

## Post-bariatric contour deformity correction: an endeavour to establish objective criteria nationally

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### Summary

**BACKGROUND:** A marked increase in bariatric surgery has led to higher numbers of patients with contour deformities after massive weight loss seeking plastic surgical correction. Insurance coverage for these post-bariatric interventions is highly subjective and a common set of objective criteria has not yet been established.

**AIM:** The aim was to evaluate the factors influencing insurance coverage for post-bariatric surgery, focusing on finding objective, reproducible criteria.

**METHODS:** This was a retrospective single centre chart review of all post-bariatric patients with redundant skin requesting body contouring surgery from 2013 to 2018. Demographic, bariatric and surgical, as well as insurance information were collected. A logistic regression model was used to identify predictors of successful insurance coverage.

**RESULTS:** 116 Patients were included in the study. Insurance approval for post-bariatric body contouring surgery was obtained for only 47 patients (41%). Mentioning the term “medical indication” in the application letter was associated with a 15.2 times higher rate of receiving a positive answer ( $p < 0.001$ ), whereas mentioning “mental suffering” was associated with 82.3% lower chance of getting a positive response ( $p < 0.001$ ). A high body mass index (BMI) ( $p < 0.009$ ) before the bariatric operation as well as a high BMI reduction ( $p < 0.021$ ) were associated with a higher approval rate by insurance companies. An additional application letter to the insurance company ( $p < 0.024$ ) as well as mentioning mechanical restriction ( $p < 0.022$ ) were associated with a positive response from the insurance companies.

**CONCLUSIONS:** We were able to establish certain objective predictive criteria for insurance coverage of post-bariatric surgery. However, it appears that the decisions of insurance companies for this condition are still rather randomly taken. Therefore, the establishment of objective criteria for insurance coverage may allow fairer treatment for this growing patient population.

### Introduction

In Switzerland, within the last 25 years, the proportion of obese (body mass index [BMI]  $> 30 \text{ kg/m}^2$ ) people has doubled. For men, we have seen an increase from 6% in 1992 to 12% in 2017, whereas women had an increase from 5% in 1992 to 10% in 2017 in the general population [1]. This has led to a dramatic increase in bariatric surgery, in order to lose weight. After massive weight loss, the patients find themselves with contour deformities and/or redundant skin. It is scientifically proven that bariatric surgery has considerable advantages for patients, such as resolution of type 2 diabetes and improvement of arterial hypertension [2]. The long-term benefit of modest and moderate weight loss in established type 2 diabetes and diabetes prevention, as well as improvement in cardiovascular risk factors is well established [3]. The resulting redundant excess skin can lead to difficulty in mobilisation and exercising, intertrigo and infections. Furthermore, patients report being dissatisfied with their appearance, which consequently leads to decreased psychosocial well-being [4]. The only possible treatment for excess skin is surgery. However, body contouring surgery is considered by some as cosmetic rather than reconstructive surgery and therefore should not be reimbursed by insurance companies [5]. Today, these procedures are often considered cosmetic by health insurance companies and therefore not reimbursed. There is little scientific evidence regarding benefits of these procedures and hence the insurers also put their efficacy in question. Moreover, they also simply ignore the fact that redundant skin is an expected outcome of bariatric surgery [6].

However, several studies have shown that patients undergoing body contouring surgery maintain a significantly lower average weight than patients who undergo only bariatric surgery [7]. Patients undergoing body contouring surgery are in fact very satisfied with the results and have an improvement in self-esteem and quality of life in many cases [8, 9]. Despite an appropriate diagnosis-related group (DRG)-code, coverage of post-bariatric surgery by insurance companies remains low. There is little guidance for coverage by insurance companies for body contouring procedures [5, 10]. A negative decision for reimbursement

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in redundant skin and body deformities by the federal court (Decision K135/04 of 17 January 2006, Bundesgericht) makes it an even harder task for doctors to get financial help for the patient, despite the fact that surgeons can clearly identify the medical indications for the surgery. The decision on coverage remains random.

## Aim

The aim of our study was to identify objective criteria in application letters submitted to insurance companies leading to a positive answer for body contouring surgery.

## Patients and methods

All patients requesting body contouring surgery (arms, breast, abdomen, thighs) after bariatric surgery between January 2013 and December 2018 in the Department of Plastic and Reconstructive Surgery, University Hospital in Bern, Switzerland were included in this study. No patients requested gluteal or facelift surgery after massive weight loss. The following patient-related data in the application letters were retrospectively collected for each patient:

- Age
- Gender
- Time from bariatric operation to the first plastic surgery consultation (in months)
- Height (cm)
- Weight (before and after bariatric surgery)
- BMI (before and after bariatric surgery)
- BMI reduction
- The duration of stability of weight (in months) (before the application letter)
- Number of application letters sent to the insurance companies
- Time from the bariatric operation to the application letter (in months).

All postoperative weight losses and BMI values were recorded at the time of writing the letter to the insurance company.

The application letters from our department to the insurance companies were searched for objective criteria leading to approval for body contouring surgery. The following keywords were collected from the application letters for each patient:

- Medical indication
- Mechanical/functional restrictions
- Mental suffering
- Pain
- Stable weight over a year (documented for a minimum of three dates)
- Unreasonable/abnormal body conditions
- Additional application letters
- Disfigurement
- Stigmatising
- Weight history
- Reconstructive interventions
- Lawyer

- Photo documentation
- Eczema
- Gender

In order to analyse which factors influence the approval or the refusal of insurance companies, the retrospectively collected continuous data were analysed with the student's t-test or the Mann-Whitney U-test if the data were not normally distributed; the Pearson's  $\chi^2$  test and the Fischer's exact test were used for the categorical variables. A p-value  $<0.05$  was considered statistically significant. A univariate statistical analysis was performed for multiple independent variables. All the factors with a significance of  $p < 0.2$  in the univariate analysis were included in the multivariate logistic regression model to identify independent predictors for the approval of the insurance companies. Statistical analysis was performed using SPSS 24.0 (SPSS Inc., Chicago, USA).

The study was conducted according to the Declaration of Helsinki principles and was approved by the local Research Ethics Committees (BASEC-Nr: Req-2020-01274).

## Results

The study included 150 consecutive patients seen in the outpatient clinic between January 2013 and December 2018. From this total of 150 patients, 116 (77.3%) could be included in the study; the excluded patients are summarised in table 1. The specific demographic data of the patients included are summarised in table 2. We considered medical indications as follows:

- BMI  $<35$  kg/m<sup>2</sup>
- BMI loss  $>10$  kg/m<sup>2</sup>
- Stable weight for  $>6$  months
- Mechanical and/or functional restrictions
- Pain
- Exzema/intertrigo
- Infections

An average of 1.3 application letters were written per patient, with a range from 1 application letter to a maximum number of 3 per patient, with a total number of 148 application letters. Ninety patients had one letter of request for reimbursement to the insurance company, of which only 38 (32.8%) were approved (table 3).

Twenty patients had a supplementary letter of recommendation and an additional six patients had a third letter of recommendation. That brings the overall approval for post-bariatric body contouring surgery to 47 patients or 40.52%, as shown in fig. 1.

In total, 45 patients were finally operated on at our department for plastic and hand surgery. One patient declined surgery for personal reasons. Another patient was redirect-

**Table 1:**  
Excluded patients.

Reason for exclusion	Number of patients
Missing data	10
Missing answer from insurance companies	2
No medical indication	18
Referred to the psychiatrist	4

ed to another plastic surgery unit because of the lack of insurance coverage in our canton.

The phrase "medical indication" was mentioned in 101 application letters out of the total 148 sent to the insurance companies. The second most mentioned phrase was "mechanical restriction". A mechanical restriction was considered to exist when mentioned by the referring physician or the patient indicated a shearing stress between body parts, for example between the legs, through the abdominal apron or between the upper body and upper arms. The frequency of the terms mentioned in the application letters is summarised in table 4.

**Table 2:**  
Demographic data.

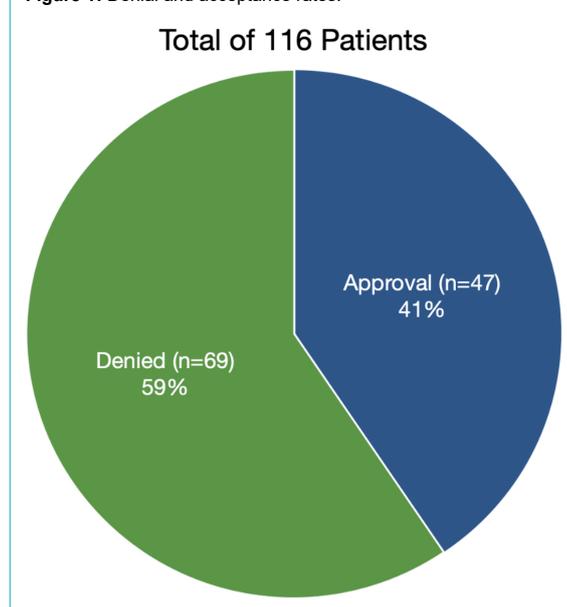
	Mean	Min.	Max.
Age (years)	46.3	24	79
Men (n)	22		
Women (n)	94		
Time from bariatric operation to first plastic surgery consultation (months)	49.2	0	221
Height (cm)	165.4	145	192
Weight (kg)	127.4	83.9	230
BMI before bariatric operation (kg/m <sup>2</sup> )	46.6	31.7	94.6
Weight after bariatric operation (kg)	80.9	55	137
BMI after bariatric operation (kg/m <sup>2</sup> )	29.6	20.7	46.3
Weight loss (kg)	46.9	12	124
BMI loss (kg/m <sup>2</sup> )	17.2	4.4	55.9
Stability of weight (months)	15.2	0	126
Time from bariatric operation to application letter (months)	51.6	0	221
Number of application letters	1.3	1	3

BMI: body mass index

**Table 3:**  
Number of application letters.

Number of application letters	Total applications	% applications	Accepted	% accepted
1	90	77.6%	38	32.8%
2	20	17.2%	5	4.3%
3	6	5.2%	4	3.4%

**Figure 1:** Denial and acceptance rates.



### Univariate analysis

The results of the univariate analysis are summarised in table 5. Including an additional application letter to the insurance company ( $p < 0.024$ ), either from the family doctor or from another medical department, as well as mentioning mechanical restriction ( $p < 0.022$ ), were associated with a positive response from the insurance companies.

Looking at the demographic data, we found that a high BMI before the bariatric operation ( $p < 0.009$ ), a high weight before the bariatric operation ( $p < 0.039$ ), a high weight loss ( $p < 0.027$ ), as well as a high BMI reduction ( $p < 0.021$ ) were associated with a higher approval rate by insurance companies (table 6).

To further clarify the importance of a reduction in BMI we separated the patients into four categories, depending on the degree of reduction: a first group with a BMI reduction of 0–10 kg/m<sup>2</sup>, a second group with a BMI reduction of 10.1–20 kg/m<sup>2</sup>, a third group with a BMI reduction of 20.1–30 kg/m<sup>2</sup> and a last group (group 4) with a BMI reduction of >30 kg/m<sup>2</sup>. We did a logistic regression to compare groups 2–4 with the first BMI reduction group (0–10 kg/m<sup>2</sup>).

The second group with 10.1–20 kg/m<sup>2</sup> BMI reduction did not show a statistically significant difference when compared with the first group ( $p < 0.697$ ). However, the 20.1–30 kg/m<sup>2</sup> group had 4.889 times higher chance than the 0–10 kg/m<sup>2</sup> BMI reduction group to have their application letters accepted ( $p < 0.027$ ). The group with >30.1 kg/m<sup>2</sup> BMI reduction had a 16.5 times higher chance than the 0–10 kg/m<sup>2</sup> group to have an accepted application letter from the insurance company ( $p < 0.022$ ; table 7)

### Multivariate analysis

A logistic regression was performed to ascertain the effects of the variables with a p-value < 0.2 on the approval or denial of the insurance companies. The logistic regression model was statistically significant,  $\chi^2(21) = 62.968$ ,  $p < 0.0001$ . The model explained 61.0% (Nagelkerke R<sup>2</sup>) of the variance in the approval of the insurance companies

**Table 4:**  
Number of keywords searched in application letters.

Keyword	Number
Medical indication	101
Mechanical/functional restrictions	83
Mental suffering	42
Pain	37
Stable weight over a year	34
Unreasonable/abnormal body condition	31
Additional application letters	20
Disfigurement	17
Stigmatising	8
Weight history	4
Reconstructive intervention	3
Lawyer	2
Painful scar	2
Photodocumentation	113
Eczema - consequence	90
Pain - consequence	30

and correctly classified 80.8% of cases. Of all the predictor variables, only two were statistically significant: the mention of medical indication and of mental suffering. Patients where medical indication was mentioned had a 15.2 times higher chance of receiving a positive answer ( $p < 0.001$ ). Patients who had mental suffering included in the letter had 82.3% less chance of getting a positive response from the insurance company ( $p < 0.001$ ). A detailed risk factor table including all odd ratios, 95% confidence intervals and associated p-values are presented as table 8. All reports of mental suffering were confirmed by a professional.

There was no statistical significant difference in the approval rate by the insurance companies between the different surgical procedures (arms, breast, abdomen, thighs). In addition, due to our small sample size there was no statistical difference in our study for requesting one or more surgical procedure. The type of body contouring surgery that was planned, approved and performed is shown in detail in table 9.

**Table 5:**  
Univariate analysis of the data for the approval of the insurance company.

Characteristic		Refusal	Approval	p-value
Medical indication				0.130
	No	11 (78.6%)	3 (21.4%)	
	Yes	58 (57.4%)	43 (42.6%)	
Mechanical restriction				0.022
	No	27 (75.0%)	9 (25.0%)	
	Yes	42 (52.5%)	38 (47.5%)	
Mental suffering				0.133
	No	40 (54.8%)	33 (45.2%)	
	Yes	29 (69.0%)	13 (31%)	
Pain				0.625
	No	48 (61.5%)	30 (38.5%)	
	Yes	21 (56.8%)	16 (43.2%)	
Stable weight over a year				0.055
	No	53 (66.3%)	27 (33.8%)	
	Yes	16 (47.1%)	18 (52.9%)	
Unreasonable/abnormal body condition				0.123
	No	54 (64.3%)	30 (35.7%)	
	Yes	15 (48.4%)	16 (51.6%)	
Additional application letters				0.024
	No	62 (64.6%)	34 (35.4%)	
	Yes	7 (36.8%)	12 (63.2%)	
Disfigurement				0.086
	No	62 (63.3%)	36 (36.7%)	
	Yes	7 (41.2%)	10 (58.8%)	
Stigmatising				0.263
	No	66 (61.7%)	41 (38.3%)	
	Yes	3 (37.5%)	5 (62.5%)	
Weight history				0.299
	No	68 (61.8%)	42 (38.2%)	
	Yes	1 (25.0%)	3 (75.0%)	
Reconstructive intervention				1.000
	No	67 (59.8%)	45 (40.2%)	
	Yes	2 (66.7%)	1 (33.3%)	
Lawyer				0.158
	No	69 (61.1%)	44 (38.9%)	
	Yes	0 (0.0%)	2 (100%)	
Photo documentation				1.000
	No	1 (100%)	0 (0.0%)	
	Yes	67 (59.3%)	46 (40.7%)	
Eczema				0.486
	No	17 (65.4%)	9 (34.6%)	
	Yes	52 (57.8%)	3 (42.2%)	
Gender				0.600
	Male	12 (54.5%)	10 (45.5%)	
	Female	57 (60.6%)	37 (39.4%)	
Number of application letters (in total)				0.149
	1	52 (57.8%)	83 (42.2%)	
	2	15 (75.0%)	5 (25.0%)	
	3	2 (33.3%)	4 (66.7%)	

## Discussion

Sparse data exist in Switzerland regarding insurance coverage for post-bariatric procedures. We reached an approval rate of approximately 40% in our single centre review at the University Hospital in Bern. The reimbursement rate found in our study is comparable to other reimbursement rates found in the literature [4, 5, 10, 12, 13]. The decision-making processes of insurance companies worldwide appear to be random at best. Some USA and UK insurance companies even insert an exclusion clause for bariatric surgery in their policies [5, 10, 14].

In the review of Gurunluoglu et al. in the USA, the refusal rate based on the authors' experience was 40–50% [10], whereas in England, the denial rate reached 60% in the Primary Care Trusts that allow or exclude barioplastic surgery on the National Health Service [5]. In the study of Sati et

al. there was a reimbursement rate of 35% by insurance companies in patients with massive weight loss and going through body-contouring surgery [12]. Another study showed that out of the 47 patients undergoing body contouring procedures after gastric bypass surgery, only 47% of the 17 abdominoplasties and 33.3% of the 6 breast lifts had been paid for by insurance [13]. In the study of Sioka et al only 16.7% of a total of 167 patients were approved by insurance company for body contouring procedures in Greece [4].

The goal of this study was not to investigate different insurance companies body contouring approval rates, but to evaluate whether there are any set criteria for approval and to assess if using certain keywords in the correspondence with the insurance company influences the decision-making process. Interestingly, our study identified keywords

**Table 6:**

Mean and the standard deviation for every variable and for each response from the insurance company (No/Yes). Univariate analysis of the data for the approval of the insurance companies.

Characteristics		Number	Mean	Standard deviation	p-value
Time after operation (first seen)					0.403
	No	69	46.07	49.67	
	Yes	47	53.83	47.64	
Height					0.416
	No	67	165.95	8.28	
	Yes	47	164.56	9.73	
Weight before operation					0.039
	No	67	122.94	20.39	
	Yes	46	133.64	33.92	
BMI before operation					0.009
	No	67	44.72	7.52	
	Yes	46	49.55	11.82	
Weight after operation					0.375
	No	67	79.78	13.89	
	Yes	47	82.55	19.39	
BMI after operation					0.162
	No	67	28.98	4.83	
	Yes	47	30.46	6.39	
Weight loss					0.027
	No	67	43.17	16.27	
	Yes	46	51.60	23.72	
BMI loss					0.021
	No	67	15.74	6.25	
	Yes	46	19.10	9.04	
Percentage excess BMI loss					0.136
	No	67	34.48	9.50	
	Yes	46	37.41	11.13	
Stability of weight until submission of application letter					0.054
	No	67	12.94	9.92	
	Yes	46	18.78	21.43	
Time in months after first bariatric operation and submission of application letter					0.376
	No	69	48.74	49.38	
	Yes	46	56.91	46.78	

BMI: body mass index

**Table 7:**

BMI groups 1–4 with statistical significance (p-Value) and the added chance (Exp(B)) in comparison to group 1.

Group	BMI loss (kg/m <sup>2</sup> )	p-Value	Odds ratio (Exp(B))	Confidence interval	
				Lower limit	Upper limit
1	0–10	0.006			
2	10.1–20	0.697	1.283	0.365	4.507
3	20.1–30	0.027	4.889	1.199	19.942
4	>30.1	0.022	16.5	1.487	183.070

such as “medical indication” (a positive factor) and “mental suffering” (a negative factor) that had an impact on the insurance companies decision. In addition, multiple letters to the insurance companies influence the decision in favour of the patient. Our study is unique in this respect, as we could not find any data in the medical literature regarding the correspondence with insurance companies. Insurance systems vary between European countries and are therefore hard to compare.

In our study, a higher BMI reduction also showed a higher acceptance rate by insurance companies. Losing more than 30 kg/m<sup>2</sup> in BMI value gave a 16.5 times higher chance to obtain an approval by the insurance company (p <0.022). Furthermore, losing an equivalent of 20.1 to 30 kg/m<sup>2</sup> resulted in a 4.9 times higher approval rate from the insurance company (p <0.027). There are different criteria that have been proposed by Samrat Mukherjee [5], Raffi Gurunluoglu [10] and the British association of Plastic and Reconstructive and Aesthetic Surgery Commission (BAPRAS) [15] for body contouring surgery after massive weight loss. These guidelines have been followed by some insurance companies, but there are, however, major differences between them [16–21]. The guidelines of some insurance companies distinguish between patients requesting body contouring surgery after natural weight loss versus weight loss after bariatric surgery [5]. Furthermore, most of the criteria are often very hard for patients to meet after bariatric surgery. For example, there is a guideline that suggests the patient should reach a BMI lower than 30 kg/m<sup>2</sup> or even a stable BMI between 18 and 27 kg/m<sup>2</sup> [5, 15]. A meta-analysis assessing the cost-effectiveness of bariatric surgery compared with conservative treatment in patients

with massive weight loss in the *Swiss Medical Weekly* demonstrated that nearly all studies assessing patients with a BMI >35 kg/m<sup>2</sup> indicated bariatric surgery to be cost-saving or cost-effective [22]. Coon et al. also showed that the BMI has an influence on complications after bariatric surgery [23]. This was confirmed by the study of Au et al., which reported the (post-weight loss) BMI at the time of body contouring surgery to be a predictor for postoperative complications [24]. Another possible reason why patients with a high weight or a high BMI reduction received a positive response for body contouring procedures from the insurance companies is that a lower BMI gives a lower complication rate after a body contouring procedure [23–25]. A meta-analysis showed that there was a 60% increase in the risk of complications after body contouring procedures in the post-bariatric patient group compared with a non-bariatric group [25]. It is as yet difficult to set a cut-off BMI at which the patient should be reimbursed for body contouring procedures or not. In the authors experience, the most common reason provided by insurance companies for refusal was a high BMI.

Very few physical criteria seem to influence the insurance companies approval positively. In our study, “mechanical restrictions”, as judged by the surgeon, appears to have a positive outcome. In other studies, abdominoplasties were covered by insurance only if the pannus reached or was below the level of the symphysis pubis [12, 19]. Problems with gait, especially osteoarthritis of the knee joint, is commonly associated with an increase in BMI. Studies have shown that a five unit increase in BMI was associated with a 35% increase in risk of knee osteoarthritis [11].

**Table 8:**  
Multivariate analysis for factors predicting insurance approval.

	Standard error	Odds ratio	pvalue)	95% confidence interval	
				Lower limit	Upper limit
Medical indication	1.603	15.253	0.049	0.659	352.886
Mechanical restriction	0.687	1.471	0.574	0.382	5.659
Mental suffering	0.725	0.215	0.034	0.052	0.891
Stable weight over a year	0.758	2.470	0.233	0.559	10.914
Unreasonable/abnormal body condition	0.697	1.597	0.502	0.407	6.262
Additional application letters	1.502	1.613	0.750	0.085	30.606
Disfigurement	0.971	1.296	0.789	0.193	8.697
Weight history	162.318	26584.412	0.999	0.000	
Lawyer	230.419	15136.720	0.999	0.000	
Stability of weight (in months)	0.489	0.568	0.248	0.218	1.483
Number of application letters (1)			0.133		
– 2	1.869	0.023	0.044	0.001	0.911
– 3	1.661	0.436	0.618	0.017	11.316
Lost BMI (0–10 kg/m <sup>2</sup> )			0.294		
– 10.1–20 kg/m <sup>2</sup>	1.061	2.952	0.307	0.369	23.601
– 20.1–30 kg/m <sup>2</sup>	1.292	10.632	0.067	0.844	133.886
– >30.1 kg/m <sup>2</sup>	1468.080	2411387.616	0.999	0.000	
Constant	17.992	1520957.253	0.152		

**Table 9:**  
Procedures requested, approved and performed.

Abdomen requested (n)	Thigh requested (n)	Arms requested (n)	Breast requested (n)
100	44	14	24
Abdomen approved (n)	Thigh approved (n)	Arms approved (n)	Breast approved (n)
42	6	3	4
Abdomen performed (n)	Thigh performed (n)	Arms performed (n)	Breast performed (n)
42	6	3	4

Worldwide insurance approval trends for body contouring surgery suggest that a high rejection rate based on ill-defined criteria seems to be a common occurrence. Insurance companies appear to have a positive attitude to rewarding people with a high BMI reduction. Obese patients considering any bariatric surgery should be treated by a multidisciplinary team including a general practitioner, a visceral surgeon, a plastic surgeon, a psychologist and a dietitian. Additionally, the patient should discuss what exactly will be paid by an insurance company and what he or she would need to cover by themselves from the array of body contouring procedures. Our study confirmed that an additional application letter sent to the insurance company renders a higher chance for approval for a body contouring procedure. Closer cooperation between different medical disciplines is therefore required.

The psychological well-being of the patients is clearly impacted by the extent of disfigurement after massive weight loss [9], with body contouring procedures significantly improving satisfaction and quality of life in patients after gastric bypass [26]. Moreover, the study of Smith et al. suggested that patients undergoing body contouring surgery were able to lose more weight and maintain a better BMI than patients undergoing bariatric surgery alone [7]. Insurance companies often consider body contouring procedures cosmetic surgery and therefore there is no reimbursement for this type of operation. Each insurance company should have a set of objective criteria that can be applied universally to all patients. It would be of even greater benefit if a national Swiss guideline for these procedures could be agreed upon by all insurance companies. A consensus conference between all Swiss insurance companies to decide on objective criteria might be helpful. In our opinion, a person with a high BMI (>40 kg/m<sup>2</sup>) prior to the massive weight loss and with a high BMI reduction (>20 kg/m<sup>2</sup>) will definitely have more redundant skin and, in consequence, more mechanical restrictions. In such a case, the body contouring procedure should be considered reconstructive. On the other hand, a patient with a lower BMI before bariatric surgery and a lower BMI reduction will have only moderate redundant skin and mechanical restrictions. In this particular situation, the body contouring procedure would be seen more as an aesthetic operation. This outlook was confirmed by our study on the approvals of different insurance companies.

### Conclusion

We recommend that all patients are seen in an interdisciplinary team. The most important objective criteria appear to be related to the patients' BMI. We recommend that insurance companies adopt a universal BMI policy that it would make clear to patients and referring physicians whether they will qualify for body contouring surgery after bariatric surgery. This would significantly reduce the administrative workload of both the treating physicians and insurance companies. In addition, it would then be clear for patients before going on the bariatric surgery road whether they will be able to have body contouring surgery paid for by the insurance companies.

The broad term "medical indication" in correspondence to the insurance companies appears to have a positive effect. Surprisingly, the only specific medical indication that is

constantly associated with a positive response appears to be mechanical restrictions. Again, an objective list of physical symptoms that may lead to a positive outcome and universally adopted by insurance companies would be extremely helpful to the patients.

The mental suffering of morbidly obese patients pre- and post-bariatric surgery is generally unappreciated and underestimated. Denying patients body contouring surgery after bariatric surgery can add to their psychological stress and mental suffering.

We do not question that some body contouring procedures can be considered to be cosmetic. However, in the patients with massive weight loss the procedures have significant medical and functional benefits.

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