

# Strannik: A Summary or Meta-analysis of Available Published and Unpublished Clinical Data

Grakov I G<sup>1,\*</sup>, Ewing G W<sup>2</sup>, Mohanlall R<sup>3</sup>, Adam J K<sup>4</sup>.

<sup>1</sup>Technical Director, Mimex Montague Healthcare Limited (corresponding author)

<sup>2</sup>Managing Director, Mimex Montague Healthcare Limited

<sup>3</sup>Managing Director, ECP (South Africa), Umhlanga, Durban

<sup>4</sup>Head, Biomedical and Clinical Technology Department, Durban University of Technology

\*Corresponding author email: [graham.ewing \[AT\] mmhcl.co.uk](mailto:graham.ewing [AT] mmhcl.co.uk)

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**ABSTRACT---** *The authors reports a meta-analysis of available published studies, conducted in Spain and South Africa during 2015-2016; and previously unpublished Strannik studies most of which were conducted in the Russian market in the period 1997-2003 by eminent and respected physicians at various medical centres operating mainly in the Russian markets.*

*This meta-analysis of the use of Strannik technology includes reports of 24 different studies of various sizes: the smallest being the study by Ewing & Duran (17 patients) and the largest being the study by Ignatiev (3000 patients).*

*The study reports that , of the 9,800 patients tested using Strannik Virtual Scanning, the test outcomes ranged from 0-21% more accurate than the range of diagnostic tests against which it was compared; and that of over 6,000 patients treated with Strannik Light Therapy which was determined to be circa 76-96% effective treating a wide range of a 30 categories of common medical conditions.*

**Abbreviations:** Strannik Virtual Scanning (SVS), Strannik Light Therapy (SLT)

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## 1. INTRODUCTION

There is increasing recognition of the need to understand how the brain functions i.e. (i) there is recognition of a fundamental relationship between how we experience stress through the senses and pathological onset e.g. if we experience a bereavement, divorce, loss of employment, etc, this can result in the onset of a variety of pathologies resulting in headaches, back-ache, digestive ailments, depression, etc; (ii) some forms of light therapy have been shown to be more effective than drugs when treating mild forms of depression [1] yet (iii) the accepted way of treating such conditions is by anti-depressant drugs. This is evidence of a dynamic relationship between brain function and visceral function. Moreover, such pathological changes must influence cell function, organ function, and the coherent function of the organ networks which we commonly refer to as the physiological systems i.e. there is evidence of a structured relationship between brain function and visceral function.

Knowledge of this relationship between brain and visceral function has been the subject of intense speculation. It forms the basis of the European Commission's EUR1.2BN funded Human Brain Project and the US government's Brain Initiative which is unsurprising considering the inter-relationships between the most eminent researchers [2] yet in a quite astonishing revelation it has been noted that the three essential aims and objectives of the Human Brain Project were completed in the period 1981-1997 by the researcher Igor Gennadyevich Grakov.

From laser research conducted at the University of Novosibirsk in the early 1980's Grakov created a mathematical model of the autonomic nervous system and physiological systems. The principle was first highlighted in a paper presented to the *Praesidium of the Siberian of the Academy of Medical Sciences of the USSR* (AMN) held in Novosibirsk on 4th December 1985 [3]. It is based upon the fundamental observation that pathological reactions emit biophotons of light which influence colour perception in the retina.

There have been explanations for changes of colour perception however none has been able to provide a plausible or robust explanation for this phenomena which is clearly associated with almost every biological and pathological process although proteins, enzymes and related biochemicals have been illustrated to be visually active. This technique has been incorporated into Grakov's Strannik technology [4]. It effectively measures the rate of emission of biophotons as proteins are genetically expressed (genotype) and also the rate of emission of biophotons as proteins react with their reactive substrate (phenotype) [5]. It is the first technique to recognise that every pathological process has a genetic and

phenotypic component [6] i.e. thereby filling the gap in medical research which has existed since the first introduction of genetic screening.

Such a neural simulation technique is the fundamental objective of the Human Brain Project which is researching an essentially identical methodology to that which has been incorporated into the Strannik technology. The Human Brain Project has three fundamental objectives: (i) to understand what the brain does and how it does it, (ii) to use this knowledge to create a new generation of cognitive technology which is able to determine the complex pathological profiles of complex medical conditions such as Alzheimer's disease, and finally (iii) to understand and adapt the multi-level nature of brain function.

Grakov completed this project almost 20 years ago [7,8] however the commercialisation of this technology has floundered due to a number of issues which include but are not limited to the following: scepticism and support from the scientific community, the lack of an adequate scientific explanation, lack of funding, regulatory issues, political pressures, etc.

Ewing GW has completed an extensive programme of writing medical papers which have illustrated:

- that the brain functions as a neuromodulator which regulates the function of the autonomic nervous system and physiological systems [9];
- that changes of sense perception, in particular colour perception, have pathological origins and can be used as the basis of an immensely sophisticated and advanced method of screening the health of the patient [10];
- that the brain deploys frequency – hence what we see as EEG frequencies - to regulate the function of the autonomic nervous system and physiological systems [11] i.e. it is a biophysical entity.

Over 75 papers have been completed which illustrate how SVS is able to screen for a wide range of common pathologies including diabetes [12], cardiovascular disease(s) [13], migraine [14], Raynaud's phenomenon [15], etc; and how Strannik Light Therapy has been successfully used to treat a broad range of common pathologies, in particular the sympathetic response (phenotype) e.g. diabetic circulatory disorders, hypertension, migraine [16], depression, headaches, breathing disorders (e.g. asthmatic type conditions, hay fever), sleep disorders [17] (e.g. sleep apnoea and shortened duration of sleep), etc.

More recently a non-clinical study [18] has been followed by a blinded clinical study [19] conducted in South Africa which effectively validates the vast body of evidence which has been provided by Russian researchers and clinicians since abt 1997. Accordingly, this paper/meta-analysis is intended to summarise the available body of evidence and to make this available for wider review.

It is recognised that this summary of available data has significant limitations. Moreover it is recognised that by publishing this data in its current format that this will attract criticism. The authors consider that, despite the limitations of the various reports, this does not invalidate the data and hence that the data should be published and placed in the public forum for further rescrutiny.

## **2. BACKGROUND & HISTORY**

Grakov IG is recognised as a researcher of repute. He is a qualified medical doctor, physicist and mathematician (Medical Doctor (MD), Grand-PhD, professor, academician of RAEN (Russian Academy of Natural Science). He has been a consultant to Russian President Vladimir Putin. His work has been reviewed by technologists at NICE who have independently validated the existence of Dr Grakov and the validity of published work (by Grakov, Ewing, etc), and who have expressed their admiration for the technology and their hopes that the technology might ultimately find its way into regular use within the UK's National Health Service. The technology has been known to the UK's Department of Health since 2009 who recognised the immense cost-savings which such a technology presents and previously sought to allocate a £410k grant to Mimex Montague Healthcare in 2010 and, in addition, the MHRA is currently in receipt of the Strannik Technical Dossier re the registration of Strannik as a Type 1 medical device under sub-section Z-301 standalone software.

Strannik was assessed by the S.F. Vladimirkiy Scientific Research Institute MONIKI in Moscow, on the basis of which the Certificate of Ministry of Health of the Russian Federation (036 dated 19.01.00) authorised use of the software by the Russian public health service(s). On 7<sup>th</sup> December 1998 Strannik was awarded the official registration of the computer programs (980696) by the Russian agency of patents and trade marks (Rospatent). Since June 2001 "Mimex" company has been a member of the Russian Academy of Natural Sciences. In 2001 the design work of "Mimex" was awarded the Laureate of the First International congress "High medical technologies" held in St-Petersburg (the Diploma of the First

Degree) for the design work in the development of the Strannik system. Other awards included the Silver Medal of I. Pavlov "For the Contribution Made to the Development of Medicine and Health Protection", Gold Medal at the International Fair "MedSib – 2001", and in 2001 the Certificate for the active participation in the State program of the Russian Federation "Health of the Nation".

The most significant milestone was the inception of the Human Brain Project which enabled us to illustrate that Grakov's research has effectively completed this most intensely funded medical research project [8].

Whereas in 2003 we sought to justify the existence of the technology, we are now able to justify that the technology exists and that there is evidence to justify further research. The issue is no longer whether it works but instead 'how well does it work'.

### 3. METHODS

The methodology for all studies, irrespective of whether they are controlled observational studies or blinded clinical studies, remains the same [20]. In the case of Strannik Virtual Scanning: (i) what are the SVS test results and (ii) can these results be validated by contemporary diagnostic methods (which have accuracy of typically 25-90%). In the case of Strannik Light Therapy: does it create a significant and indisputable therapeutic response/outcome.

### 4. RESULTS

Condition	Number of SVS Identified Conditions	Number of Diagnostic Confirmations	%
Neurocirculatory dystonia	14	10	71.4%
Encephalopathies	4	4	100%
Cerebrovascular disease	28	22	78.6%
Acute bronchitis	12	10	83.3%
Chronic bronchitis	11	9	81.8%
Acute rhinitis	16	13	81.3%
Angina pectoris	13	11	84.6%
Chronic otitis	3	3	100%
Deforming osteoarthritis	6	5	83.3%
Vertebral osteochondrosis	34	30	88.2%
Intercostal neuralgia	11	8	72.7%
Neuritises, polyneuropathies	11	9	81.8%
Ischemic heart disease	9	7	77.8%
Hypertonia	33	27	81.8%
Chronic pyelonephritis	6	5	83.3%
Urolithiasis	11	9	81.8%
Chronic gastritis	29	24	82.8%
Duodenal ulcer	22	19	86.4%
Chronic pancreatitis	16	12	75%
Chronic hepatitis	5	4	80%
Chronic cholecystitis	46	39	84.8%
Gallstone disease	13	10	76.9%
Diabetes mellitus	17	15	88.2%
<b>Total</b>	<b>370</b>	<b>305</b>	<b>82.4%/21.3%+</b>

Condition	Effectiveness of Treatment		
	No Patients Treated with Strannik Light Therapy	No of Patients with Positive Effect	% Effectiveness
Chronic Fatigue Syndrome	43		97.7%
Depressive & Anxiety Disorders	54		96.3%
Diseases of the CNS	26		95.0%
Vegetative-vascular Distony	96		85.0%
Cerebrovascular Disorders	46		97.8%
Spinal Circulation Disorders	57		100%
Cerebral Palsy	12		100%
Chronic Bronchitis	37		100%
Bronchial Asthma	12		91.7%
Chronic Tonsllitis	7		100%
Chronic Otitis	8		100%
Ischaemic Heart Disorder	63		90.5%
Chronic Cardiac Insufficiency	11		81.8%
Cardiac Arrhythmia	12		83.0%
Myocarditis	30		93.3%
Hypertension	120		87.5%
Chronic & Acute Gastritis	105		98.1%
Peptic Ulcer Disease	75		100%
Chronic Hepatitis	53		92.5%
Chronic Cholecystitis	58		98.3%
Dyskinesia of the Biliary Ducts	52		100%
Cholelithiasis	15		86.7%
Chronic Pancreatitis	49		85.7%
Nephrolithiasis	42		86.5%
Pyelonephritis	26		84.6%
Hydronephrosis	2		100%
Cystitis	12		83.0%
Prostatitis	70		94.3%
Disorders of the Thyroid Gland	73		93.2%
Adrenal Hypofunction	21		61.9%
Ovarian Cyst	14		86.0%
Mastopathy	18		83.0%
Gynaecological Diseases	40		100%
Diabetes Mellitus	31		100%
Musculoskeletal System Disorders	19		100%
Vertebral Osteoarthrosis	168		93.5%
Gout	26		100%
Ankylosing Spondilitis	40		95.0%
<b>Total</b>	<b>1672</b>		<b>93.2%</b>

Condition	<u>Diagnostic Confirmations</u>		
	Number of SVS Identified Conditions	Number of Diagnostic Confirmations	
Chronic Gastritis	294	294	100%
Erosive Gastritis	82	78	95%
Acute Stomach/Duodenal Ulcers	59	53	89%
Peptic stomach Ulcer	131	127	96%
Peptic Duodenal Ulcer	218	213	97%
Gastric Reflux	53	51	96%
Erosive Oesophagitis	10	8	80%
<b>Total</b>	<b>847</b>	<b>824</b>	<b>97.3%/2.8%+</b>

Condition	<u>Effectiveness of Treatment</u>		
	No Patients Treated with Strannik Light Therapy	No of Patients with Positive Effect	% Effectiveness
Chronic Gastritis	294		100
Erosive Gastritis	82		
Acute Stomach/Duodenal Ulcers	59		
Peptic stomach Ulcer	131		
Peptic duodenal Ulcer	218		
Gastric Reflux	53		
Erosive Oesophagitis	10		
<b>Total</b>	<b>847</b>		<b>95%</b>

Condition	<u>Effectiveness of Treatment</u>		
	No Patients Treated with Strannik Light Therapy	No of Patients with Positive Effect	% Effectiveness
Cerebrovascular Disorders	49	47	95%
Chronic Fatigue Syndrome	43	42	98%
Epilepsy	4	4	100%
Migraine	41	36	88%
Alkylosing Spondylitis	28	27	96%
Arthropathies/joint diseases	22	14	64%
Musculoskeletal Disorders	98	96	98%
Myocarditis	15	13	87%
Hypertension	45	32	71%
Hypothyrosis	22	21	95%
Thyroiditis	22	20	91%
Chronic Bronchitis	6	6	100%
Chronic Sinusitis	3	2	67%
Allergic Rhinitis	8	5	63%
Chronic Otitis	8	8	100%
Oesophagitis	2	2	100%
Chronic Gastritis	63	61	97%
Peptic Ulcer	32	32	100%

Chronic Pancreatitis	11	11	100%
Chronic Cholecystitis	13	13	100%
PostCholeCystectomy Syndrome	8	8	100%
Chronic Hepatitis	6	6	100%
Dyskinesia Biliary Ducts	16	16	100%
Chronic Gastroenteritis	2	2	100%
Chronic Colitis	6	5	83%
Chronic Pyelonephritis	12	12	100%
Cystitis	15	13	87%
Nephrolithiasis	13	13	100%
Male infertility	10	8	80%
Female infertility	10	8	80%
Chronic Prostatitis	46	46	100%
Adenoma of Prostate	12	10	80%
Chronic Adnexitis	6	6	100%
Disorders of Menstrual Cycle	5	4	80%
Allergodermatitis	9	7	78%
<b>Total</b>	<b>711</b>	<b>656</b>	<b>92.3%</b>

<b>Table 6 : Mironov &amp; Yankevich</b>		<b><u>Effectiveness of Treatment</u></b>
<b>Condition</b>	<b>No of Patients Treated</b>	<b>% Effectiveness</b>
Nasal/Sinusitis	12	65%
Impaired Cerebral Circulation	19	94%
Impaired Spinal Circulation	57	100%
Parkinson's disease	1	improvements
Gout	26	100%
Tuberculosis	1	100%
Chronic Bronchitis	29	100%
Asthma	2	50%
Ischaemic Heart Disease	38	94%
Chronic cardiac insufficiency	11	81.8%
Hypertension	17	100%
Chronic Duodenitis	29	100%
Chronic Gastritis	32	100%
Ulcers	5	100%
Psoriasis	36	100%
Chronic Hepatitis	47	92.0%
Chronic Cholecystitis	24	100%
Gall Stones/Cholelithiasis	6	66.0%
Chronic Pancreatitis	32	80.0%
Kidney Stones/Cholelithiasis	38	9.0%
Pyelonephritis	14	71.0%
Prostatitis	16	75.0%
Thyroid Disorders	29	93.0%
Ovarian Cyst	14	86.0%
Mastopathy	19	83.0%
Uterine Fibromyoma	3	33.0%
Musculoskeletal Disorders	65	91.0%
Other	41	ca 72.0%
<b>Total</b>	<b>663</b>	<b>90.0%</b>

**Table 7: Sarsinbayeva Z, Sarsinbeyeveva S. Diagnostic Confirmations**

Condition	Number of SVS Identified Conditions	Number of Diagnostic Confirmations	%
Encephalopathies	22	20	90.9
Cerebrovascular Disorders	130	123	95%
Consequences of brain trauma	8	8	100%
Arthropathies (arthritis)	257	257	100%
Ischaemic Heart Diseases	51	48	93.2%
Hypertension	134	132	98.5%
Chronic Pyelonephritis	117	115	98.3%
Nephrolithiasis	72	65	72.7%
Chronic Gastroduodenitis	215	213	99.0%
Peptic Ulcer Diseases	28	24	85.7%
Chronic Pancreatitis	29	25	86.2%
Chronic Cholecystitis	337	337	100%
Cholelithiasis	18	16	88.8%
Chronic Colitis	115	110	95.6%
Diabetes Mellitus	67	56	83.5%
Uterine Fibroids, Mastopathies	13	11	90.3%
Anaemia	260	250	96.0%
Thrombophlebitis	78	76	97.6%
Allergic dermatitis	112	109	97.3%
Post operational scarring (adhesions)	14	14	100%
<b>Total</b>	<b>2077</b>	<b>2009</b>	<b>96.7%/3.4%+</b>

**Table 8: Sarsinbayeva Z, Sarsinbeyeveva S. Effectiveness of Treatment**

Condition	No Patients Treated with Strannik Light Therapy	No of Patients with Positive Effect	% Effectiveness
Ischaemic Heart Disease	12	11	92%
Hypertension	19	14	73.7%
Cerebrovascular Disorders	12	12	100%
Peptic Ulcer Diseases	21	21	100%
Chronic Cholecystitis	24	24	100%
Chronic Pancreatitis	11	11	100%
Diabetes Mellitus	2	2	100%
Musculoskeletal Disorders	27	26	96.3%
<b>Total</b>	<b>128</b>	<b>121</b>	<b>94.5%</b>

**Table 9: Skvortsova NP, Gushchin AJ, Lobanov TV. Diagnostic Confirmations**

Condition	Number of SVS Identified Conditions	Number of Diagnostic Confirmations	%
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Acute Bronchitis	12	10	83.3%
Chronic Bronchitis	8	7	87.5%
Acute Sinusitis	16	13	81.5%
Angina Pectoris	13	11	84.6%
Chronic Ear Conditions	3	3	100%
Distortive Osteoarthritis	6	5	83%
Musculoskeletal Disorders	16	14	87.5%
Intercostal Neuralgia	11	8	72.7%
Ischaemic Heart Disease	4	3	75%
Essential Hypertension	21	18	85.7%
Urolithiasis	11	9	81.8%
Cerebrovascular disease	19	15	78.9%
Chronic gastritis	8	6	75%
Duodenal Ulcer	6	5	83.3%
Chronic pancreatitis	9	6	66.6%
Cholelithiasis	7	6	85.7%
chronic cholecystitis	21	17	80.9%
Diabetes mellitus	4	3	75%
Other	6	4	66.7%
<b>Total</b>	<b>201</b>	<b>180</b>	<b>89.9%/11.7%+</b>

<b>Table 10: Sheina SG, Shevchenko LN, 2003.</b>		<b><u>Diagnostic Confirmations</u></b>	
<b>Condition</b>	<b>Number of SVS Identified Conditions</b>	<b>Number of Diagnostic Confirmations</b>	<b>%</b>
CNS Disorders			81%
PNS Disorders			85%
Cardiovascular disorders			81%
Disorders of the Thyroid Gland			81%
Pancreatitis			82%
Hepatitis			81%
Cholecystitis			79%
Respiratory Disorders			78%
<b>Total</b>	<b>1232</b>		<b>78-85%/17.6-33.3%+</b>

<b>Table 11: Sheina SG, Shevchenko LN, 2003</b>		<b><u>Effectiveness of Treatment</u></b>	
<b>Condition</b>	<b>Number of SVS</b>	<b>% Effectiveness</b>	
Ischaemic Heart Disease/angina		91%	
Hypertension		83%	
Respiratory Disorders		76%	
CNS/PNS Disorders		79%	
Gastroentologic Disorders		98%	
Improved Brain Function		90%	
<b>Total</b>	<b>977</b>	<b>76-98%</b>	

<b>Table 12: Summary of Results (SVS)</b>		<b><u>Diagnostic Confirmations</u></b>	
<b>Table of Results: SVS</b>	<b>patients/ conditions</b>	<b>diagnostic confirmations</b>	<b>%</b>
Ewing GW, Duran J-C (20)	17		ca 2%
Mohanlall R, Ewing GW	(50)	50	14.4%
Vysochin et al (370)	370	305	21.3%



Gvazava V	232		
Vartanyants RG, Shevchenko LN	121		
Zhuravleva TN, Komarova IA	(34)		
Vekshenkova MS	(130)		
Petchin IV	847	824	2.8%
Berov M, Bekuzarova SA	150		
Filatova IV	157		
Georgievna SO	825		
Ignatiev VA (3000)	3000		2.0%
Mironov VD, Yankevich AG	n/a		
Mylnikov VV , Murachova VP	(139)		
Peyganovich AI, Oreshechko IV	91		100%/0%
Radchenko IO, Kolyanov VB	(4580)		n/a
Sarsinbayeva Z, Sarsinbayeva S (560)	2077	2009	3.4%
Berov M, Bekuzarova SA	(32)		
Skvortsova NP, Gushchin AJ, Lobanov TV	210	180	16.7%
Starodubtsev SI, Bobrow LB	357		
Frumin ID, Zabortseva M		75-85%	17-33%
Vekshenkova MS, Matveeva VP	130		
Sheina SG, Shevchenko LN, 2003	1232		n/a
<b>Total</b>	<b>9,866</b>		<b>0-21.3%+</b>

<b>Table 13: Summary of Results (SLT)</b>		<b>Effectiveness of Treatment</b>	
<b>Table of Results: SLT</b>	<b>Patients Treated</b>	<b>Positive therapeutic Effect</b>	
Vysochin et al	1672		93.2%
Gvazava V	77		85%
Vartanyants RG, Shevchenko LN	38		92%
Zhuravleva TN, Komarova IA	34		
Vekshenkova MS	130		
Petchin IV	847		95%
Filatova IV	157		
Georgievna SO	240		91%
Ignatiev VA	711		92.3%
Mylnikov VV , Murachova VP	139		96.4%
Radchenko IO, Kolyanov VB	(1600)		89%
Sarsinbayeva Z, Sarsinbayeva S	560		95.2%
Starodubtsev SI, Bobrow LB	357		
Frumin ID, Zabortseva M		80-85%	
Vekshenkova MS, VP Matveeva	130		
Voinov VI (Orenburg)	100		
Sheina SG, Shevchenko LN	977		76-98%
<b>Total</b>	<b>6,069</b>		<b>76-96%</b>

<b>Table 14: Determination of Diabetes Mellitus</b>		<b>Diagnostic Confirmations</b>	
Vysochin et al	17		15
Sarsinbayeva & Sarsinbayeva	67		56
NP Skvortsova, A J Gushchin, TV Lobanov	4		3
<b>Total</b>	<b>88 patients</b>	<b>74</b>	<b>+18.9%</b>

<u>Table 15: Determination of Duodenal Ulcer</u>		<u>Diagnostic Confirmations</u>	
Vysochin et al	22	19	
Petchin IV	408	393	
Skvortsova, Gushchin, Lobanov	6	5	
Sarsinbayeva Z, Sarsinbeyeveva S	28	24	
<b>Total</b>	<b>464 patients</b>	<b>441</b>	<b>+5.2%</b>

<u>Table 16: Determination of Cardiovascular Conditions(s)</u>		<u>Diagnostic Confirmations</u>	
Vysochin et al	Angina	13	11
Vysochin et al	Ischaemic Heart Disease	9	7
Vysochin et al	Hypertension	33	27
Sarsinbayeva & Sarsinbeyeveva	Hypertension	134	132
Sarsinbayeva & Sarsinbeyeveva	Ischaemic Heart Disease	51	48
Skvortsova, Gushchin, et al	Hypertension	21	18
Skvortsova, Gushchin, et al	Angina	13	11
<b>Total</b>	<b>274 conditions</b>	<b>254</b>	<b>+7.8%</b>

<u>Table 17: Determination of Encephalopathies</u>		<u>Diagnostic Confirmations</u>	
Vysochin et al		4	4
Sarsinbayeva & Sarsinbeyeveva		22	20
<b>Total:</b>	<b>26</b>	<b>24</b>	<b>+8.3%</b>

<u>Table 18: Treatment of Common Cardiovascular Conditions(s)</u>			
Vysochin et al	ischaemic heart disease	63	90.5%
Vysochin et al	Cardiac insufficiency	11	81.8%
Vysochin et al	Cardiac Arrhythmia	12	83.0%
Vysochin et al	Myocarditis	30	93.3%
Vysochin et al	Hypertension	120	87.5%
Ignatiev VA	Hypertension	45	71%
Ignatiev VA	Myocarditis	15	87%
Mironov & Yankevich	Ischaemic Heart Disease	38	94%
Mironov & Yankevich	Cardiac insufficiency	11	81.8%
Mironov & Yankevich	Hypertension	17	100%
Sarsinbayeva Z, Sarsinbeyeveva S	Hypertension	19	73.7%
Sarsinbayeva Z, Sarsinbeyeveva S	Ischaemic Heart Disease	12	100%
Sheina & Shevchenko	Ischaemic Heart Disease	n/a	91%
Sheina & Shevchenko	Hypertension	n/a	83%
<b>Total</b>		<b>ca 400+ patients</b>	<b>71-100%</b>

<u>Table 19: Treatment of Common Gastrointestinal Complaints</u>			
Vysochin et al	Gastritis	105	98.1%
Vysochin et al	Peptic Ulcer	75	100%
Petchin IV	Gastric Reflux/Ulcer	847	95%
Ignatiev VA	Gastric Reflux/Ulcer	97	97.9%
Mironov & Yankevich	Gastritis/Reflux/Ulcer	37	100%
Sarsinbayeva , Sarsinbeyeveva	Peptic Ulcer	21	100%
Sarsinbayeva , Sarsinbeyeveva	Colitis	115	95.7%
<b>Total</b>		<b>1297</b>	<b>95-100%</b>

## 5. DISCUSSION OF RESULTS

The most significant of the studies was conducted by a team of researchers led by eminent physiologist Professor Yuri Vysochin Director of the Peter Lesgaft Sports Research Institute, University of St Petersburg. The study was commissioned by the Russian parliament THE DUMA and included clinical results submitted by a number of medical clinics. The study comprised an assessment of SVS (see Table 1) and SLT (see Table 2).

**Vysochin** reported that there were no adverse occurrences; Mironov & Yankevich vouched for the safety of the technology; Peyganovich & Oreshechko reported no complications and side effects had been identified or recorded; Frumin & Zabortseva reported contraindications for VSLT among 12 people of the 104 patients treated.

Each SVS test report was compared with the patients known/prevaling medical condition. Additional tests were conducted where necessary to confirm or disprove the SVS test report. Vysochin commented: ‘To check results we used traditional methods of investigations – laboratory tests, x-rays, ultrasound scans, and others. We also took medical history and previous hospital investigations into account’.

Treatment was considered as effective in case if the patient condition after the full course of treatment was diagnosed as fully recovered, considerably improved and improved.

Further studies reported by Grakov ((i) 345 patients screened using SVS with 83.8% confirmation by contemporary diagnostic techniques i.e. 19.3% more accurate than contemporary diagnostic techniques; (ii) 1066 patients treated with 92.5% effectiveness; and (iii) and by **Vysochin & Grakov** (1516 patients treated with 90.1% effectiveness) were excluded from consideration. It was not known whether there was overlap with Vysochin’s study.

[**Note 3: Professor Vysochin** is deceased. Professor **Denisenko**, a member of the research team which conducted this study, can be contacted at [yprof@yandex.ru](mailto:yprof@yandex.ru)]

In a gender balanced study of 34 patients **Zhuravleva TN & Komarova IA** reported elevated immune function, hypertonic stabilised, and better sleep in the study group. This study was included in the peer-reviewed publication [9].

In a study of 232 cardiac patients **Gvazava V** treated 77 patients: 57 with a range of conditions including (but not limited to) neurocircular dystonia, hypertonic disease and ischaemic heart disease with ca 85% effectiveness.

In a broad ranging study, **Vartanyants RG & Shevchenko LN** surveyed 121 patients of which 38 were subsequently submitted for treatment. The results from the screening were not reported but the study reported significant improvements in the 38 patients treated of which 10 of the 11 patients with hypertension responded to the therapy. In addition the report commented re the patient outcomes ‘decrease in the number of vascular crises, the noise in the ears, headaches, dizziness while walking, stabilized sleep, improved mood’.

A study of 130 patients conducted by **Vekshenkova MS** at the Novosibirsk Music College identified a number of medical conditions which were subsequently confirmed by contemporary diagnostic tests and significant improvement in patients treated with depression, neuroses, nervous system disorders, digestive system disorders, and high blood pressure.

**Petchin IV** (see Tables 3&4) evaluated Strannik as a screening and therapeutic modality for gastrointestinal disorders. Of the 847 patients in the study the SVS test results were confirmed by contemporary diagnostic tests in 97.3% of cases. In addition, he reported a 95% improvement following treatment by SLT.

**Berov M, Bekuzarova SA** (1999/2000) surveyed 150 patients, including 45 patients with gastrointestinal disorders, 25 patients with gynecological diseases and 32 patients with eating disorders. The report focussed upon therapeutic outcomes and reported reduction in pain in patients with ulcers, normalization of menstrual cycle, a decline of PMS, ending acyclic uterine bleeding; reducing clinical manifestations of menopause for all patients over 2-5 months in patients with gynaecological problems; reduced asthma attacks as a result of therapy in 10 patients; reduced psychosomatic reaction, improved sleep, improved weight in patients with eating disorders.

**Ulicki & Efimenko** reported a number of successful case studies of patients treated with Strannik Light Therapy including (i) a patient with a 20mm ulcer – the ulcer had disappeared by the 10<sup>th</sup> session of treatment; (ii) a patient with uterine myoma –which had disappeared within 2 courses of treatment; (iii) four patients with psoriasis – three patients showed significant improvements; (iv) very good effect in cases of depression. They concluded: ‘based on the above, one can conclude undoubted potential method for SVS and SLT to patients’ neurosis and psychosomatic illnesses. The method is certainly of great interest not only to patients but also to doctors of various specialties’.

**Filatova** reported how SVS was used to screen and treat 157 patients with a spectrum of neurological disorders including fever attacks, irritability, depression, headaches, lowered libido, memory problems, sluggishness, constipation, insomnia, hysteria, increased weight, elevated heart rate, dysuria, joint aches and back aches. They reported in particular 'after 1,5 months of treatment with SLT from 15 examined and cured patients, 12 ridding themselves of insomnia; in the patients with fever attacks – reduced occurrence from 10-12 to 3-4 times during the day; 3 patients normalized their blood pressure; and in the case of a patient (insomnia for 5 years: periodical hysterical attacks, during which she tried on two occasions to commit suicide (she had previously been treated with hypnosis and medicine) after a course of SLT she recovered good sleep patterns within 2,5 weeks, her levels of anxiety were lowered and within 1 month she recovered an interest in life'.

**Georgievna SO** (Vladikavkaz S SH-99 on HI-99) reported a study of 825 patients involving the treatment of 240 patients with SLT of which 200 patients 'expressed clinical effect'. Of particular note, in the reported case studies, is the treatment of a disabled patient with multiple sclerosis who recovered improved sleep patterns, appetite and the ability to walk without assistance and to undertake 'uncomplicated work at home'.

**Hetagurova & Kataev** surveyed students aged 17-23 years. The study identified neuroses, unexplained emotional reactions, and stress as a result of study. The neuroses were accompanied by violations of the endocrine system, adrenal glands, ovaries, thyroid gland, and pancreas.

**Ignatiev VA** (see Tables 5) provided a comprehensive report in which he reported that of the >3000 patients screening with SVS and that 'the results of diagnosis were evaluated by clinical, anamnesis and laboratory methods, which confirm the accuracy in 98% of cases'; and the 92.3% effectiveness of SLT in the 610 patient cohort. In addition he provided a list of 16 case studies describing how SLT was able to assist patients with Ewing's sarcoma, leukoencephalitis, epilepsy, paralysis due to ruptured disc, endometriosis, plexitis, infertility (female), Meniere's disease, allergic reaction to latex in surgical gloves, etc.

**Mironov, Yankevich** (see Table 6) reported a selection of cases: including urinal complications following an operation on the hernia: virtually disappeared pain in the bladder, normal urination following a course of SLT; 7cms ovarian cyst reduced to 1.1-1.2cms during one month of SLT; patient with type 1 diabetes, diabetic angiopathy and renal failure – reduced insulin dose, blood sugar better regulated; and finally that 'treatment with colour information is a very effective therapy for patients and rehabilitation during their chemotherapy and radiotherapy'.

**Mylnikov & Murachova** reported the improvement of 134 patients out of a 139 patient cohort; and of the determination of intestinal bleeding and sickle cell anaemia.

**Peyganovich & Oreshechko** reported the 100% confirmation of patient's known conditions; the determination of unknown medical indications in 34 of the 91 patient cohort; and that SVS test outcomes were confirmed 'by orthodox methods of diagnosis: UZI- scan, X-ray diagnostics, fibrogastroscopy, computer tomography and laboratory research methods'. All 91 patients were given the recommended treatment scheme (SLT), which has a clear positive effect of a reduction in complaints and regression of the disease symptoms. In the course of treatment, all patients had improved sleep, reduced post-stress effects, improved vision.

**Radchenko & Kolyanov** surveyed and treated 870 patients with Strannik. They comment that SVS 'detects patterns of subcortical matrix of the brain and internal organs at early stages of disease'; that of the 870 patients treated 68% noted significant improvement, 21% improving, and 7% moderate improvement; and that 'of particular interest is the treatment of "difficult" diseases : multiple sclerosis, mental illness border, vegetative syndromes with organic brain damage and other diseases'.

**Sarsinbayeva & Sarsinbayeva** reported the results of 560 patients including 53 children of 7-15 years (see Table 7). Of the number of patients/conditions which had been detected by SVS. The report focussed mainly upon adult patients with diseases of the digestive tract, hepatobiliary system, and osteochondrosis with neurological symptoms. Children were mostly diagnosed with residual organic conditions of the brain (encephalopathies) and vegetative-visceral disorders.

Several observations from this study are worth noting: (i) diagnosis by SVS indicated ca 30% of patient had a high risk of predisposition to diabetes but in blood test of these patients there was not an increased level of blood sugar although there was a history was presence of diabetes in the family; (ii) stress attract an increased level of allergic conditions in 87% of patients (nose, lungs, skin and intestines) which in traditional medicine is called polyvalent allergy and most of all detected skin manifestations – 97.3%; (iii) 2 of 12 patients identified with myocardial infarction did not know about their condition but electrocardiography confirmed the myocardial changes; (iv) 23 women tested with SVS were shown

to have genetic predisposition to glomerulonephritis (from 12-48 units of signal), but without symptoms. The patient history included nephropathy and hypertonia during pregnancy. (v) 'anomaly of development' was detected in more than 66% of cases in 43 patients. This was associated with the birth of a premature baby, the mothers having strong toxicosis during pregnancy, living in ecologically poor areas with poor environmental conditions.

Of the 560 patients 128 received a course of SLT (see Table 8) with reported effectiveness of SLT ca 95%.

In addition the study reported four case studies (i) treatment of a complex multisystemic disorder with SLT assisted the patient to reduce their weight from 93 kgs to 84 kgs; (ii) treatment for diabetes assisted the patient to lose 5 kgs in 50 days; (iii) treatment of child for insulin dependent diabetes which was due to the stress of parental infighting and divorce. At the outset this child was receiving 5 or 6 injections of insulin each day, blood glucose in range 4.5-9.0mmol/l, with tendency to ketoacidosis/hypoglycaemia. Treatment by SLT normalised blood glucose levels within one month. (iv) treatment of 12yo for neurosis, night phobias, and claustrophobia – was given a course of SLT for optimal sleeping pattern. After one week of treatment her phobias had disappeared and her night dreams had normalised.

**Berov & Bekuzarova** examined and treated 32 patients with eating disorders and depression and reported ' In all patients after therapy information has been improving in every way, the reduction of psychosomatic reaction, good sleep, good weight.'

**Skorobogatova** reported the diagnosis and treatment of 45 patients; in particular positive results were 80% of patients; that in ca 90% of cases there was improvement and rehabilitation of the night of sleep, morning awakening, removed stress, better mood, improved overall physical fitness, elimination of headaches improved memory; positive results in the treatment of long-standing bronchitis and diseases of the gastrointestinal tract; very good results in therapy of radiculitis, pleksitis, neuritis; good results in the treatment of urologic disease, skin diseases.

**Skvortsova, Gushchin, & Lobanov** (see Table 9) reported the determination of pathologies in a study of 201 patients/pathologies and, in particular that of the 201 pathologies identified by SVS that 180 were subsequently identified by contemporary diagnostic tests thereby illustrating that SVS was performing ca 11.5% more sensitively than the existing range of diagnostic tests.

**Starodubtsev & Bobrow** reported the screening and treatment of 357 people with SLT, in particular to patients with diseases of the central and peripheral nervous system e.g. encephalitis, encephalopathy, polyradiculitis, arachnoiditis, impaired cerebral circulation, spine disorders, vascular syndromes, polyneuropathy, neuritis.

They commented upon (i) the patients being brighter, having less severe headaches, improved sleep, improved memory and attention; and that the application of SLT allows lower doses of anti-convulsant drugs in children with epilepsy and significantly reduces the frequency of epilepsy in those with mild stroke. (ii) In the treatment of inflammatory diseases there was cessation of aches and pains, ceased vegetative-vascular dystonia, and improved nutrition of affected areas. (iii) In encephalitis, where there was localization of the pathological process in subcortical nodes, with hyperkinetic syndrome, after 5-6 days, significantly reduced hyperkinesia after 9-10 days, regressed organic neurological symptom, declined leukocytosis and recovery of normal blood levels. (iv) In cases of neurotoxicosis and liver/spleen syndrome: 2-3 days of treatment decreased the symptoms of toxicity, and within 4-5 days normalized liver function (increased total blood protein, normal protein fractions).

They reported the application of SLT in 38 patients with hypertensive disease and the decline of blood pressure after 3-4 day treatment, thereby reducing, and sometimes eliminating the need for anti-hypertensive therapy; and that by the end of treatment, most of the patients returned to normal AD, decreased headaches, recovering fitness; and tremendously positive results in 94% of patients treated for depression, neurosis, phobias; 100% of patients seen sleep recovery; and 92% positive effect re the treatment of children with logoneurosis i.e. who have speech impairments.

**Frumin & Zabortseva** screened and treated a cohort of 104 people, of whom 76 adults and 28 children. They reported contraindications for SLT were among 12 people. The accuracy of diagnosis confirmed by clinical, laboratory, tools and other techniques to study diagnostic facilities and the city was 75% to 80% and the effectiveness of treatment is 80-85%. They commented that the most appropriate application of SVS and SLT is in the treatment of diseases that have no results from traditional methods of treatment i.e. vegetative-vascular dystonia, cervical bone syndrome, vertebral artery syndrome, hypertension, cerebrovascular disease (including Parkinson's disease ), chronic pancreatitis, chronic fatigue syndrome, insomnia, declining hearing and vision impairment. Children who received treatment information indicate improved memory, improved efficiency, easier learning process.

**Vekshenkova & Matveeva** screened 130 patients. The report listed a number of Case Studies whereby SLT was successfully deployed to identify prostate adenoma and to treat various conditions including diabetes, 98% success treating depression, 95% positive result treating disorders of the central nervous system and gastrointestinal diseases, positive results treating hypertension, neurosis, menstrual instability,

In 2000, **Voinov** reported that more than 100 psychosomatic diseases could be successfully treated with SLT including gynaecological conditions and that most patients were brighter following normalization of sleep, experienced improved appetite, increased mental and physical performance, and the disappearance of "chronic fatigue syndrome". They recommend Strannik and its suitability for use in health care. They cite numerous case studies in which SLT has been used to improve the health of patients with notoriously "difficult" to treat diseases e.g. multiple sclerosis, mental illness border, vegetative syndromes with organic brain damage and a number of other diseases, treatment methods which generally do not lead to positive results.

He reported an extensive list of case studies in which patients were successfully treated. The list includes: type 1 diabetes, enuresis, absence of menstruation/anorexia, sexual dysfunction arising from drug addiction, cardiac arrhythmia, epilepsy, dysfunction associated with spinal disorders/slipped disc, endometriosis, plexitis, thyroid dysfunction, infertility (male and female), depression, multiple sclerosis, trigeminal neuralgia, etc.

In 2003, **Sheina & Shevchenko** (see Table 10) reported the outcome of a study of 1232 patients of which 977 were treated with SLT. Results of diagnosis by SVS were confirmed by other clinical diagnostic methods including ultrasound, x-rays, ECG, haematological methods, blood biochemistry, urea and electrolytes tests and were confirmed in 78-85% of cases thereby indicating that SVS may be indicatively 17.5-28% more accurate than the range of contemporary diagnostic tests which are routinely deployed in clinics and that SLT (see Table 11) was successfully used to treat (i) Ischemic Heart Diseases – 91% of patients are registered with significant decreasing frequency of angina; (ii) Hypertension – 83% of patients are registered with decreasing of blood pressure/BP, better night sleep, reduction of daily dose of medicines; (iii) Respiratory Disorders – 76% of patients are registered with decreasing frequency asthmatic attacks, bouts of coughing; (iv) Central and Peripheral Nervous System Disorders – 79% of patients are improved those conditions; (v) Gastroenterologic Disorders – 98% of patient are improved clinically; 90% of ALL patients significantly improved reading of brain functions (perception, imagination, memory and associative thinking and decision making); (vi) patients exposed to stress as a result of exposure to armed conflicts, zone of disaster got rid of frustration, aggression, and depression.

Finally, they concluded by stating (i) 'that SVS is excellent screening method and (ii) that the SLT is excellent tool for complex treatment of psychosomatic pathology'.

**Grakov I, Spassky J, Borovleva J, Egorov V** reported the use of Strannik to screen and treat the health of narcotic dependent patients.

**Kolyanov V** reported the results of 4,580 patients screened with SVS and 1600 patients treated with SLT. He reported 89.0% improvement (including 67% significant improvement) in those treated with SLT.

### **5.1 Tables of Results: Detection/Diagnosis of Particular Medical Conditions**

Over 30 categories of medical conditions were reported in varying levels of sophistication. In total over 9,500 patients were screened using SVS. The patients were selected randomly in most cases.

Of the patients screened with SVS the determined indications were confirmed in 85-100% of cases indicating that SVS performed at a level which is indicatively 0-21.3% more sensitive than the range of diagnostic tests against which Vysochin commented were confirmed by traditional methods of investigations – laboratory tests, x-rays, ultrasound scans, medical history, etc.

Tables 14-17 reported the sensitivity of SVS to determine the onset and progression of a number of conditions (as reported in Tables 1-11) e.g. diabetes mellitus (88 patients), ulcers and related gastric issues (464 conditions), cardiovascular/cardiological conditions (274 conditions), and encephalopathy (26 patients): indicatively 5.2-18% more accurately than contemporary diagnostic and screening techniques.

Various conditions were determined by SVS which could not be satisfactorily diagnosed using current diagnostic, screening or histopathology tests e.g. prostate adenoma, Polycystic ovarian syndrome, uterine fibromyoma, etc.

## **5.2 Tables of Results: Treatment of Particular Medical Conditions**

Over 30 categories of medical condition were treated with SLT. In total over 6,000 patients were treated using SLT. Over 400 patients with cardiovascular conditions (see Table 18) with ca 71-100% effect depending upon the nature and extent of the conditions being treated. 1297 conditions/patients with stress-related digestive issues (see Table 19) were treated using SLT with 95-100% effectiveness.

## **6. SUMMARY**

To date, over 550 doctors have been trained to use Strannik and over 1M Strannik tests have been conducted since the emergence of this technology in the late 1990's. This summary or meta-analysis of the available clinical data raises a number of issues, in particular that knowledge of the fundamental neurological mechanism which the brain deploys to regulate the body's function can significantly enhance therapeutic outcomes in a broad range of medical conditions and with effectiveness which may be superior – indicatively 76-96% effective in the 6,000+ patients treated with SLT - to that of contemporary drugs-based approach which published data appears to indicate is ca 50% effective (Spear, Heath-Chiozzi, Huff, 2001). The study reports the patients which are significantly improved and others which are clearly visibly improved.

SLT treats autonomic dysfunction i.e. the stress response which is stimulated by psychological or psychophysiological stressors. This is what is commonly known as 'phenotype' or the 'sympathetic nervous system'. It cannot treat genetic point defects therefore it cannot be effective in an estimated 5-10% of medical conditions. Nevertheless patients suffering from genetic conditions or cancer are often highly stressed which worsens their conditions. In such cases SLT has been shown to be effective ways of mitigating the symptoms.

The study reports the results of over 9,800 patient tests in reports which have been completed in different levels of detail. The most well presented report is that compiled by Vysochin and a team of researchers. It focussed upon the seven reports presented by Vysochin; Petchin; Ignatiev; Mironov & Yankevich; Sarsinbayeva Z, Sarsinbayeva S; Skvortsova NP, Gushchin AJ, Lobanov TV; and Sheina SG & Shevchenko LN.

The results present the numbers of SVS test indications and the number of diagnostic conformations made by contemporary diagnostic tests. It mirrors the way that SVS would be used in the diagnostic context to enable the doctor to better understand the health of the patient. The results illustrate that SVS performs typically 2-21% more accurately than the entire range of diagnostic tests against which it was compared and which were in regular use in the various medical clinics i.e. including the detection of preclinical and/or presymptomatic conditions which are likely to be manifest as 'acute' conditions during periods of psychological or psychophysiological stress.

Tables 14-17 illustrate the potential effectiveness of SVS as a screening technology in the following areas: diabetes, gastrointestinal, cardiovascular, encephalopathies. Tables 18 & 19 illustrate the potential effectiveness of SLT to treat cardiovascular ailments and gastrointestinal complaints.

Finally, the report lists many Case Studies reported by various researchers which illustrate that SLT performs at a level of significance which is greater than current treatments. Such a body of evidence highlights the need for a more comprehensive investigation of the scope of this technology.

Strannik is the most advanced of the new generation of neurological interventions. There are many companies with technologies which interfere with the body's function and are able to deploy such effects with diagnostic and/or therapeutic effect however all such interventions, with the exception of Grakov's Strannik technology, are relatively simplistic and experiential i.e. they lack a fundamental understanding of the complex mechanism by which the brain functions and how it regulates the autonomic nervous system. Grakov's Strannik technology enables the doctor to understand the health of the patient in a level of detail, precision and sophistication which is unprecedented in modern medicine, to advise the patient how to deal with their issues through lifestyle adjustments, and also to understand how to treat the patient with greater effectiveness than is currently possible.

## **7. CONFLICT OF INTEREST STATEMENT**

Graham Ewing and Igor Grakov are Directors in Mimex Montague Healthcare Limited which is devoted to the commercialization of Grakov's Strannik technology.

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