

Extended Abstract**Thyroid Revelation Score (TReS)**

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Keyword

Thyroid
Revelation
Score

ABSTRACT (11 PT)

At the base of the neck, directly below the Adam's apple, is where the thyroid gland is located. It encircles the windpipe and resembles a butterfly. Your entire body may experience problems if your thyroid is not working properly. When the body produces too much thyroid hormone, it is said to have hyperthyroidism. When the body's production of thyroid hormone is insufficient, hypothyroidism results. Both of these ailments require medical attention because they are both significant. According to a recent large cross-sectional multicentre study, 3.4% of Malaysians have thyroid malfunction, of which 0.6% have overt hyperthyroidism and 2.8% have subclinical hyperthyroidism. The prevalence of hypothyroidism, on the other hand, is 2.1% (0.5% overt and 1.6% subclinical hypothyroidism). The potential thyroid diagnosis may be able to alter a person's trajectory in life. The Thyroid Revelation Score (TReS) is a measurement score for potential thyroid patients that can also be used to gauge one's own health. A suitable process flow for measuring thyroid self-health will also be developed by Thyroid Revelation Score (TReS). As a self-health evaluation tool, this score is anticipated to attract interest from medical institutions, universities, governmental organisations, schools, and the general public.

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INTRODUCTION

Thyroid disease is a prevalent condition. For instance, 15–30% of the adult population in endemic areas has goiter. Despite the fact that endocrine surgery may not be part of their usual practice, most anesthetists will regularly need to manage thyroid disease patients. Hypothyroidism, hyperthyroidism, and thyroidectomy-required ailments are among the thyroid conditions with an aesthetic impact. According to a recent large cross-sectional multicenter study, 3.4% of Malaysians have thyroid malfunction, of which 0.6% have overt hyperthyroidism and 2.8% have subclinical

hyperthyroidism. The prevalence of hypothyroidism, on the other hand, is 2.1% (0.5% overt and 1.6% subclinical hypothyroidism).

PROBLEMS/ISSUES

According to endocrinologist Dr. Alexander Tan Bong Bong, 3.4% of Malaysian citizens suffer from hyperthyroidism, whereas 2.1% from hypothyroidism. There has been less research done on the relationship between treatment and improvements in blood pressure, body mass index, cognitive function, or quality of life. Untreated thyroid conditions during pregnancy have been related to major issues, such as early death, miscarriage, and stillbirth, for the quality of life. If your thyroid disease is addressed while you are pregnant, both you and your unborn child can be healthy. Additionally, due to the dermal water content, the skin has a tendency to appear pale. The palms, soles, and nasolabial folds may also have a noticeable yellow tint due to elevated dermal carotene levels. Swelling around the eyes and hair loss in the outer area of the brows are two side effects of hypothyroidism.

Furthermore, lifestyle might be impacted by thyroid disorders. The issue for Thyroid is a hormonal imbalance brought on and may make it difficult for men or women to achieve or maintain an erection. Fatigue, weight gain or loss, heat sensitivity, hair loss, and other issues can have an emotional impact on you as well as a physical one, affecting your relationships and your ability to enjoy daily life. Throughout the full spectrum of thyroid disease, blood pressure is affected. Increased cardiac output, contractility, tachycardia, expanded pulse pressure, lower systemic vascular resistance, and an increase in basal metabolic rate are all side symptoms of hyperthyroidism.

NOVELTY

This project proposed a score as a measurement to potential Thyroid patients which is the score could be utilized as self-health measurement. Additionally, Thyroid Revelation Score (TReS) will develop an appropriate process flow of Thyroid self-health measurement, perhaps this score can detect the thyroid symptom from the beginning.

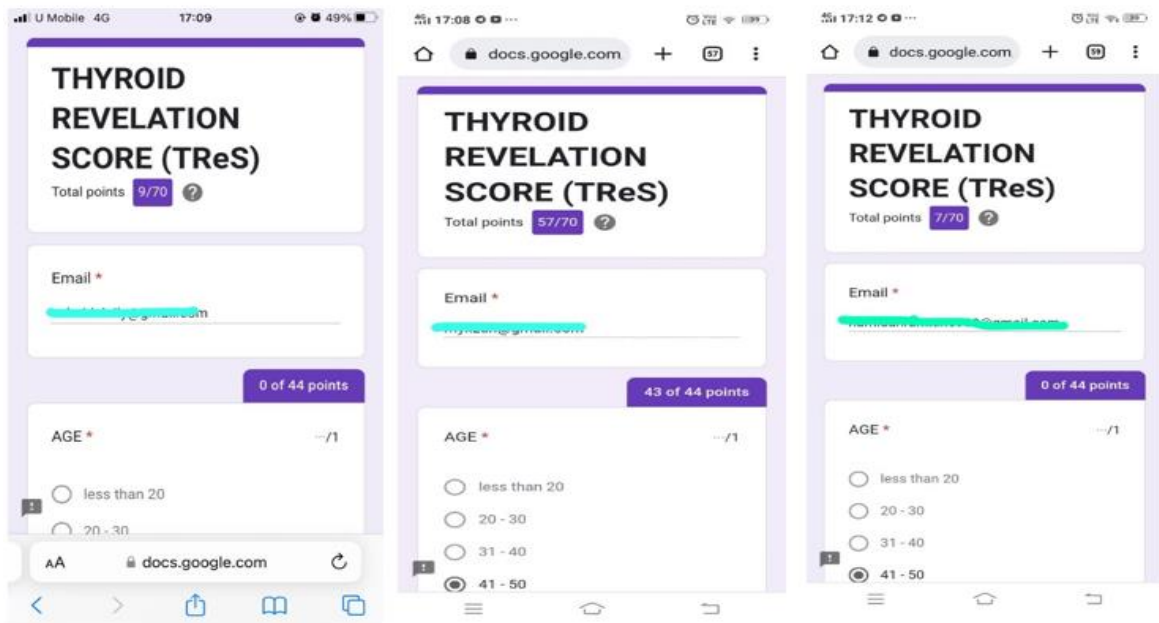
BENEFIT

This will improve the quality of life and important due to the possible contribution on happiness to the society. To create thyroid alert society where the community will more aware and give endless support to the Thyroid patients.

COMMERCIALIZATION/INTELLECTUAL PROPERTY

For commercialization, it is expected to gain interest for medical institutions, universities, government agencies, schools and public as self-health measurement

PRODUCT PICTURES



VALIDATION/FEEDBACK

User-friendly and convenience.

Thyroid Revelation Score (TReS)

Feedback & Testimonial 1



I'm ~~Khairul Adhha binti~~ Hassan 36 years old and a Hyperthyroidism dysfunction patient for almost 5 years since 2017. Based on my observation, TReS will improve the quality of life and important due to the possible contribution as self-health monitoring measurement. I hope other people can utilize TReS for early detection and better treatment.

Thyroid Revelation Score (TReS)

Feedback & Testimonial 2



I'm Juliana Anis binti Ramli, 41 years old and a Hyperthyroidism dysfunction patient for almost 18 years since 2004. This score will improve my quality of life whereas this score is good for other patients. |

ADDITIONAL INFORMATION

Medical report and testing report on Thyroid.

| TEST | RESULT | FLAG | UNIT | REFERENCE RANGE |
|------------------------------------|--------|------|--------|-----------------|
| ENDOCRINE | | | | |
| Thyroid Stimulating Hormone (CMIA) | <0.01 | * | mIU/L | (0.35- 4.55) |
| Free T4 (CMIA) | 82.5 | * | pmol/L | (12.2 - 22.4) |

PANTAI
PREMIER
PATHOLOGY

Name : FATINI HANIM BT MOHAMED TAUFEK
IC No : 830620105528
DOB : 20/06/1983
Age/Sex : 39 Years / Female

Lab No : KNL22030084
MRN : 830620105528
Location : Kuantan - Premier Lab

Requester : DR SITI ZALEHA BT ROZALI
Klinik Al-Amin Sdn Bhd, Dataran Jam, Masjid Sultan
Ahmad 1, Majlis Negeri, Kuantan, 25000 Pahang

LABORATORY REPORT

Branch : Kuantan Lab
Collected : 21/10/2022
Received : 21/10/2022 12:58
Reported : 22/10/2022 11:16
Page No : 1 / 1

| Test | Patient Result | Normal Range | Units | Comment |
|----------------------------|----------------|---|--------|---------|
| Biochemistry | | | | |
| hs-CRP | H 9.94 | <5.0 | mg/L | |
| Ferritin | 124.0 | 13 - 150 | ug/L | |
| Thyroid Function | | | | |
| TSH | H 12.20 | 0.27 - 4.20 | mIU/L | |
| T4 Total | 72.4 | 66 - 181 | nmol/L | |
| Free T4 | L 10.50 | 12.0 - 22.0 | pmol/L | |
| Free T3 | 4.46 | 3.1 - 6.8 | pmol/L | |
| Immunology | | | | |
| Anti-Thyroidperoxidase abs | H >600 | <34 | kiU/L | |
| Anti-Thyroglobulin Abs | H 385 | <115 | kU/L | |
| Vitamins | | | | |
| Vitamin D (25 OH) | L 28 | Deficient <25 Insufficient 25 - 50 Consider reducing dose >175 | nmol/L | |
| Vitamin B12 | L 87 | Deficient <145 Insufficient 145 - 250 Consider reducing dose >569 | pmol/L | |
| Serum Folate | L 2.61 | 8.83 - 60.8 | nmol/L | |

| Test Name | In Range | Out Of Range | Reference Range | Lab |
|-----------------------|-----------------|---------------------|---|------------|
| TSH | 3.51 | | mIU/L Reference Range > or = 20 Years 0.40-4.50 Pregnancy Ranges First trimester 0.26-2.66 Second trimester 0.55-2.73 Third trimester 0.43-2.91 | TP |
| T4, FREE | 1.2 | | 0.8-1.8 ng/dL | TP |
| Test Name | In Range | Out Of Range | Reference Range | Lab |
| T3, FREE | 2.7 | | 2.3-4.2 pg/mL | TP |
| THYROID PANEL | | | | TP |
| T3 UPTAKE | 33 | | 22-35 % | |
| T4 (THYROXINE), TOTAL | 7.4 | | 4.5-12.0 mcg/dL | |
| FREE T4 INDEX (T7) | 2.4 | | 1.4-3.8 | |

EXPERT REVIEWER

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Klinik Al-Amin, Kuantan (MUIP)



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