MARKET STUDY

1.1. Obesity

1.

Obesity, defined as a body mass index (BMI) ≥30 kg/m2, is a significant public health concern worldwide. In the United States and Turkey, approximately 35% of the adults are obese. Obesity is a serious medical condition associated with several comorbidities including type 2 diabetes, cardiovascular and cerebrovascular diseases, digestive, locomotor and respiratory disorders, cancers(e.g., colon, breast, and uterine) and psychosocial complications. Obesity also poses severe economic impact. Many studies have shown that weight loss reduces the risk of developing complications and may also improve the established conditions.

Treatment options for obesity include bariatric surgery and non-surgical treatment. The nonsurgical management usually comprises of dietary changes, physical exercise, and behavioral therapy aimed at reducing energy intake and increasing energy expenditure, in addition to various pharmacotherapies. Unfortunately, non-surgical approaches may be ineffective in achieving or sustaining weight loss in many obese patients. Therefore, the use of bariatric or metabolic surgical methods is increasing worldwide.

In our behalf, our portfolio is currently covering most of the obesity treatment methods.

We have protein (%100 isolated and carbohydrate mixed forms), vitamin&mineral supplements used as after-treatment of bariatric procedures which made in-house and have the Balloon program that we are

coordinating, also we are marketing medical devices for Lipo plasty made in-house in Turkey and abroad. (Biological Extracellular Matrix) is another medical device that we have which is used by oncologist, plastic&general surgeons. Likewise, after losing weight patients tend to have aesthetic needs, we are covering that part with

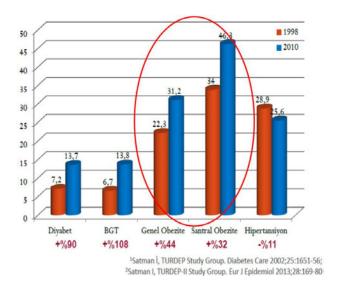
1.2. Prevalence

The prevalence of diabetes and obesity is increasing day by day in our country (Figure 1), as in other countries of the world. According to the study report (2016) made by our Health Ministry:

- •20 years and over population: 47,467,350 (65.4%)
- •Diabetes rate in TURDEP-II: 13.7%
- •Number of people with diabetes: 6.503.027 people
- •Known number of people with diabetes (54.55%): 3,547,401 people
- •Number of new people with diabetes (45.45%): 2,955,626 people
- •Prediabetic population (28.7%): 13,812,899 people
- •Obese population (31.2%): 15.237.019 people
- •Overweight population (37.5%): 17.088.246 people

According to the reports of the International Federation for the Surgery of Obesity and Metabolic Diseases (IFSO), a total number of 468,609 bariatric procedures were performed worldwide in 2013, out of which,

95.7% were laparoscopic procedures. In Turkey, approximately 10,000 obese patients underwent gastrectomy in 2016 and 12,000 in 2018. When considered with unofficial practices, it would not be wrong that 18,000 applications are made annually.



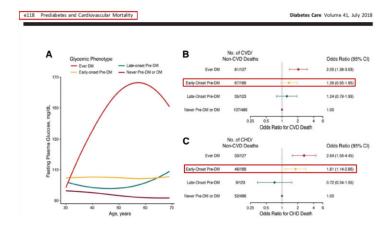
1.3. Correlation with Diabetes

The role of environmental factors in the development of type 2 diabetes is clear. Modern lifestyle adopted by many societies has led people to less active lives and rapidly changed their eating habits. In the past 25 years, the increased use of high-calorie and ready to eat foods that are fat-rich and low in fibers has caused a rapid increase in the prevalence of diabetes. Correlating with diabetes, it's complications seen more often (Figure 2).

The time spent without impairment in glucose metabolism is 10 years less in obese than normal weight people!

BS is known to have striking results in the management of obesity, the financial benefits of BS for healthcare systems are measured mainly by comparison of cost between anti-diabetic/anti-hiperlipidemic/anti-hypertensive medications and

bariatric procedures. A study shows that drug costs were lower than the BS group at the period of 6-20 years.



1.4. Indications for BS in Turkey

The careful selection of patients is crucial in obtaining successful results from BS. All patients must be followed at least 3 to 6 months ahead of the surgery in an endocrinology department and should be encouraged to lose weight prior to the surgery because even a small reduction in weight can reduce surgical complications while increasing the success of the surgery (Figure 3).

BMI categories (kg/m2)	Patient situation Patient situation			
-40	Patients without coexisting illness and for whom bariatric surgery would not be associated with excessive risk			
35.0-39.9	Patients with at least one severe obesity-related comorbidity, including but not limited to T2DM, hypertension,			
	hyperlipidemia, OSA, OHS, NAFLD or NASH, pseudotumor cerebri, GERD, asthma, venous stasis disease,			
	severe urinary incontinence, debilitating arthritis, or considerably impaired quality of life			
30.0-34.9	Patients with T2DM, metabolic syndrome, and the Asian origin may be considered for bariatric surgery*			
:30	There is no evidence to support recommending a bariatric surgical procedure for the management of T2DM alone*			
GERD: Gastroesophageal reflux	disease; OHS: Obesity-hypoventilation syndrome; OSA: Obstructive sleep apnea; NAFLD: Nonalcoholic fatty liver disease; NASH: Non e 2 diahetes: mellitus:			

	BMI categories (kg/m²)					
Treatment modalities	25.0-26.9	27.0-29.9	30.0-34.9	35.0-39.9	>40	
Diet, exercise, and behavioral therapy	+		+	+	+	
Drug therapy*			+	+	+	
Metabolic surgery**			+	+	+	
* Potential benefits must be weighed against It therapy should be stopped. ** Only for selected and motivated patients. * It is considered for patients whose diabetes c * It is recommended for patients whose diabete * It is recommended for all patients regardless	annot be regulated.	rugs. If there is an absenc	e of drug tolerance, safet	or effectivity (<5% weight to	oss after 3 months	

1.5. Market Share in Turkey

As mentioned before, in Turkey approximately 18,000 applications are made every year. The average usage of staplers in one surgery are about 5 to 8 units. According to these data

total sales potential of Turkish market; are between units annually.

According to the feedback we receive from our doctors and sub-dealers, has about of the market share and they're advancing on their Tri-Staple technology.

is coordinating their operation in Turkey with nearly 500 personnel.

current marketing is focused on their main product, Flex Stapler, by telling that it has better results than Tri-staple technology and putting forward it's ease of use.

They are coming after in market with about share.

As a new player, has substantial market share here about They are times cheaper than their competitors and they're highlighting that their product has the optimal requirements for BS.

These three companies are currently controlling almost all of the market.

marketing strategy is based on competing with

Tri-Staple technology and strategy is based on the prices. We've to remind again,

is running a comprehensive operation in Turkey but despite that has a significant share in the market due to their price.

The Turkish lira fluctuates a lot in the stock market, because of that it's hard to determine the equivalent price in USD.

1.6. Conclusion

We want our influence to increase with

in the Turkish market. Gripping

point to our current market for ______ can

be it's compatibility, price and customer support

that we will be providing. After a possible collaboration between companies,

The possible agreement between us can to turn into a long partnership. We aim to establish sustainable business model.

1.7. References

Anon. 2003. "Türkiye'de Obezitenin Kardiyovasküler Hastalıklara Etkisi." *TÜRK KARDİYOLOJİ DERNEĞİ ARŞİVİ* 31(5):279–89.

Anon. 2003. "Türkiye'de Obezitenin Kardiyovasküler Hastalıklara Etkisi." *TÜRK KARDİYOLOJİ DERNEĞİ ARŞİVİ* 31(5):279–89.

Anon. n.d. "Eczacının Sesi: Bariatrik Cerrahi Yöntemleri." Retrieved August 11, 2020 (http://www.eczacininsesi.com/?yon=haber&id=1179).

Anon. n.d. "TÜRKİYE ENDOKRİNOLOJİ VE METABOLİZMA DERNEĞİ | KILAVUZLAR." Retrieved August 11, 2020 (http://temd.org.tr/Kilavuzlar).

Cantürk, Zeynep. n.d. "Antiobeziter İlaçların Kardiyometabolik Etkileri." 112.

Hatemi, H., Yumuk, V. D., Turan, N., & Arik, N. (2003). Prevalence of overweight and obesity in Turkey. Metabolic Syndrome and Related Disorders, 1(4), 285-290.

Sabuncu, Tevfik, Sinem Kiyici, Mehmet Ali Eren, Seda Sancak, Alper Sönmez, Sibel GüldiKen, Faruk Kutlutürk, İbrahim ŞahiN, Murat Yilmaz, and Fahri Bayram. 2017. "Summary of Bariatric Surgery Guideline of the Society of Endocrinology and Metabolism of Turkey." *The Turkish Journal of Endocrinology and Metabolism* 21(4):140–47.

Sarı, Murat, and Dr M. Temel Yılmaz. n.d. "Türk Halkının Paketlenmiş Gıdalar Konusunda Davranış Özellikleri." 22.

Satman, I., Omer, B., Tutuncu, Y., Kalaca, S., Gedik, S., Dinccag, N., ... & Turker, F. (2013). Twelve-year trends in the prevalence and risk factors of diabetes and prediabetes in Turkish adults. European journal of epidemiology, 28(2), 169-180.

Pharm. Ahmet Ozan ÖZGEN

Business Development Executive

+90 505 759 20 56

in A @

This document, with all it's attachments, will be deemed the confidential property of Biocalis, Inc. accordance with the third parties' confidentiality obligations.