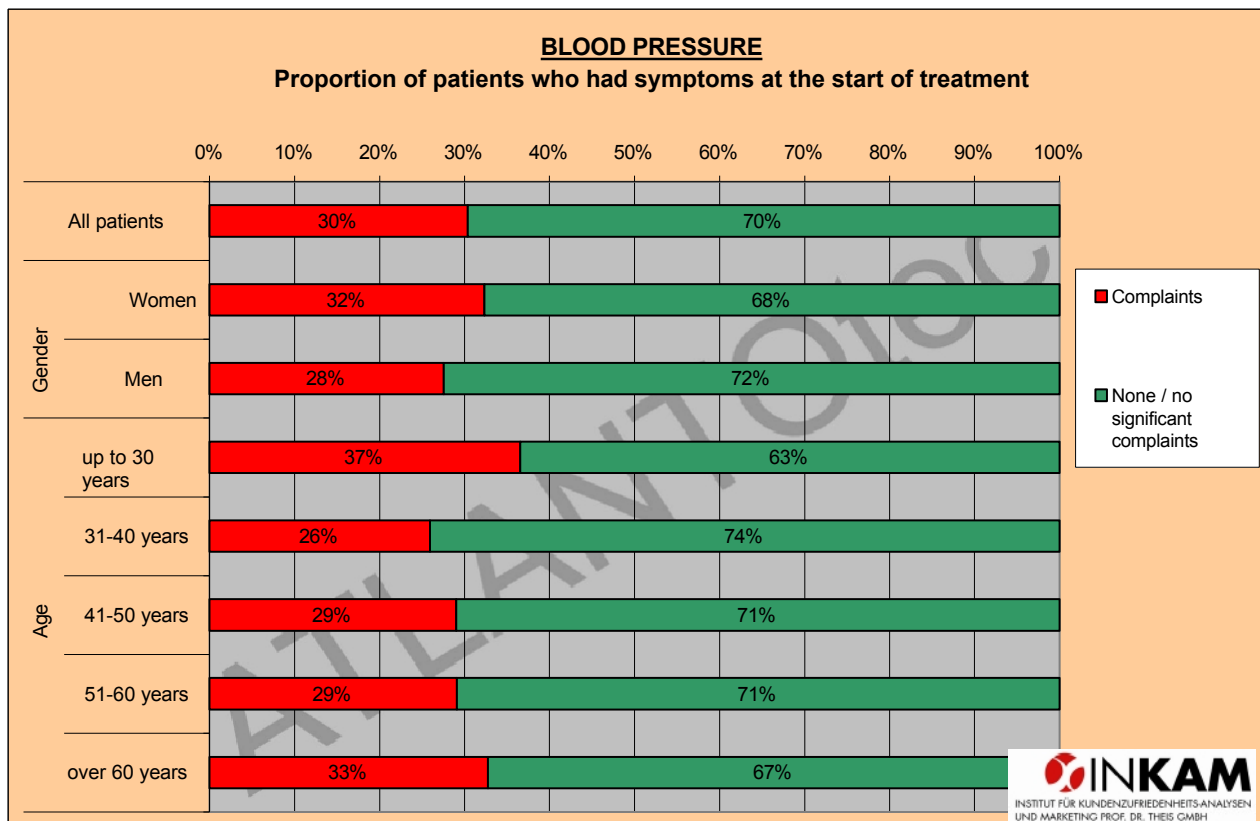## 5.17.5 Average complaint severity BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the severity of *elbow* complaints has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

ELBOW COMPLAINTS
Average complaint severity BEFORE and AFTER treatment

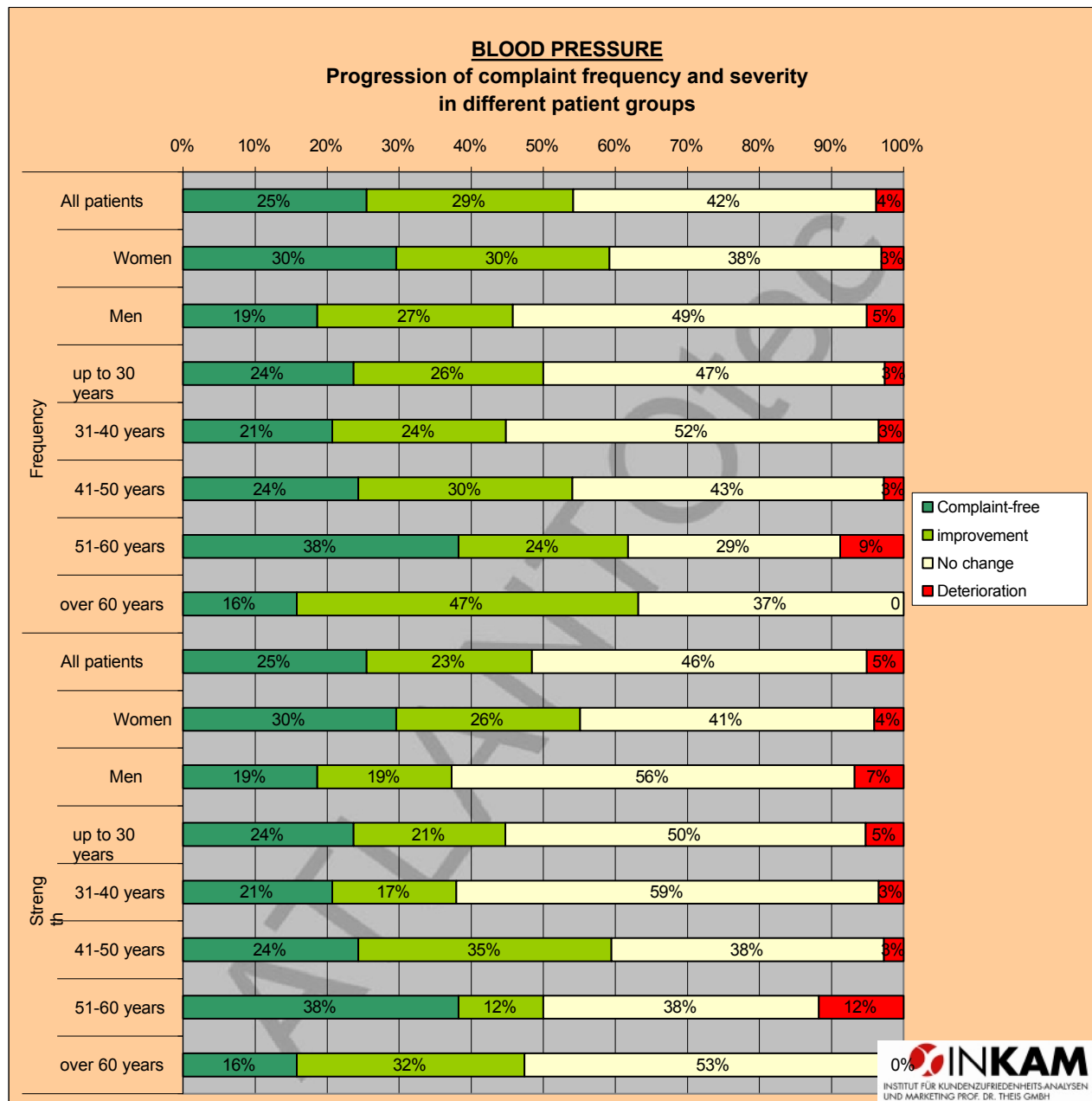| Group		BEFORE treatment	AFTER treatment
	All patients	3,9	2,4
Gender	Women	4,0	2,3
	Men	3,7	2,5
Age	up to 30 years	3,8	2,4
	31-40 years	3,8	2,3
	41-50 years	3,9	2,5
	51-60 years	4,0	2,5
	over 60 years	3,6	1,8

5.18   Blood pressure complaints

5.18.1 Complaint status at the start of treatment

The following graph shows the proportion of patients - differentiated according to the various patient groups - who suffered from low/high blood pressure before treatment.

BLOOD PRESSURE
Proportion of patients who had symptoms at the start of treatment

Group		Complaints	None / no significant complaints
All patients		30%	70%
Gender	Women	32%	68%
	Men	28%	72%
Age	up to 30 years	37%	63%
	31-40 years	26%	74%
	41-50 years	29%	71%
	51-60 years	29%	71%
	over 60 years	33%	67%

5.18.2 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression of symptoms in terms of severity and frequency in those patients who initially complained of low/high blood pressure (scale levels 2-7 for frequency and/or severity) and underwent ATLANTOtec® treatment.

BLOOD PRESSURE
Progression of complaint frequency and severity
in different patient groups

|	Complaint-free	improvement	No change	Deterioration
Frequency				
All patients	25%	29%	42%	4%
Women	30%	30%	38%	3%
Men	19%	27%	49%	5%
up to 30 years	24%	26%	47%	3%
31-40 years	21%	24%	52%	3%
41-50 years	24%	30%	43%	3%
51-60 years	38%	24%	29%	9%
over 60 years	16%	47%	37%	0
Strength				
All patients	25%	23%	46%	5%
Women	30%	26%	41%	4%
Men	19%	19%	56%	7%
up to 30 years	24%	21%	50%	5%
31-40 years	21%	17%	59%	3%
41-50 years	24%	35%	38%	3%
51-60 years	38%	12%	38%	12%
over 60 years	16%	32%	53%	0%

* The treatment can lead to the following results: In the best case scenario, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

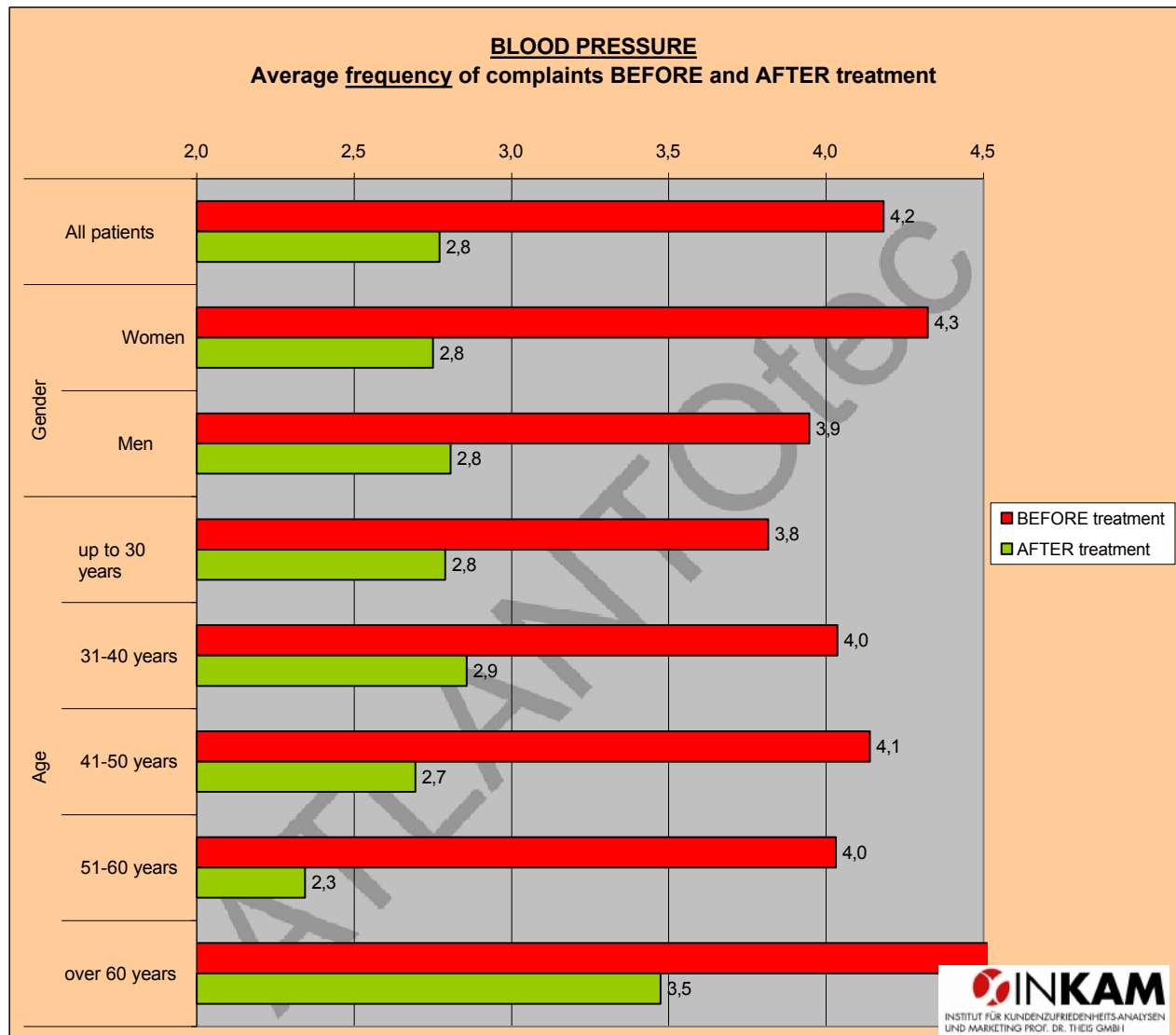## 5.18.3 Effects of treatment with different complaint intensity

The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have with different complaint intensities (complaint frequencies and severity) in the complaint area of blood pressure?

The following figure provides information about the results. It shows, for example, the change in the frequency of complaints in those patients indicated **level 5** on the frequency scale before treatment: There was no improvement in **27%** of all respondents. For **23%**, the frequency of complaints was reduced by one level, for **9%** by two levels, for **18%** by three levels and for **23%** by four levels. Consequently, 23% of all level 5 patients are symptom-free (no/no significant complaints).

BLOOD PRESSURE
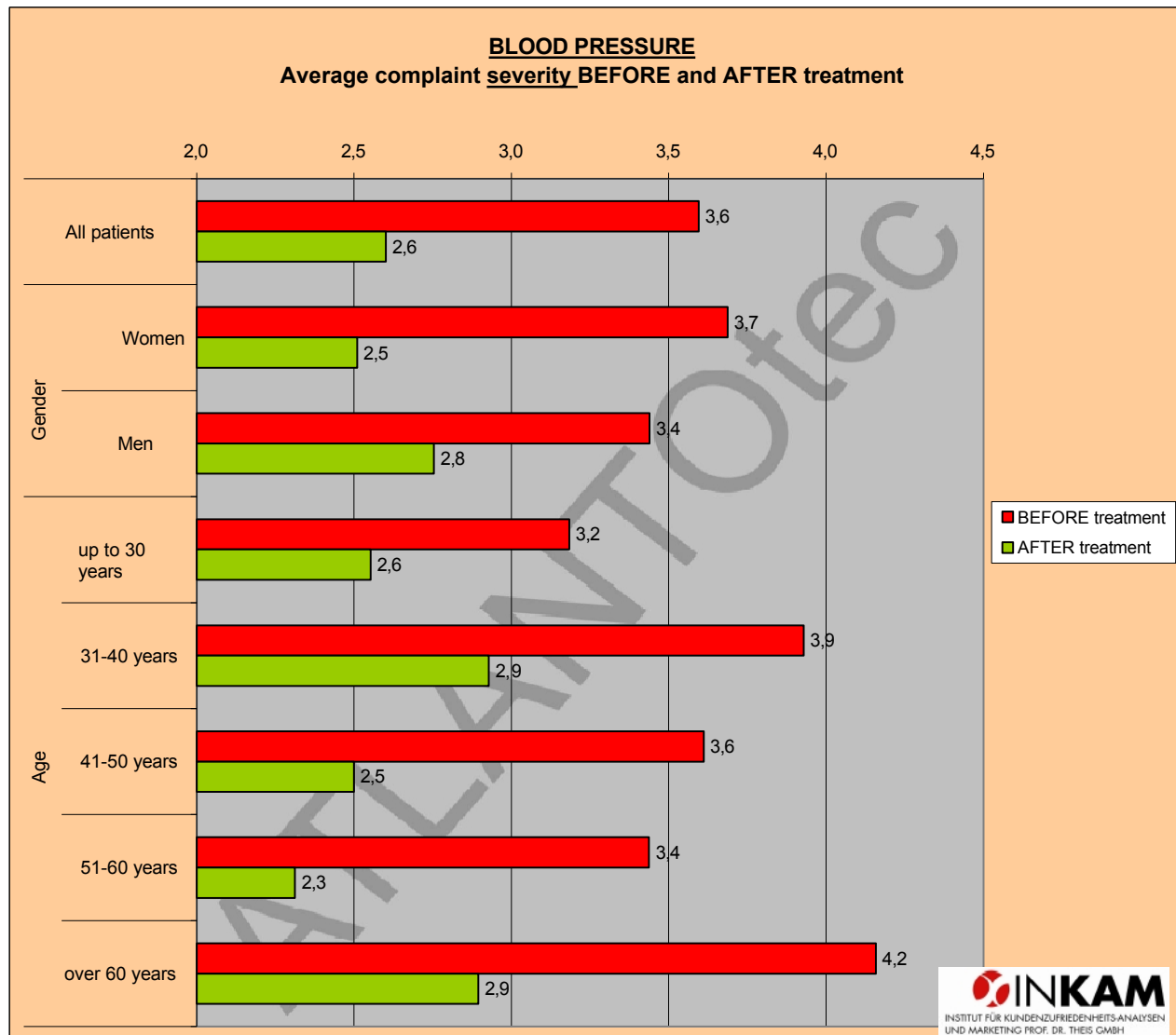Success of treatment depending on the frequency and severity of symptoms
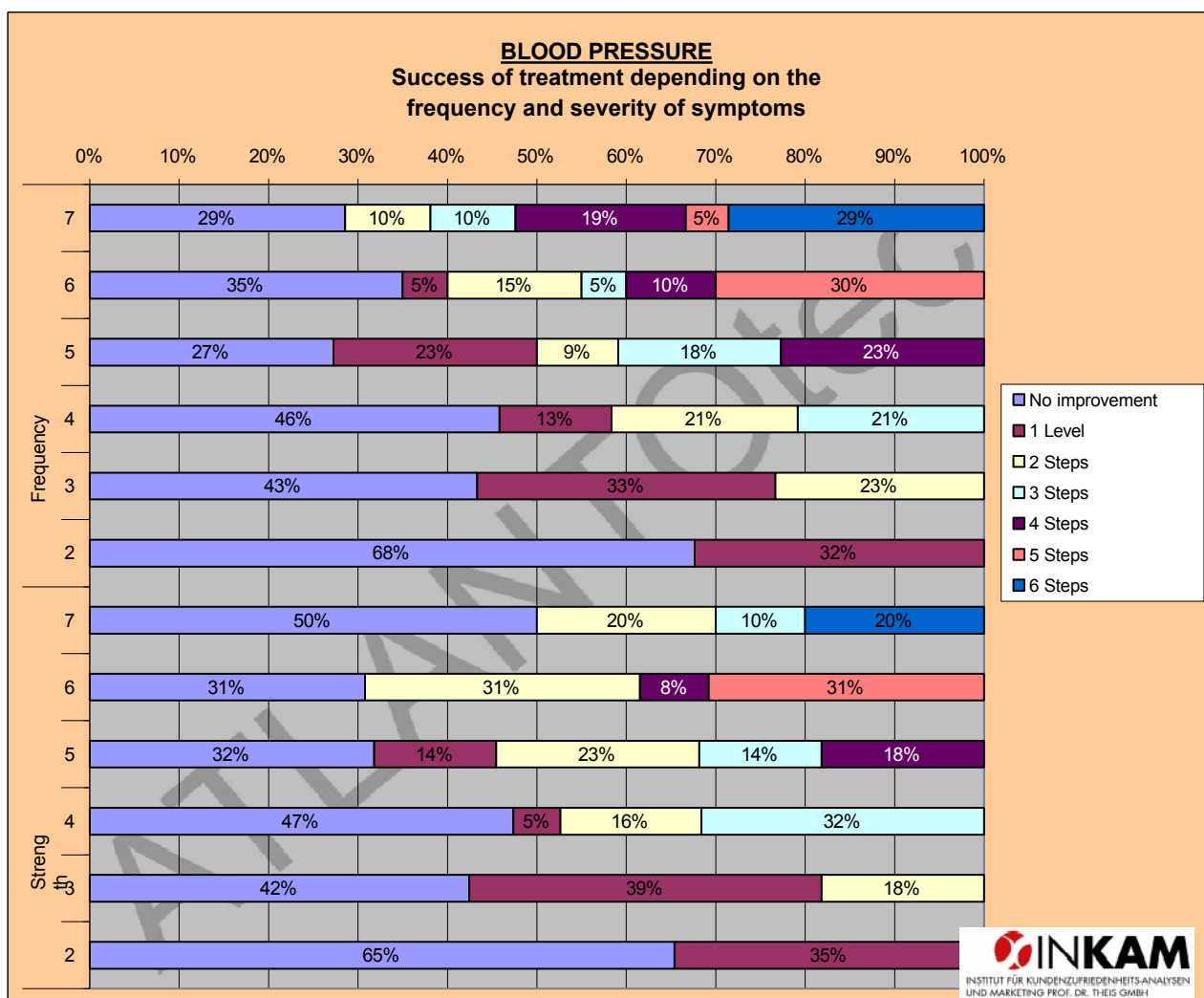
5.18.4 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of **blood pressure complaints** has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

BLOOD PRESSURE
Average frequency of complaints BEFORE and AFTER treatment

Group		BEFORE treatment	AFTER treatment
	All patients	4,2	2,8
Gender	Women	4,3	2,8
	Men	3,9	2,8
Age	up to 30 years	3,8	2,8
	31-40 years	4,0	2,9
	41-50 years	4,1	2,7
	51-60 years	4,0	2,3
	over 60 years		3,5

5.18.5 Average complaint severity BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the severity of **blood pressure** complaints has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

BLOOD PRESSURE
Average complaint severity BEFORE and AFTER treatment

Patient group	BEFORE treatment	AFTER treatment
All patients	3,6	2,6
Women	3,7	2,5
Men	3,4	2,8
up to 30 years	3,2	2,6
31-40 years	3,9	2,9
41-50 years	3,6	2,5
51-60 years	3,4	2,3
over 60 years	4,2	2,9

5.19 Other complaints

5.19.1 Complaints mentioned by the respondents

Respondents were given the complaint fields to assess. In addition, they had the option of entering further complaints in the "Other" field.

The following list shows which complaints were mentioned here.

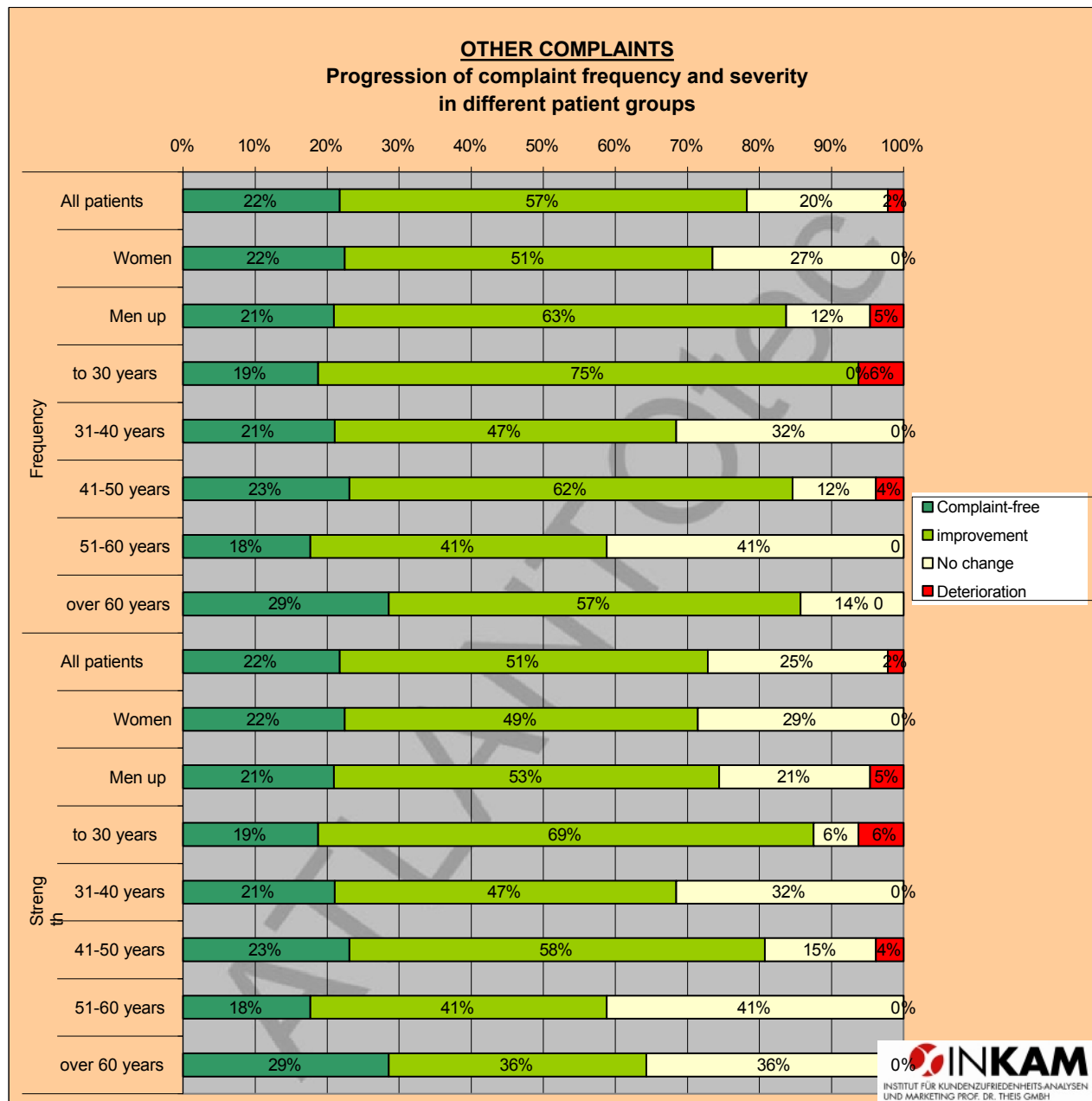|	
Head	Jaw problems (6x)
	Visual disturbances, burning eyes (3x)
	Dental complaints (2x)
	Nosebleed
	Hay fever
	Forehead and nasal cavity
Hull	Breathing difficulties
	Back pain
	Haemorrhoids
	Sciatica
	Vomiting Colic
	Hips unequal
	Tension
	Radiation from the cross
	Holding water after cancer surgery
	MS
Extremities	Aching feet/ankles (5x)
	Painful/numb hands/wrists (4x)
	Aching legs: Calf, heel thigh
Psyche, nerves, immune system etc.	Heat attacks (3x)
	Arm tingling (2x)
	Epilepsy
	Nervousness
	Fibromyalgia
	Concentration difficulties
	weak nerves
	Immunodeficiency
	Drowsiness
	Balance disorders (borrilliosis)
	Blemished skin
	Asthma
Miscellaneous	Rosaccea
	Cedimento Involtario Gamba
	Nasuea
	Contrattura Musc. Cerv.
	Tachicadia
	sudorazione ascellare
	Stati Ansiosi-Nausea

5.19.2 Complaint status at the start of treatment

The following chart shows the proportion of patients - differentiated according to the various patient groups - who suffered from "Other complaints" before treatment.

OTHER COMPLAINTS
Proportion of patients who had symptoms at the start of treatment

Group		Complaints	None / no significant complaints
All patients		18%	82%
Gender	Women	16%	84%
	Men	20%	80%
Age	up to 30 years	14%	86%
	31-40 years	18%	82%
	41-50 years	20%	80%
	51-60 years	15%	85%
	over 60 years	24%	76%
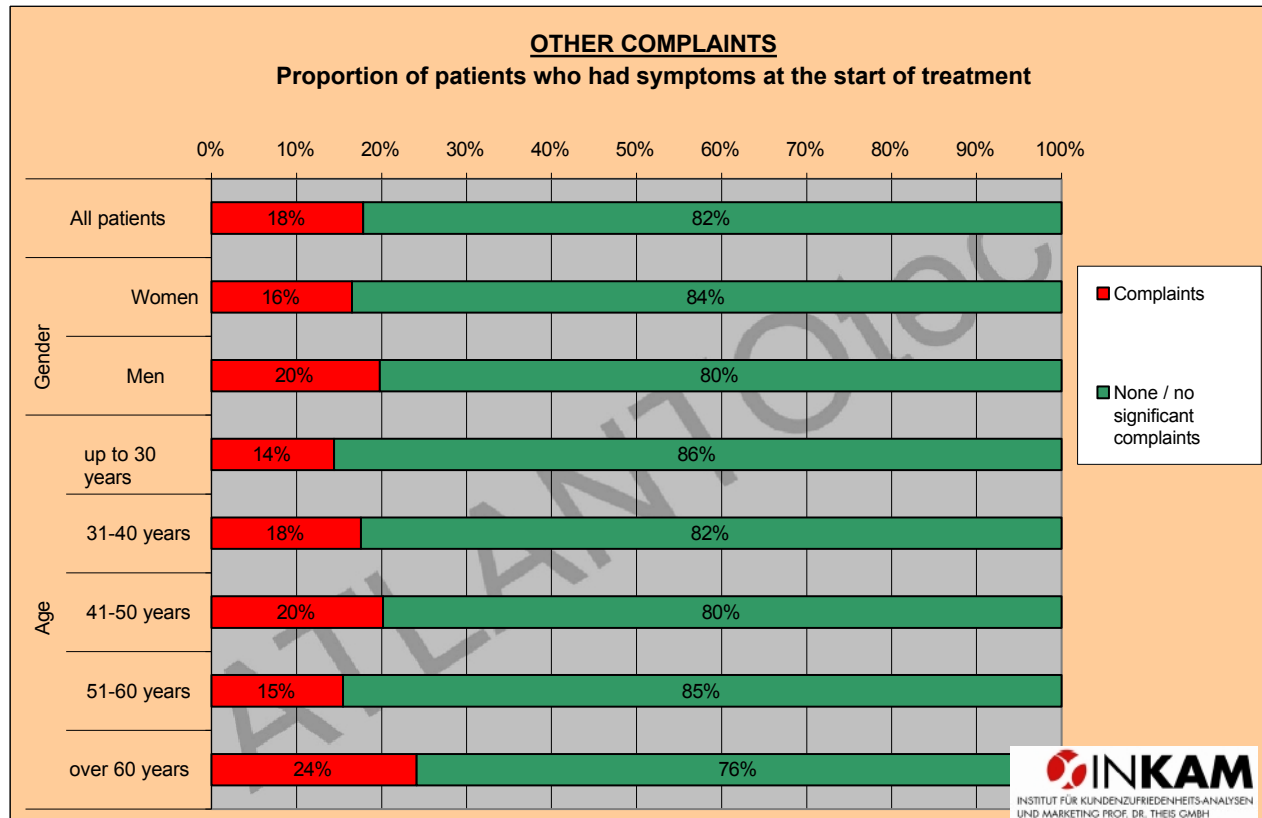
5.19.3 Effects of treatment on the frequency and severity of symptoms

The following figure shows the progression symptoms in terms of <u>severity and frequency </u>in those patients who initially complained of "discomfort" (scale levels 2-7 for frequency and/or severity) and underwent *AT-* LANTOtec® treatment.
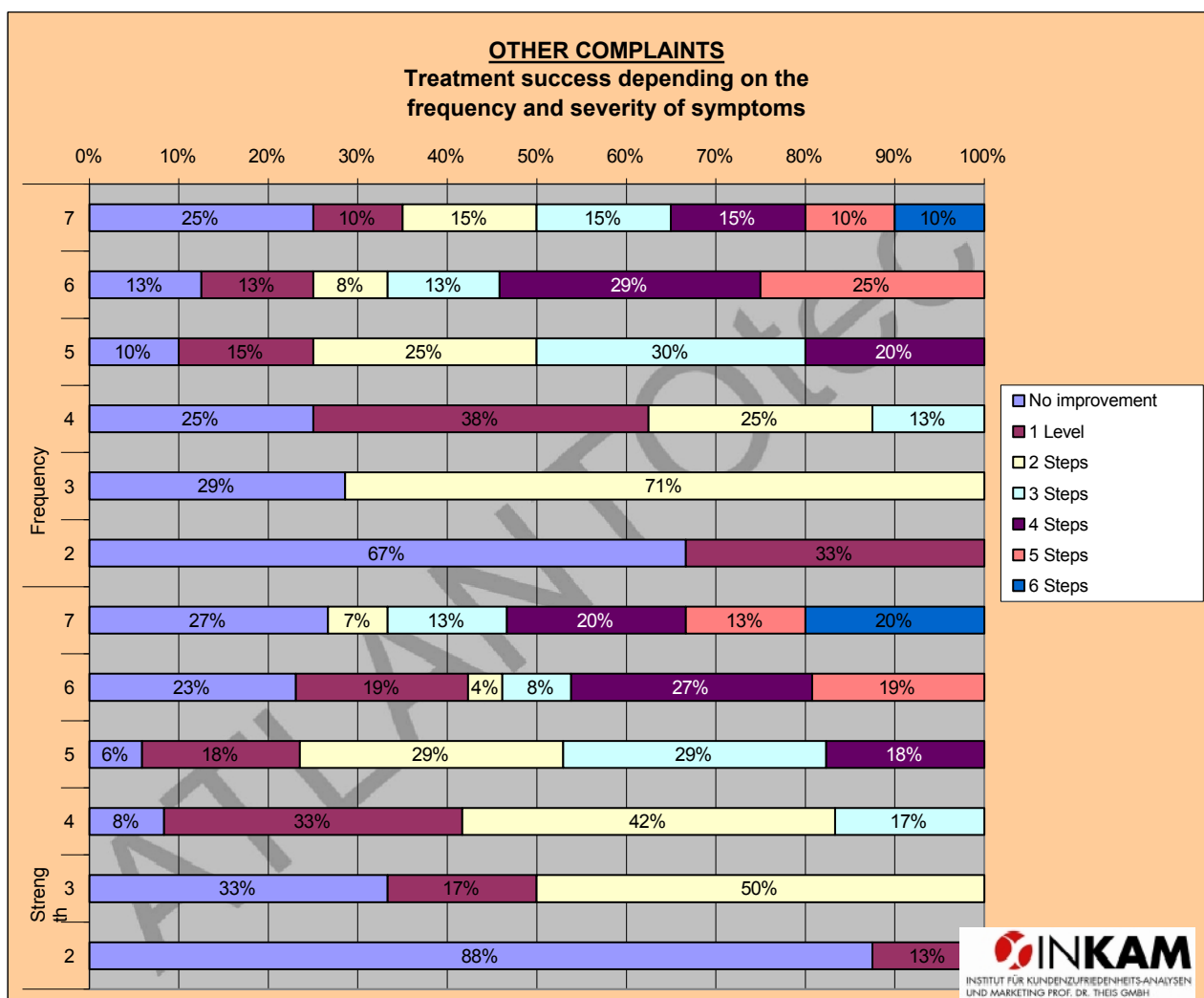
OTHER COMPLAINTS
Progression of complaint frequency and severity
in different patient groups

Group	Complaint-free	improvement	No change	Deterioration
Frequency				
All patients	22%	57%	20%	2%
Women	22%	51%	27%	0%
Men up	21%	63%	12%	5%
to 30 years	19%	75%	0%	6%
31-40 years	21%	47%	32%	0%
41-50 years	23%	62%	12%	4%
51-60 years	18%	41%	41%	0
over 60 years	29%	57%	14%	0
Strength				
All patients	22%	51%	25%	2%
Women	22%	49%	29%	0%
Men up	21%	53%	21%	5%
to 30 years	19%	69%	6%	6%
31-40 years	21%	47%	32%	0%
41-50 years	23%	58%	15%	4%
51-60 years	18%	41%	41%	0%
over 60 years	29%	36%	36%	0%

* The treatment can lead to the following results: In the best case scenario, patients are free of symptoms after treatment (no or no significant complaints). However, treatment success is also achieved if the treatment has (only) led to an improvement (due to a decrease in the frequency or severity of the symptoms). Furthermore, the result can be an unchanged frequency/severity (no improvement) or a worsening (due to increasing frequency/severity).

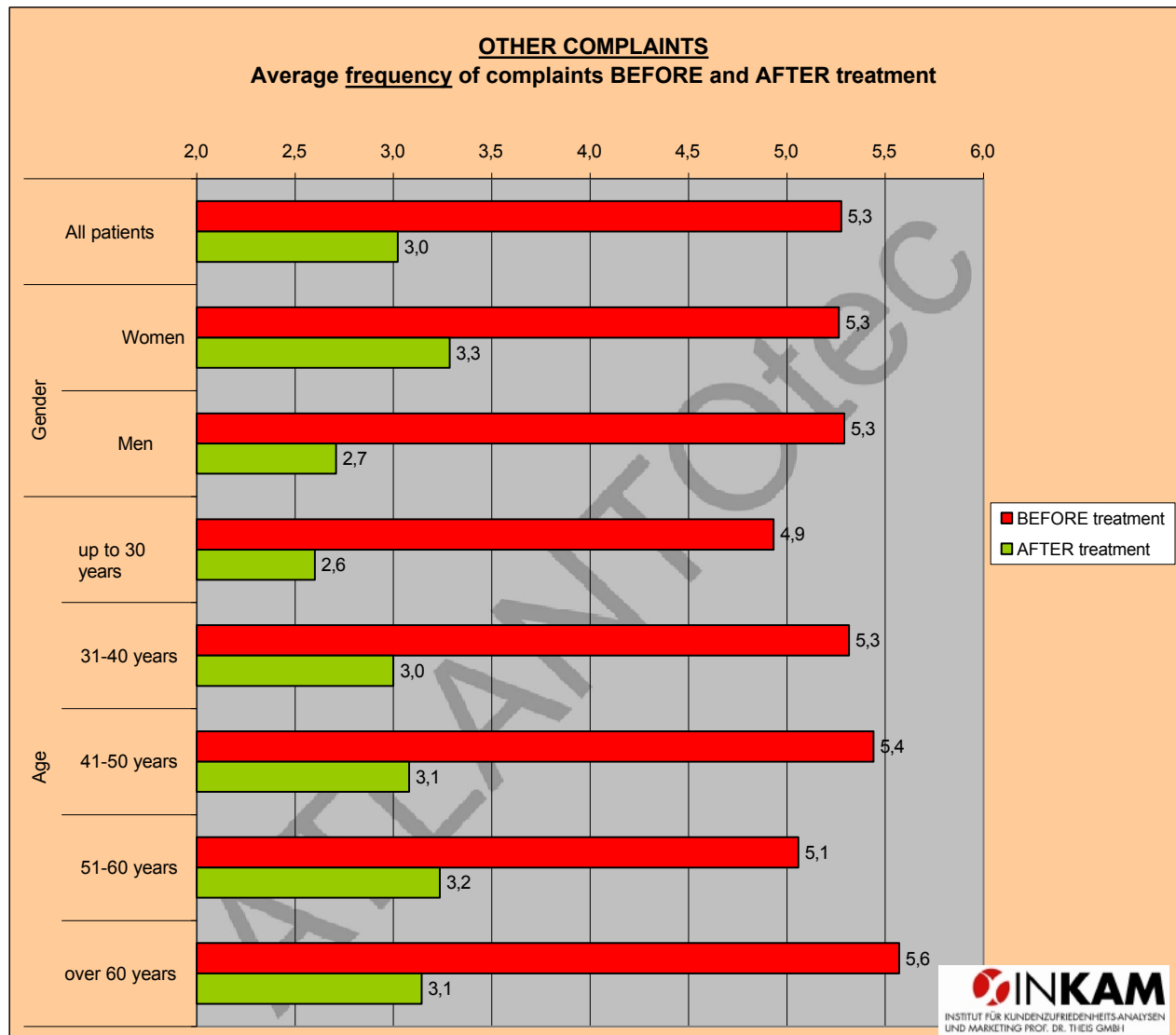## 5.19.4 Effects of treatment with different complaint intensity

The figure above shows in general terms the extent to which the patients were able to achieve basic treatment success. It does not show the extent to which the ATLANTOtec® treatment was successful. The question is therefore, what effect does the atlas correction have on the "Other complaints" complaint area with different complaint intensities (complaint frequencies and severity).

The following figure provides information about the results. It shows, for example, the change in the frequency of complaints in those patients indicated **level 5** on the frequency scale before treatment: There was no improvement in **10%** of all respondents. For **15%**, the frequency of complaints was reduced by one level, for **25%** by two levels, for **30%** by three levels and for **20%** by four levels. Consequently, 20% of all level 5 patients are symptom-free (no/no significant complaints).

5.19.5 Average frequency of complaints BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the frequency of complaints for *"Other complaints"* has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

OTHER COMPLAINTS
Average frequency of complaints BEFORE and AFTER treatment

Patient group	BEFORE treatment	AFTER treatment
All patients	5,3	3,0
Women	5,3	3,3
Men	5,3	2,7
up to 30 years	4,9	2,6
31-40 years	5,3	3,0
41-50 years	5,4	3,1
51-60 years	5,1	3,2
over 60 years	5,6	3,1

5.19.6 Average complaint severity BEFORE and AFTER treatment

The following graph shows - differentiated according to the various patient groups - how the severity of complaints for *"Other complaints"* has changed on average across all patients (with complaints before treatment) as a result of the ATLANTOtec® treatment.

OTHER COMPLAINTS
Average complaint severity BEFORE and AFTER treatment

Patient group	BEFORE treatment	AFTER treatment
All patients	5,0	2,9
Women	5,2	3,2
Men	4,7	2,5
up to 30 years	4,7	2,6
31-40 years	5,3	3,3
41-50 years	5,4	2,8
51-60 years	4,6	3,1
over 60 years	4,5	2,4

INKAM
INSTITUT FÜR KUNDENZUFRIEDENHEITS-ANALYSEN
UND MARKETING PROF. DR. THEIS GMBH
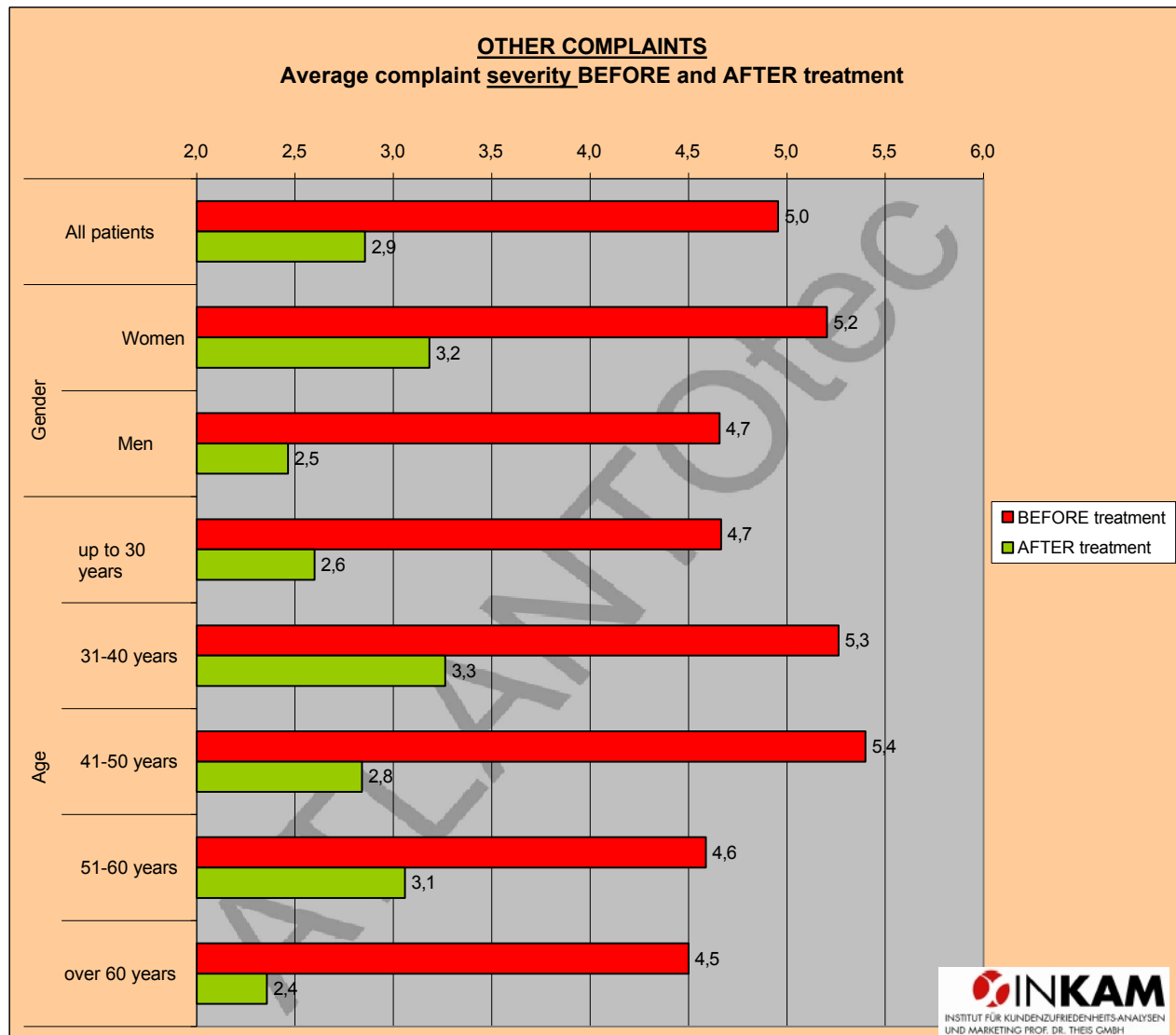
6   Praise and criticism from respondents

At the end of the questionnaire, respondents had the opportunity to provide "My comments ONE month after treatment".

As part of the evaluation, the statements made were - as far as possible - categorised according to the individual areas of complaint.

General condition improved

- I would like to thank my friend for her good advice.
- Not much has changed yet. The general condition is better.
- I feel fine. Exception: neck slightly stiff on the right. Pulling nerves in right arm; in elbow for a week.
- More freedom of movement. General condition significantly better. Treatment highly recommended.
- Generally feeling better. Currently experiencing shoulder pain, probably due to new stresses or changes in muscle strain.
- I have grown 2 cm. Good general feeling.
- I good 1-2 weeks after the treatment. I do physio treatment in between. I am confident. Must change my diet. The treatment was relaxing.
- The general well-being and outlook on life have become more positive.
- Tense jaw better. General condition significantly better.
- Generally more energy and concentration.
- Extreme improvement in quality of life. Much less, i.e. hardly any pain.
- I am very satisfied with the treatment. I am almost pain-free again after a cervical spine distortion (whiplash injury). Better quality of life. Many thanks.
- A month later, I feel like a new person. Not without pain, but the quality of life has improved massively.
- Complaints are much better. I can recommend this method.
- Sensational improvement after the treatment.
- Improvement has occurred.
- I feel as fit as a twenty-year-old.
- Highly recommended. Significant improvement.
- I feel looser and more upright.
- I was very positively surprised that Atlantotec has such a quick and strong effect: can only recommend it to anyone.
- Very relieved after the treatment.
- Significantly better now.
- I felt very comfortable after the treatment. I can only recommend the treatment.
- I feel much more relaxed. Treatment has me a few steps further.
- I feel like I've been reborn.
- Very good progress in many areas. Mobility is great.
- Improvement immediate.
- The first week was very good.
- I am satisfied with the treatment. Can recommend it to others.
- Everything has improved a lot. Treatment is very quick.
- I am very satisfied with the treatment. Thanks to the whole team.
- I was in a very bad way before the treatment after a road accident. My condition improved after the first treatment. I have more sleep problems because the accident insurance is causing problems. Treatment payments are to be stopped at the expense of the health insurance company.
- A lot has improved. I hope it stays that way. Thank you very much.
- Did me a world of good. I can already tell a difference. To the staff: Super friendly, keep it up.
- Experienced almost unimaginable relief from the pain.
- Healing process is .

- Compliments.
- The treatment was fantastic for me.
- Everything is fine.

No improvement

- Unfortunately no improvement.
- Currently: (10 June 2009) no clear improvement (back) noted.
- No improvement so far, unfortunately. What is not yet can still be, I hope.
- Little improvement. But perhaps still too early.
- No change
- No significant change yet. As I had the complaints for years, I don't expect any immediate improvement.
- Positive effect 1 week after treatment. 1 month after treatment as before.
- Little change so far. As the symptoms have been present for a long time, I am still hoping for an improvement.
- Without change.
- In the first few days I had dizziness, with the feeling that something was happening. At the moment everything is almost the same as before, but I'm confident.
- Symptoms intensify in the first two days. Ants crawling all over the body. Then slightly better for about a week. Unfortunately unchanged again after a further week.
- Treatment did me a lot of good. No improvement in the main complaints, but I am convinced that my body needs a little longer as I have had the complaints for years.
- Increased cardiac activity in the evening.
- Atlas had slipped again after one month and was corrected again.
- I am often tired in the evening. My legs are heavy and covered with small red spots from the knee to the foot.

Tension

- I feel better every day. The pain from the tension has largely disappeared. I am very happy about the treatment. It has saved me many years of visits to the GP, which would not have brought any improvement anyway.
- No negative experiences. Tension is almost gone. Migraine twice in the last 4 weeks. Very good for prevention.
- Pain has generally been reduced by 30%. Tension has decreased by 50%.
- The treatment did me a lot of good, especially after the treatment. I need additional massages to relieve the tension permanently.
- Tension improved. No more dizziness.
- Tension is still there, but has eased. Mobility has improved.
- The first few weeks were noticeably better. After that, tension returned.
- Immediately after the treatment I felt very well, then 3 days of great tension and pain. Then things calmed down. Unfortunately, more muscle tension again. But the atlas is in the right place. I hope for relief through massages and exercises.

Headache

- Headache has subsided. Surprisingly, morning pelvic joint pain has improved and is sometimes completely gone.
- I had a lot of energy in the first week, then became a little weaker. I was better able to withstand nervous strain. It did me a lot of good. It's a different feeling to be able to carry your head properly again.
- Headache completely gone after one month.
- Practically no more headaches.
- I feel fitter. Head moves better. Much fewer headaches than before the treatment.
- Fewer headaches and I feel better. If it got any better, I'd be happy. Many thanks
- Significant improvement, much fewer headaches; much more efficient; improved mood, more exercise possible.

- Headaches are almost gone. General condition has positively.
- I'm looking forward to the next few weeks. Neck more relaxed, headaches less.
- Fewer headaches, almost cured. Runny nose increased. Positive: I have stopped rasping.
- Rapid improvement after approx. 2 weeks. Headaches: less frequent and less severe. Much better general state of health. Just have to learn to deal with my new body feeling.
- Virtually no more headaches. Very good mobility of head and neck. No more shaky eyes. CONCLUSION: Very satisfied. Should have had the treatment earlier.
- I am very satisfied with the treatment. There are no more headaches.
- The headaches have got a little better. The frequency and intensity are much lower.
- The headaches improved, although they have not disappeared completely. Neck tension has improved.
- The frequency of headaches caused by neck tension has decreased. I am on the road to recovery.

Neck pain

- Head rotation much better.
- Great physical relief. Noticeable in the neck immediately after treatment.
- The head can still be turned after treatment.
- I feel much more relaxed in the neck and shoulder area.
- I feel much more relaxed; head mobility is increased many times over. Insomnia has disappeared. Thank you very much.
- Neck pain has decreased enormously.
- Better movement of the head after treatment.
- Head is more mobile. Neck complaints are gone, shoulder complaints unchanged. Treatment has paid off. I generally feel better.
- Significantly less neck pain, improved shoulder/torso coordination when walking.
- Neck pain has decreased significantly. Mobility improved.
- Pain in my neck has almost disappeared. Relief of shoulder tension, but not completely gone yet.
- It takes a bit of courage to offer your neck to a stranger, but it's worth it. The first week was an overwhelming experience. It felt like moving home. Many thanks for this ingenious invention and the service.
- Good treatment for my main problem: neck tension, but somewhat useless in my case.
- I feel more rested and relaxed. Neck and lower back pain alternating between pain-free and acute. Hope that these are signs of positive changes.
- Headaches have improved noticeably. Change in neck pain. Pain is no longer in the atlas, but in the lower neck vertebrae. Very positive: can sit on a sofa again without any discomfort.
- Tension in the neck worse at the moment, but less back pain.

Back problems

- I am satisfied. No more back pain. Better breathing, can sleep on my back again. Sleeps very well. Better sense of well-being.
- It was worth it. My neck and back have straightened out.
- After the treatment: very sore muscles in my back. Was able to sleep on my stomach again quickly afterwards.
- Although the SI joint on the right is still blocked, it causes less pain and tension in the entire back.
- I feel better, back pain is no longer so severe. I'm thinking of repeating the treatment in a few weeks' time. Today's massage did me a lot of good. I still need some time.
- Spine now straight. I feel taller when I walk!
- Spine absorbs impacts/jumps on the back better.
- Better body awareness. I rarely notice slipped discs any more. Massage and correction recommended.
- Straighter posture, no hollow back.

- My back is straight again. The right shoulder was 5 cm lower, now almost the same.
- Others have noticed that my back is straighter. Have a better sense of well-being.

Shoulder complaints

- Shoulder pain is almost gone.
- Very positive. Height difference between left and right shoulder virtually eliminated. Knee problems when jogging greatly reduced.

Tinnitus

- Almost everything has improved. Less tiredness and sleeping problems. Tinnitus not yet completely gone. Intensity varies depending on the position of the head.
- My ringing in the ears has completely disappeared.

Migraine

- No more migraines so far.
- Migraine attacks unchanged; back freer.

Sleep complaints

- I feel stronger and pain-free. Sleep more relaxed and deeper at night. I can and will recommend this atlas technique to others.
- I no longer have trouble falling asleep and can sleep through the night without any problems. The migraines have greatly diminished.
- I am often tired, but sleep better. Otherwise unchanged.

Other complaints

- Hip complaints improved. Neck pain has improved.
- No more complaints after treatment on the left side of the body.

Combined complaints

- Tension, tiredness, headaches still there, but much better. Dizziness greatly reduced since the whiplash injury; better concentration.
- Neck pain almost completely gone. No more headaches. New quality of life.
- General condition much better. Less tension, head can be turned in a larger radius, less hip pain.
- I feel very well. My neck and shoulder complaints have been reduced to a minimum. My breathing is much better.
- Significant improvement regarding: headache, dizziness, tension. Only tinnitus is unchanged.
- After 3 weeks: very good mobility of the head. Practically no more back pain after gardening. Noticeably less hip pain. Tinnitus stronger, no improvement so far.
- Neck and shoulder area much better. Less tension. Hips much better. One headache in the last month.
- Headache only once more in connection with a cold. Have a good straight back feeling. No more migraines.
- No more jaw cracking, jogging without knee pain. Practically no more headaches.
- Almost no more knee pain. Elbow and lower back pain have also disappeared. Neck and shoulder still not quite optimal.
- Increased ability to concentrate. Decrease in constant tiredness. Menstrual cramps have decreased significantly.
- Improved posture. Better stance, much straighter. Migraines and headaches still there, but less intense. I can relieve tension myself, which improves my quality of life. Thank you.
- Dizziness has improved. Also knee and lower back pain.
- At the beginning: headaches, left knee cracked when walking/running. Hip and pelvic complaints were resolved.
- Generally better; migraine slightly better, although 1 month is relatively short for a judgement. Hardly any more dizziness. I'm curious to see how it goes on. Comments in the forum will follow.
- Body better aligned. Pain in the skull, jaw, neck is different; sometimes stronger,

sometimes weaker. A change/improvement is , which gives me confidence.

Appendix (questionnaire)

Behandlungs-Datum .....21.8.08.....

ATLANTOtec® ①

Name .... Vorname *Sandra* Alter *34*

Bitte das Feld mit BLAUEM Schreibstift ankreuzen, um den Gesundheitszustand **VOR** der Behandlung anzugeben.
Bitte das Feld mit GRÜNEM Schreibstift einkreisen, um den Gesundheitszustand **NACHHER** anzugeben.

BEISPIEL: VOR der Behandlung: ☐ ☐ ☐ ☐ ☐ ☒ ☐   NACH der Behandlung: Ⓞ ☐ ☐ ☐ ☐ ☒ ☐

Wie beurteilen Sie Ihr Wohlbefinden?
Bitte das Formular **komplett** ausfüllen.

BESCHWERDEN		HÄUFIGKEIT	STÄRKE
Depression			
Nervosität			
Schlafbeschwerden			
Müdigkeit			
Magen-Darm-Beschwerden			
Kreislaufbeschwerden			
Blutdruck	↑ Hoch☐ ↓Niedrig☒		
Kopfschmerzen			
Migräne			
Schwindel			
Tinnitus (Ohrgeräusche)	Links☐ Rechts☐		
Verspannungen	Links☒ Rechts☐		
Nackenbeschwerden			
Schulterbeschwerden	Links☐ Rechts☐		
Ellbogenbeschwerden	Links☐ Rechts☐		
Kreuzbeschwerden			
Hüftbeschwerden	Links☐ Rechts☐		
Kniebeschwerden	Links☐ Rechts☐		
Andere:			

Besserung nach ....1. Monaten seit der Behandlung: 21.08.08 ....

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Sind Sie damit einverstanden, dass dieses Formular anderen Kunden/Interessenten
zum Zwecke des Wirkungsnachweises von ATLANTOtec® gezeigt werden kann?   Ja ☒   Nein ☐

...dass dieses Formular auf der Internet-Seite von ATLANTOtec® publiziert wird?   Ja ☒   Nein ☐

...dass Ihre Fotos auf der Internet-Seite von ATLANTOtec® publiziert werden?   Ja ☐   Nein ☒

Unterschrift.................................

Danke für die Mitarbeit

Imprint

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ATLANTOte ®
c

ATLANTOtec Mr
Alfredo Lerro
Roosstrasse 61
CH-8832 Wollerau SZ
Tel. 0041/(0)43/536 04 78
Mobile: 0041/(0)79/3600 521
www.atlantotec.com

Appraiser

INKAM
INSTITUT FÜR KUNDENZUFRIEDENHEITS-ANALYSEN
UND MARKETING PROF. DR. THEIS GMBH

INKAM - Institute for Customer Satisfaction
Analyses and Marketing Prof. Dr. Theis
GmbH
Prof Dr Hans-Joachim Theis
Burgwaldstraße 9
35043 Marburg
Tel. 06421/4870180
Fax. 06421/4870181
www.inkam.biz