

**NO: P.224**

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# TTS 2024

**ISTANBUL TURKEY**

September 22-25  
+ Virtual October 21-23

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# Comparison of Higher Alternative Health Eating Index-Taiwan Scores and Lipid Profiles in Long Term Follow-up Renal Transplant Recipients in Taiwan

**Author: I-Hsin Tseng <sup>1</sup>**



I-Hsin Tseng <sup>1</sup>; Te-Chih Wong <sup>2</sup>; Shih-Wei Nien <sup>1</sup>; Yi-Ming Wu <sup>1</sup>; Hsu-Han Wang <sup>3</sup>; I-Hsin Lin <sup>1</sup>

<sup>1</sup> Department of Medical Nutrition Therapy, Linkou Chang Gung Memorial Hospital, Taoyuan City, Taiwan;

<sup>2</sup> Department of Nutrition and Health Sciences, Chinese Culture University, Taipei, Taiwan

<sup>3</sup> Department of Urology, Linkou Chang Gung Memorial Hospital, Taoyuan City, Taiwan;





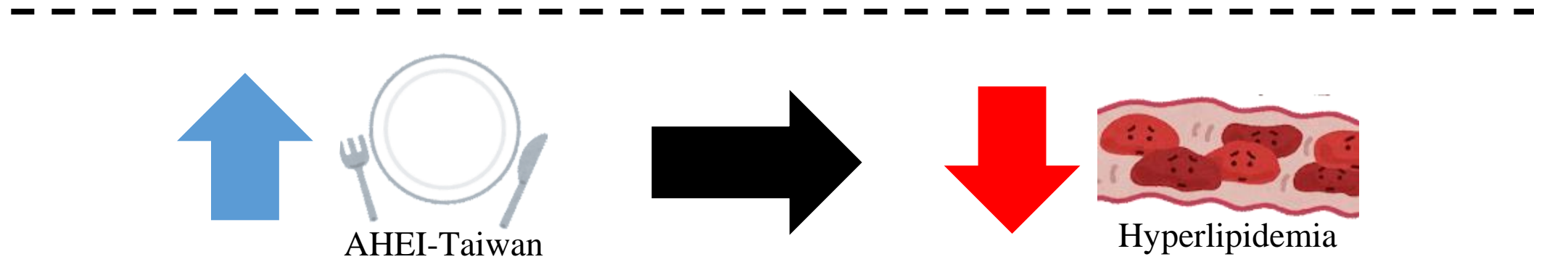
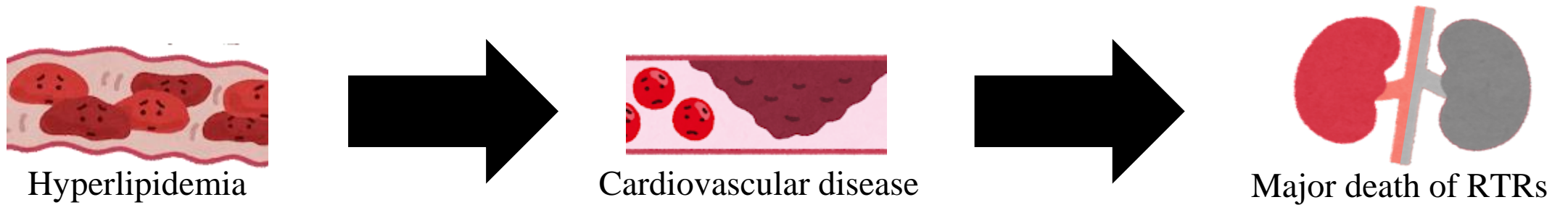
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## COI Disclosure

Name of First Author : I-Hsin Tseng

**The authors have **no** financial conflicts of interest to disclose concerning the presentation.**

# High diet quality indices, lower risk of lipid profiles abnormalities



- ✓ Reflected dietary change immediately
  - 32 healthy population *Chung, 2009*
- ✓ Negatively related to blood sugar
  - 196 diabetes patients *Lee, 2010*
- ✓ Negatively related to systolic blood pressure
  - 68 hemodialysis patients *Yang, 2011*

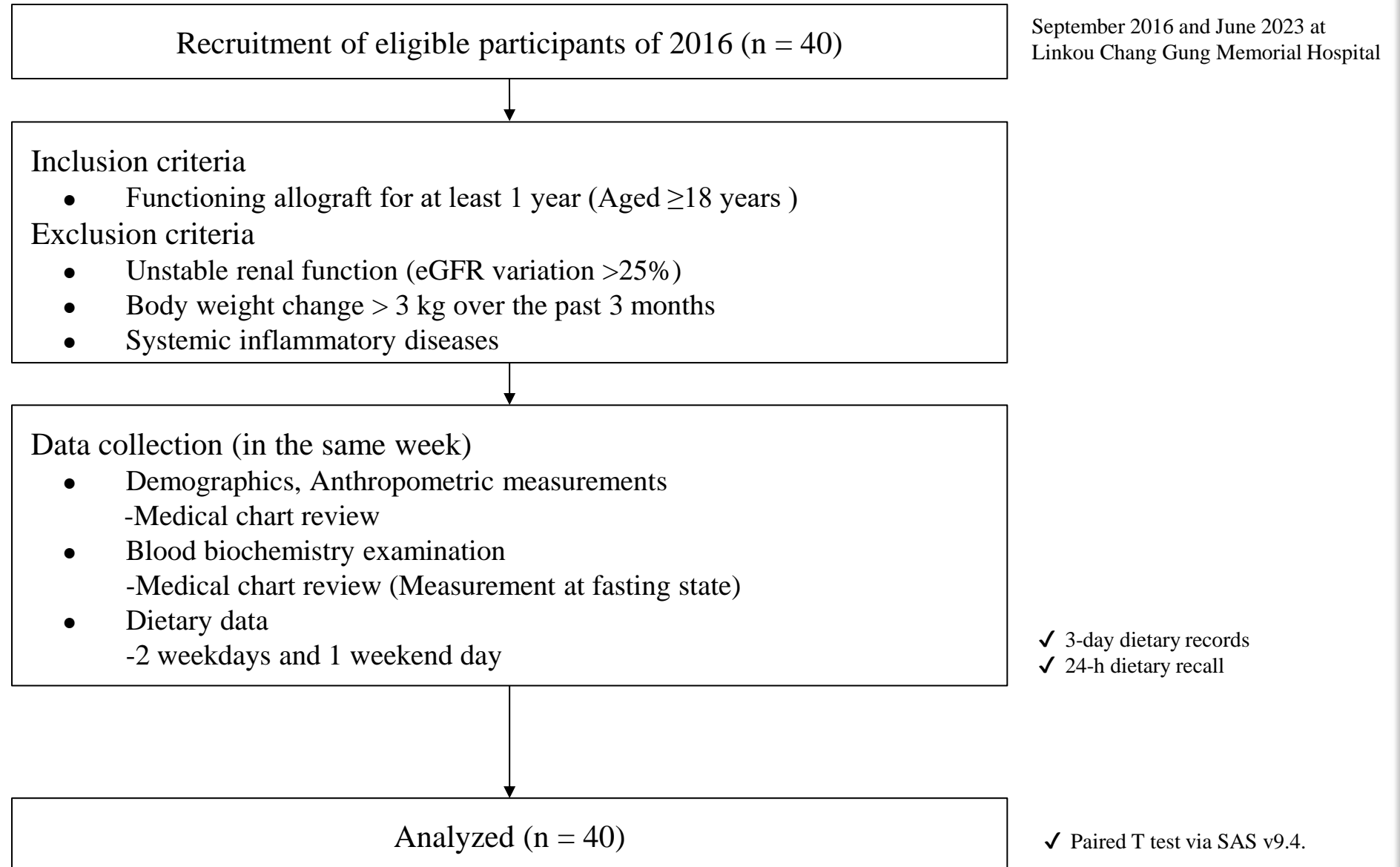
- ✓ Negatively related to risk of lipid profiles abnormalities
  - 106 RTRs
  - **Cross-sectional study** *Lin et al., 2023*

**Retrospective cohort study ?**

RTRs: renal transplant recipients  
AHEI-Taiwan: Alternative Health Eating Index-Taiwan

Chang Gung Memorial Hospital CMRPG3F2001  
Chang Gung Memorial Hospital CMRPG3N0781

# Study procedure



**Figure 1.** Study procedure and flowchart with patients' enrollment.

*eGFR, estimated glomerular filtration rate*

Table 1. Comparison of paired macronutrients and Alternative Health Eating Index-Taiwan Score between the first and the sixth year (n = 40)<sup>1</sup>

Paired Post-Pre	Mean	SD	SD Error Mean	95% confidence interval		t	DF	Significant
				Lower	Upper			
Calories, kcal/day	-108.0	485.3	76.7	-263.2	47.2	-1.4	39	0.167
Protein, g/day	1.5	19.0	3.0	-4.6	7.5	0.5	39	0.627
Carbohydrate, g/day	-20.4	63.7	10.1	-40.7	0.0	-2.0	39	*0.049
Fat, g/day	-3.2	26.0	4.1	-11.6	5.1	-0.8	39	0.437
Dietary fiber, g/day	-0.7	7.1	1.1	-3.0	1.6	-0.6	39	0.529
AHEI-Taiwan Score								
<sup>a</sup> Trans-fat	0.0	0.0	0.0	0.0	0.0	.	39	.
<sup>b</sup> PUFA/SFA ratio	-0.4	1.9	0.3	-1.0	0.2	-1.4	39	0.167
<sup>c</sup> Fruit	-0.4	1.2	0.2	-0.8	0.0	-2.2	39	*0.035
<sup>d</sup> Vegetable	-0.3	2.7	0.4	-1.1	0.6	-0.6	39	0.535
<sup>e</sup> Whole grain	-0.7	4.0	0.6	-2.0	0.6	-1.1	39	0.272
<sup>f</sup> White/red meat	1.2	3.3	0.5	0.1	2.3	2.3	39	*0.029
<sup>g</sup> Nuts and soy protein	-0.3	4.3	0.7	-1.7	1.1	-0.4	39	0.660
<sup>h</sup> Multi-vitamin use	0.0	0.0	0.0	0.0	0.0	.	39	.
<sup>i</sup> Alcohol	0.0	0.0	0.0	0.0	0.0	.	39	.
Total score	-1.1	9.0	1.4	-4.0	1.7	-0.8	39	0.428

<sup>1</sup>Analyzed by using paired t-test.

SD: standard deviation; DF: degree of freedom

<sup>a</sup> Trans-fat consumption was calculated in grams (10 points for ≤ 1 g and 0 points for ≥ 8 g).

<sup>b</sup> Polyunsaturated fatty acid and saturated fatty acid ratio consumption was assigned 0–10 points for a ratio < 0.1 to ≥ 1.

<sup>c</sup> Fruit consumption was defined as follows: 0–10 points for 0–2 servings/day.

<sup>d</sup> Vegetable consumption was defined as follows: 0–10 points for 0–3 servings/day.

<sup>e</sup> Whole-grain consumption was calculated in percentage: 10 points for ≥ 50% of cereal intake.

<sup>f</sup> White to red meat ratio was assigned 0–10 points for 0–4 servings/day.

<sup>g</sup> Nut and soybean consumption was assigned 0–10 points for 0–1 servings/day.

<sup>h</sup> Vitamin consumption was assigned 2.5–7.5 points for < 5 years to ≥ 5 years.

<sup>i</sup> Alcohol consumption was defined as 0–10 points for 0 or > 3.5 equivalent and 0.5–2.5 equivalent in men and 0 or > 2.5 equivalent and 0.5–1.5 equivalent in women.


**After 6-year follow-up:**  
 Ratio of White/red meat  
 Intake of Carbohydrate, Fruit

Table 2. Comparison of paired Laboratory data and AHEI-Taiwan Score between the first and the sixth year<sup>1</sup> between the first and the sixth year (n = 40)<sup>1</sup>

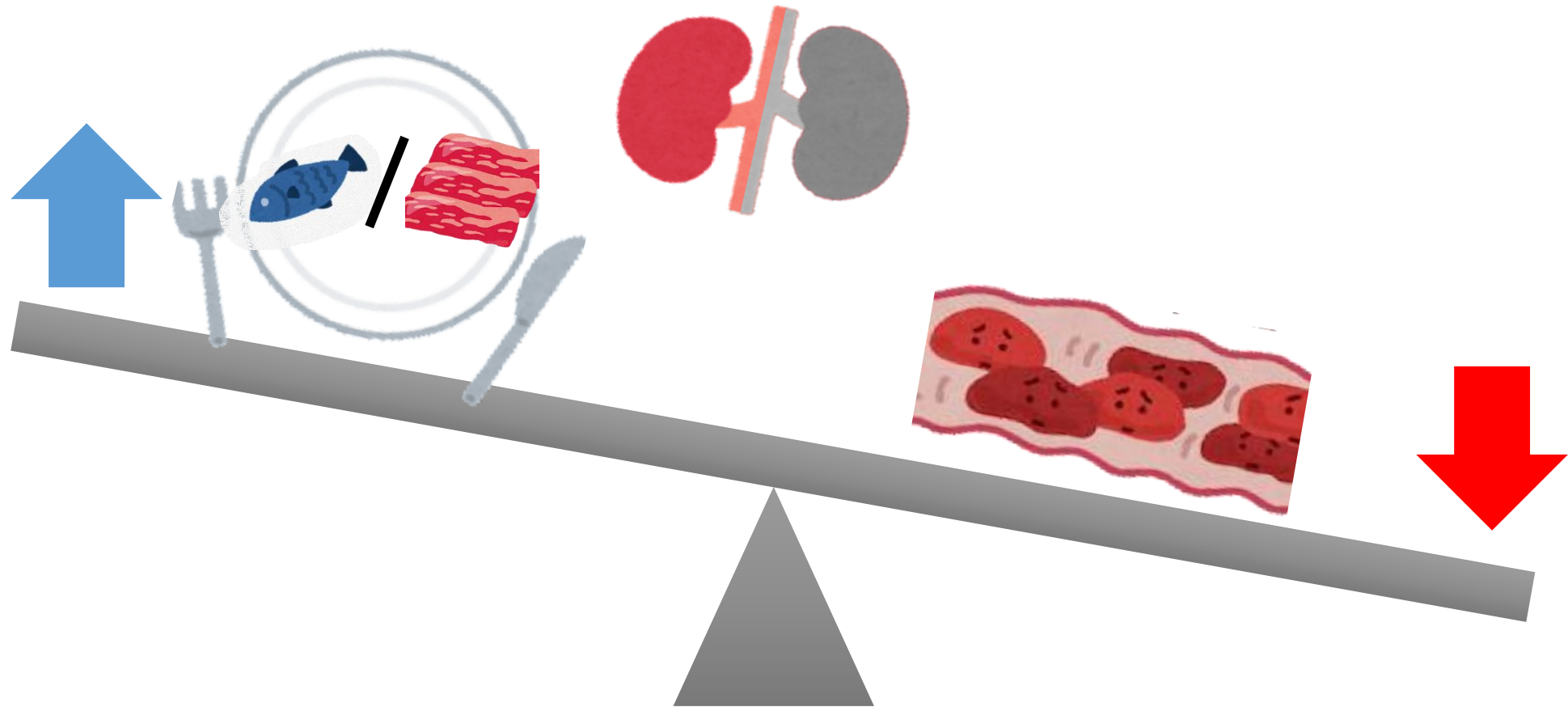
Paired Post-Pre	Mean	SD	SD Error Mean	95% confidence interval		t	DF	Significant
				Lower	Upper			
<b>Baseline Demographics</b>								
Age, years	49.3	10.9						
Follow up time, years	6.2	0.4						
Dialysis time, years	12.5	21.2						
RT time, years	9.6	5.9						
<b>Anthropometrics</b>								
BMI, kg/m <sup>2</sup>	0.3	2.2	0.3	-0.4	1.0	0.8	39	0.407
Body fat, %	-0.9	8.7	1.4	-3.7	1.9	-0.6	39	0.531
Muscle mass, kg	-2.0	5.0	0.8	-3.6	-0.4	-2.5	39	*0.017
Physical activity	-0.4	0.5	0.1	-0.6	-0.3	-6.0	39	*<.0001
<b>Clinical Characteristics</b>								
hs-CRP, mg/dL	-2.1	14.3	2.5	-7.2	3.1	-0.8	31	0.418
Uric acid, mg/dL	-0.5	1.8	0.3	-1.1	0.0	-1.9	39	0.063
<b>Lipid profile</b>								
TC, mg/dL	-26.5	47.5	7.5	-41.7	-11.3	-3.5	39	*0.001
HDL-C, mg/dL	-1.8	11.9	1.9	-5.6	2.1	-0.9	39	0.358
LDL-C, mg/dL	-22.5	41.2	6.5	-35.7	-9.3	-3.5	39	*0.001
TG, mg/dL	-8.1	97.1	15.4	-39.1	23.0	-0.5	39	0.603



After 6-year follow-up:  
Muscle mass, Physical activity, TC, LDL-C

<sup>1</sup>Analyzed by using paired t-test.

SD: standard deviation; DF: degree of freedom; RT: renal transplant; BMI: body mass index; hs-CRP: high sensitivity C-reactive protein; TC: total cholesterol; HDL-C: high-density lipoprotein cholesterol; LDL-C: low-density lipoprotein cholesterol; TG: triglycerides



Higher ratio of white red meat intake had a lower risk of hyperlipidemia in long term follow-up Taiwanese RTRs.





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**THANK YOU!**