

Oneida Comprehensive Health Division
Community Meeting
University of Wisconsin - Madison
Stroke & Cerebrovascular Disease in Oneida Nation
January 22, 2025



ONEIDA



Introduction

Sid White, DPT, MPT, MBA

Assistant Division Director

920.869.6554

swhite1@oneidanation.org



Housekeeping

Meeting Format

Streamed & Recorded

Restroom Locations

Light Meal

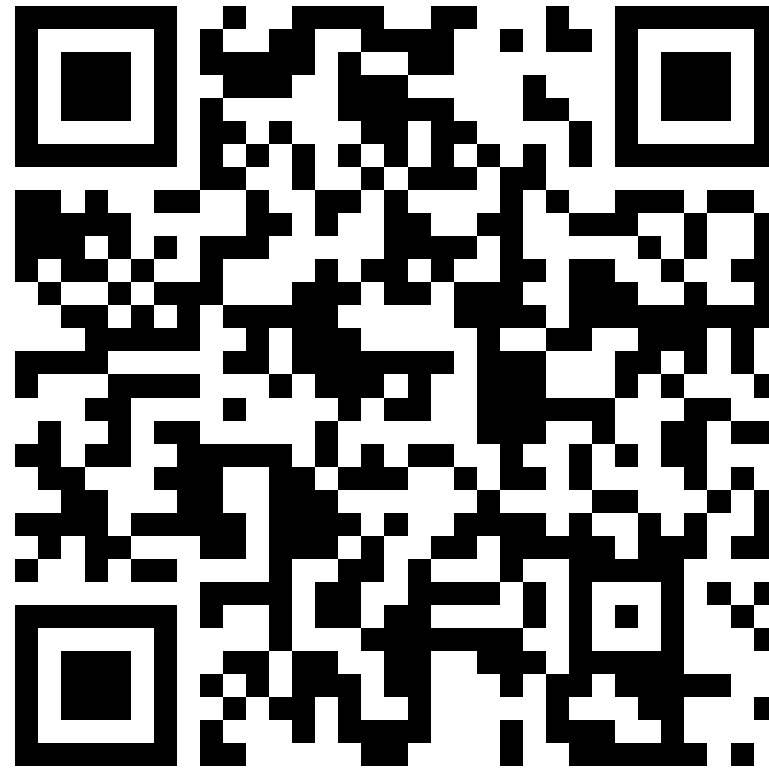
Staff Available to Assist

Program Leadership Available Post-Meeting

A good mind. A good heart. A strong fire.



Presentation QR Code



A good mind. A good heart. A strong fire.





Administration

Debra J. Danforth, RN, BSN

Division Director

920.869.2711, ext. 4807

ddanfort@oneidanation.org



ONEIDA

Vision: A Progressive Sustainable Health System That Promotes Tsi?niyukwalihot^ (Our Ways)

Mission: We Provide the Highest Quality, Holistic Health Care to Ensure Wellness for OUR Oneida Community

Values:

Responsive Leadership
Communication
Trust is the Foundation

Safety
Culturally Sensitive
Respect

Five Principles Nation Building

Transformational Leadership

Strong Governing Systems

Cultural Relevancy

Strategic Outlook

Sovereignty

A good mind. A good heart. A strong fire.



Nation Building Themes

Use Relevant Data for Decision-Making

Integrate Oneida Values into Healthcare

Strengthen Healthcare Collaboration

Create a Sustainable Health System

Advance Community Engagement

A good mind. A good heart. A strong fire.





Health and Wellness Expo

JANUARY 23, 2025

11:00 AM - 2:30 PM

Oneida Community Health Center

- INFORMATIONAL BOOTHS • BLOOD PRESSURE CHECKS • RECIPES
- NEW ONEIDA TRAIL GUIDES • GIVEAWAYS • AND MORE

Expert Presentations

11:00 AM Dr. Robert Dempsey

Stroke and Brain Health in the Oneida Nation

12:00 PM Dr. Christine Garstka

Power of Connection for our Mental Wellness

1:00 PM Stephenie Muscavitch

Health and Wellness Stored in Our History

Space is limited for presentations.

Facebook Live Stream - Oneida Comprehensive Health Division

FREE EVENT



ALL ARE WELCOME

Need more information?

Contact: Amanda 920-490-3984 or ariesenb@oneidanation.org

11/21/2024



ONEIDA



Mary Cornelissen

Manager Employee Health

47 Years of Service
December 5, 1977





Karen Krause

Coordinator

36 Years of Service

January 18, 1989



ONEIDA



Diana Hernandez

Manager Business

33 Years of Service

December 19, 1991



ONEIDA

Linda Tryba
Manager Activities
33 Years of Service
January 6, 1992





David Larson

Director Continuum of Care

30 Years of Service
January 3, 1995





Kim Mehojah

Pharmacy Tech

29 Years of Service
November 13, 1995





Kathryn Paulick

Senior Dental Assistant

26 Years of Service

December 6, 1998



ONEIDA

20-24 Years of Recognition

Linda Stops

- **Patient Accounts**

Neva Archiquette

- **Community Health**

Barbara Kamps

- **Dental Hygienist**

Margaret Valencia

- **Purchased Referred Care**

20-24 Years of Recognition

Pepin Steckler

- **Scientist Lab**

Sidney White

- **Assistant Division Director**

Linn Cornelius

- **Supervisor Patient Accounts**

Rob Pamanet

- **Patient Accounts**

20-24 Years of Recognition

Sheila Baumgart

- **Patient Accounts**

Cindy Mooren

- **Purchased Referred Care**

Gertude Jones

- **Certified Nursing Assistant**

Tina Platt

- **Patient Accounts**

Monica Montgomery

- **Registered Nurse**

15-19 Years of Recognition

Louetta Fowler

- **Community Health Nurse**

Phyllis Shaline

- **Community Health Nurse**

Frances Huempfer

- **Dietary Aide**

Lori Turpeinen

- **Registered Nurse**

Joan Oxley

- **Medical Records**

Educational Placements

Division Commitment to Learning & Development

Gabby James

- UW-Madison
- Physician Assistant
- Stephanie Eberhardy, PA

Abigail Schultz

- Bellin College
- Family Nurse Practitioner
- Katie Farley, NP

Jennifer Kilmer

- Spring Arbor University
- Psychiatric Mental Health
Nurse Practitioner
- Crystal Peters, NP

Dr. Merna Ghobrial

- Resident Community Health

Hours of Operation

Survey: Perceptions of Operating Hours

January to February 2024 = 486 Respondents
Most Common: Monday/Wednesday/Saturday

A good mind. A good heart. A strong fire.



Hours of Operation

Phase 1: Medical Clinic

Added 3:45 pm Appointments
Added 4:00 pm Appointments

Hours of Operation Phase 2: Health Center

Extended Monday Hours

Started on January 6, 2025

Hours of Operation: 7:00 am to 6:00 pm

Plan: Assess Quarterly Data April 2025



Behavioral Health

Medication Assisted Treatment Pilot

Mari Kriescher MS, LPC, CSAC, ICS

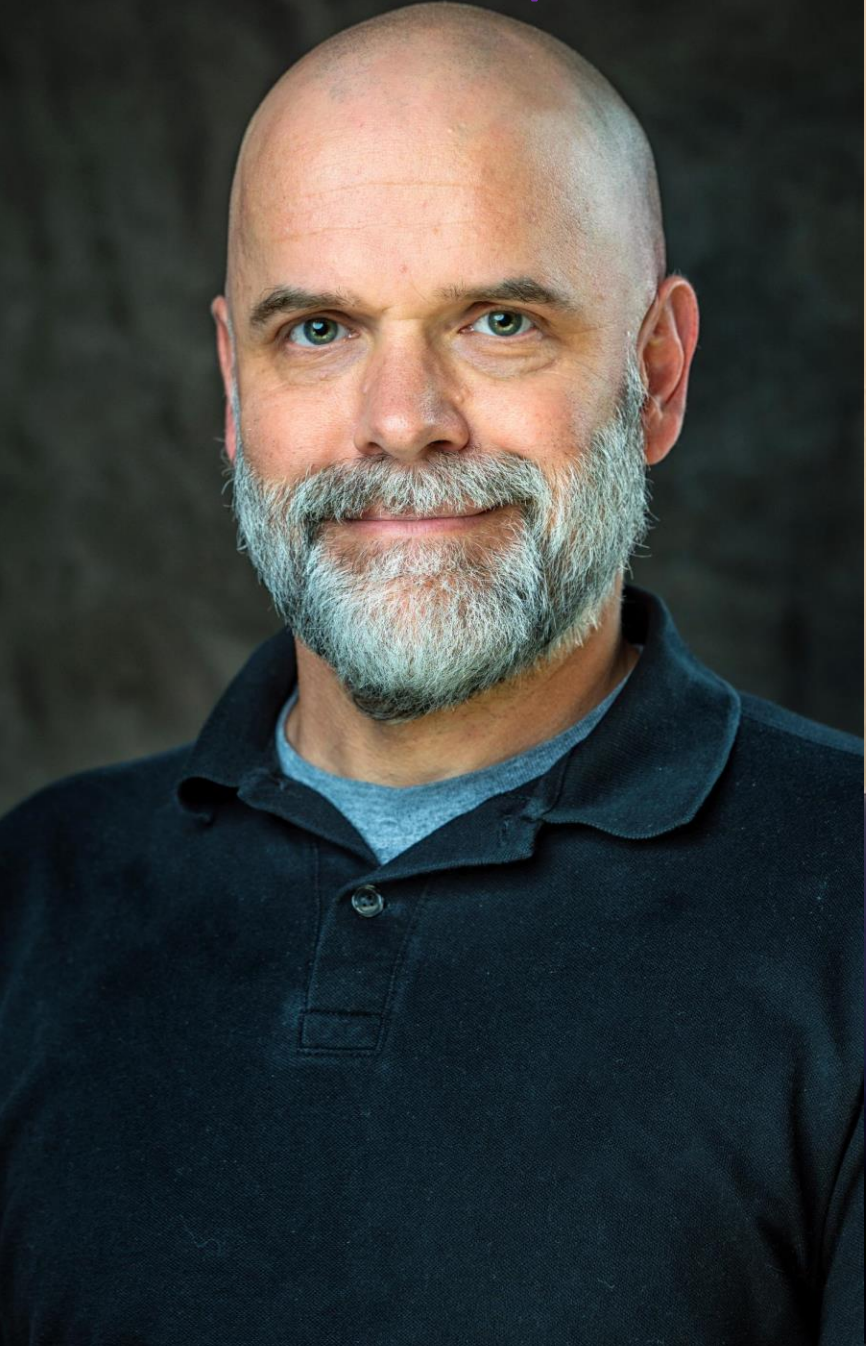
Behavioral Health Director

920-490-3737

mkriesch@oneidanation.org



Seth Moore, APNP



Yogesh Pareek, MD



Crystal Peters, APNP





Medical Provider Additions

Karen Lane, DO, FAAP

Medical Director

920.869.2711

klane@oneidanation.org





Dr. Valerie J. Hay

Pediatrician

Completing On-Boarding Process
Accepting New Patients Soon





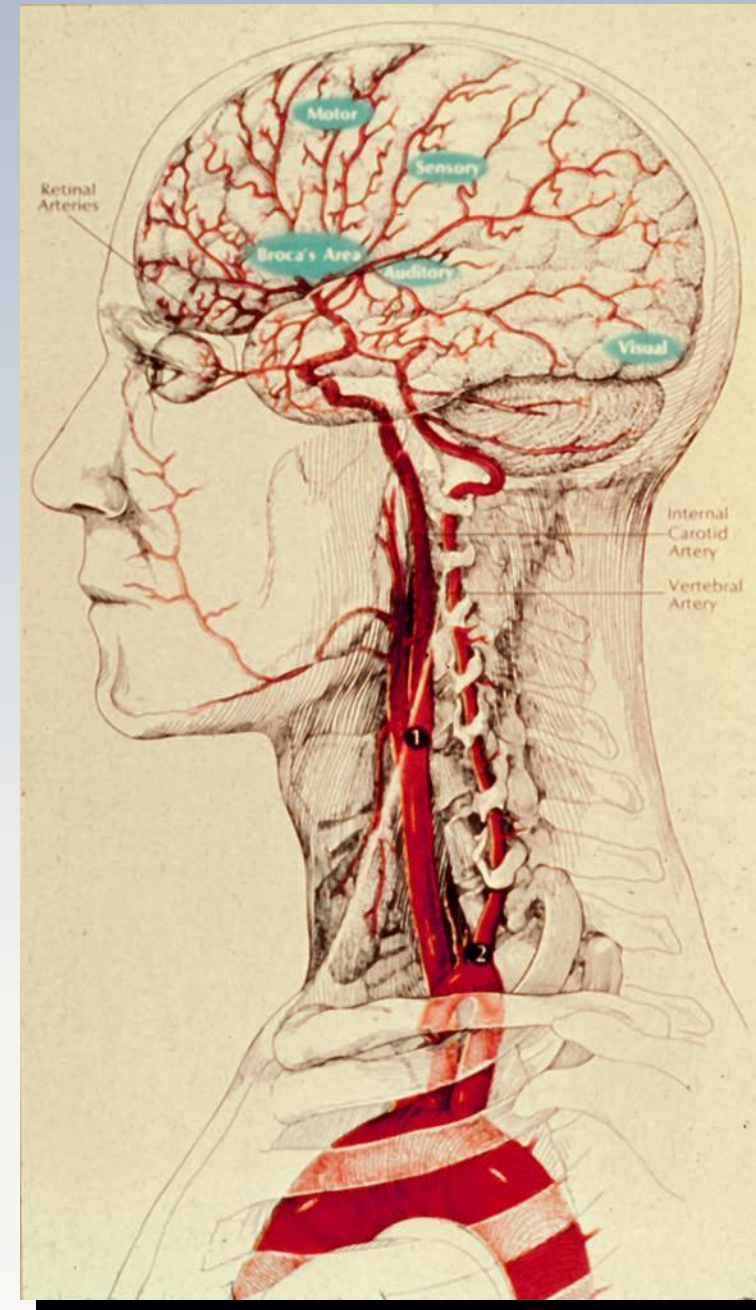
Robert Dempsey, MD

**University of Wisconsin School of
Medicine and Public Health
Chairman of Neurological Surgery**



WHAT IS A STROKE?

Sudden
neurologic
defect of a
vascular organ



WHAT DOES A PERSON NOTICE?

- Loss of speech
- Loss of vision
- Loss of motor: strength, coordination or swallow
- Loss of sensation

What they may not notice:

- Loss of memory, judgement, creativity, decision making



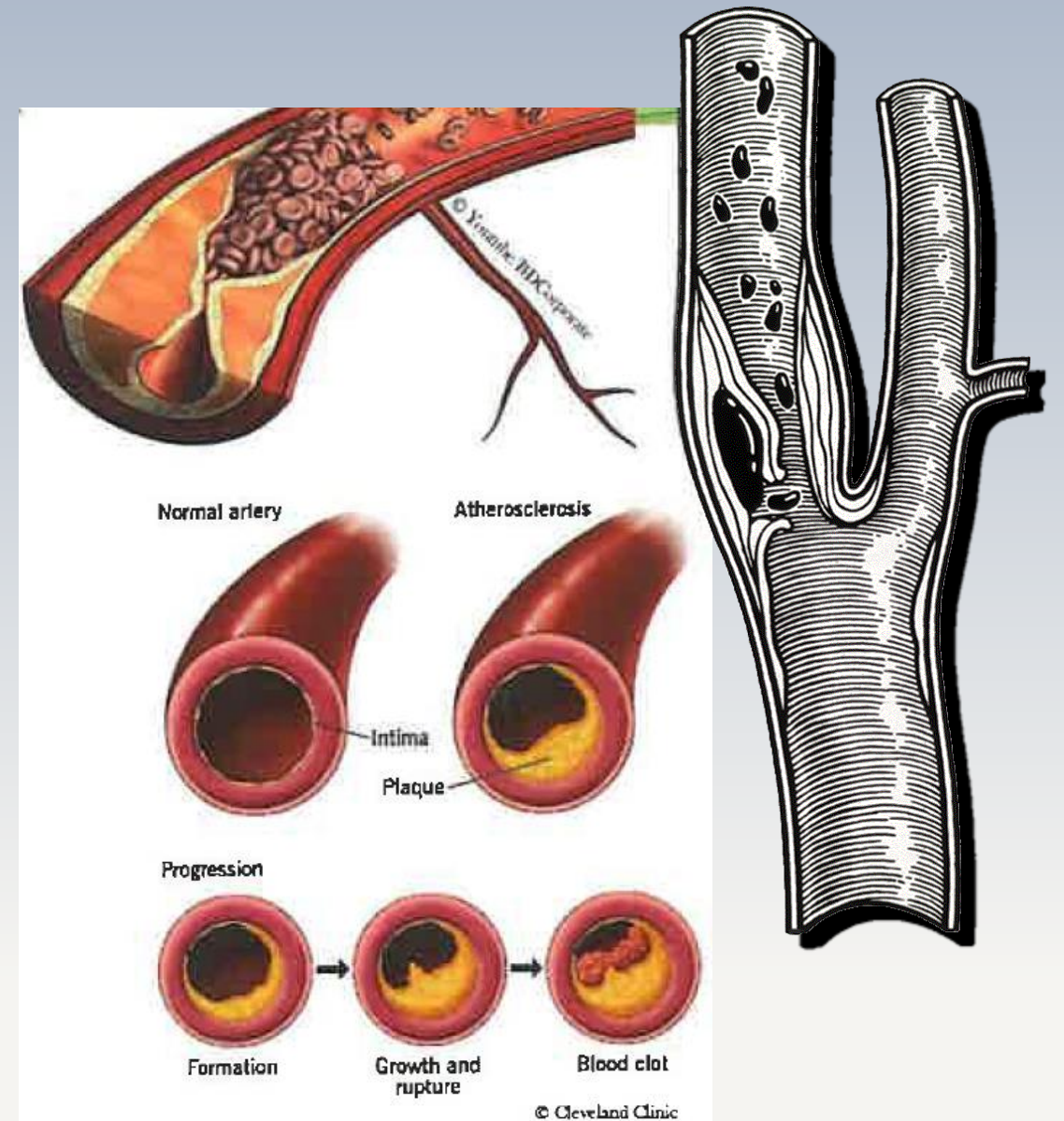
WHY?

Brain is 3% of us and
requires 25% of our
cardiac output to supply
energy

Loss of flow cuts all
function immediately
and neurons die in five
minutes



Atherosclerosis
blocks these vessels
both slowly and
suddenly



WHAT MAKES THIS MORE LIKELY TO HAPPEN?

- Smoking
- High blood pressure
- Diabetes
- Poor diet and cholesterol
- Lack of exercise



WHAT CAN YOU DO?

- Exercise
- Health Eating
- Never smoke
- Good medical check ups



GLOBAL MEANS AT HOME AS WELL

How does it all come together?
What US population has the highest
concentration of stroke risk factors



The current concern/challenges:

Native Americans (NA) have a higher incidence and prevalence of stroke and the highest stroke-related mortality in the United States

Risk factors related to stroke

Obesity and Overweight

Diabetes

Hypertension

High Cholesterol

Hyperlipidemia

Physical inactivity-Smoking



Oneida Nation members



Our Project

Establish a partnership between the University of Wisconsin's (UW) multidisciplinary stroke program and the Oneida Nation

AIM 1: Decrease Stroke, and Vascular Cognitive Decline

AIM 2: Determine the risk factors of health and lifestyle, atherosclerosis, vascular dementia and blood biomarkers

AIM 3: Determine what interventions work best in a Native American population at risk for stroke



Tehassi Hill -
Chairman Oneida
Business Committee



Debra Danforth RN, BSN
Operations Division Director of the
Oneida Comprehensive Health Division
for the Oneida Nation



Karen Lane, DO
Medical Director





PRELIMINARY WORK

Over 5 years of preparation with the tribe building on 3 decades of working with indigenous people
Essentially important to the Oneida Commission & the UW Team is the impact of stroke on premature cognitive decline



Robert J. Dempsey, MD, FACS
Chair & Professor Neurological
Surgery



Melissa Metoxen
NACHP Assistant Director
UW-Madison



Amanda Riesenber, Stroke Preventive
Wellness Coach Oneida



Eben Schwartz, PhD Assistant
Professor Neurology



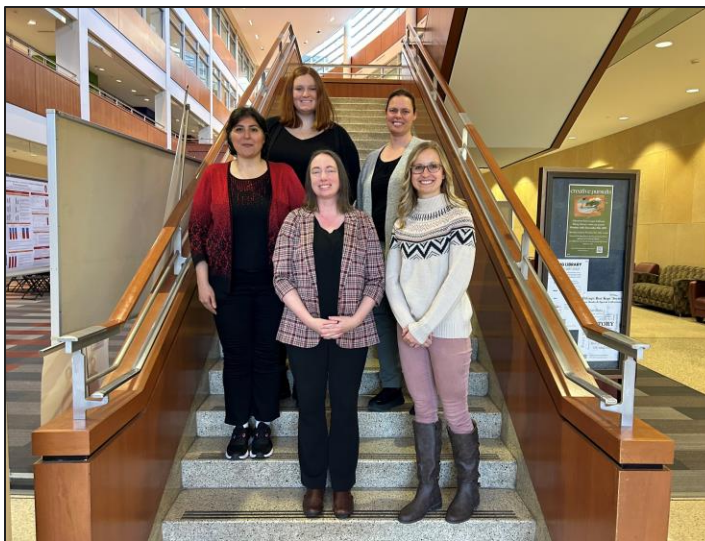
Carol C. Mitchell, PhD
Associate Professor Cardiovascular
Medicine UW -Madison



Debra Danforth RN, BSN
Operations Division Director of the
Oneida Comprehensive Health
Division for the Oneida Nation



Stephanie Wilbrand, PhD
Research Administrator /
Research Program Manager
UW-Madison



UW-Madison Clinical Research Team: Jenna Maybock, Maggie
Oimoen, Sima Sayyahmelli & McKenzie Endres



Daniell Yancey, NACHP Director
UW-Madison



Umadevi Wesley, PhD
Scientist UW Madison

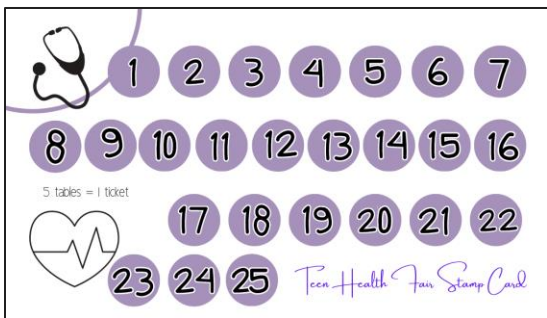


Karen Lane, DO
Medical Director





Health Fairs & Assessments

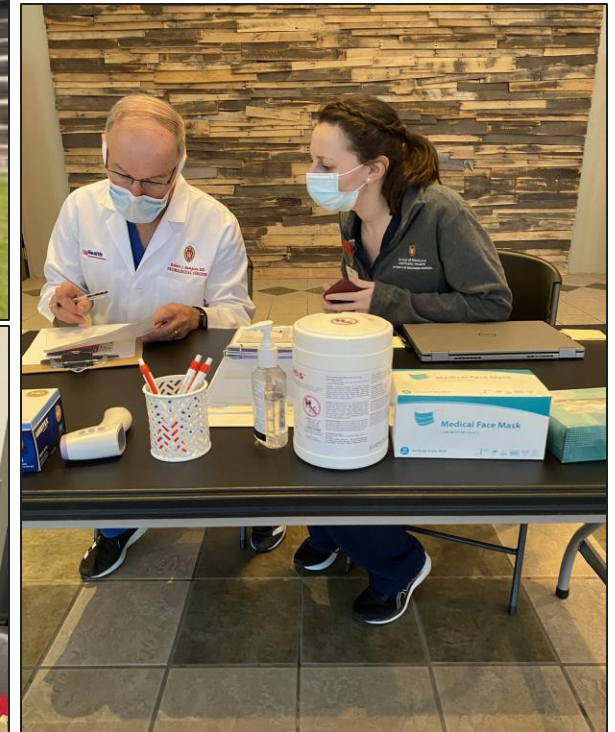
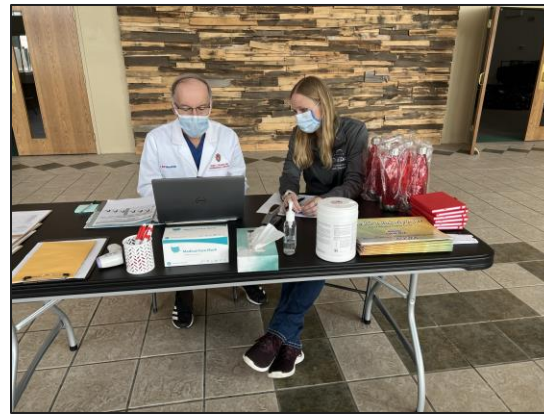


Stroke
TIA
Diabetes
Hypertension
Coronary Artery Symptoms
Smoking
Obesity
Carotid Atherosclerosis
Vascular Cognitive Decline
Plasma/Blood Biomarkers

We must learn which risk factors are present, which we can change, and which will reduce stroke



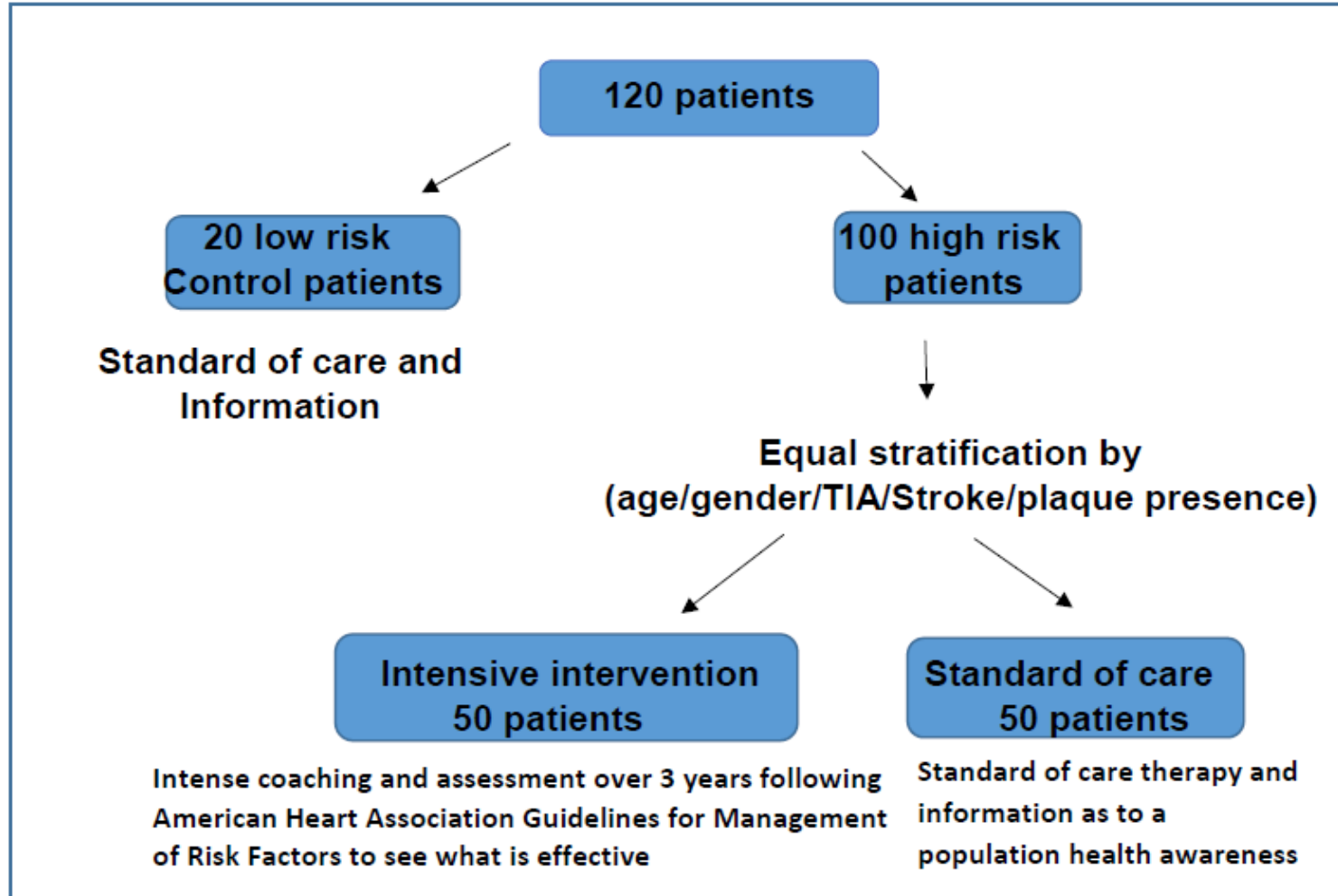
Indigenous Health & Wellness Fair
 Health Expo Events
 Oneida Bicentennial & JMI Event
 Walk with the Doc
 Oneida Career Fair
 Oneida Cultural Event
 Oneida Teen Health Career Fair
 Turtle School Visit



The Research Study



**STROKE EDUCATION FOR ENTIRE ONEIDA NATION
STUDY INTENSIVE COACHING IN A SMALLER GROUP TO LEARN IN THE NATION WHAT
METHODS ARE EFFECTIVE**



Study Activities & Schedule

All study activities happen Wednesday afternoon, Thursday and Friday

Thursday morning is bloodwork

5 - 6 UW team members go up

Stations

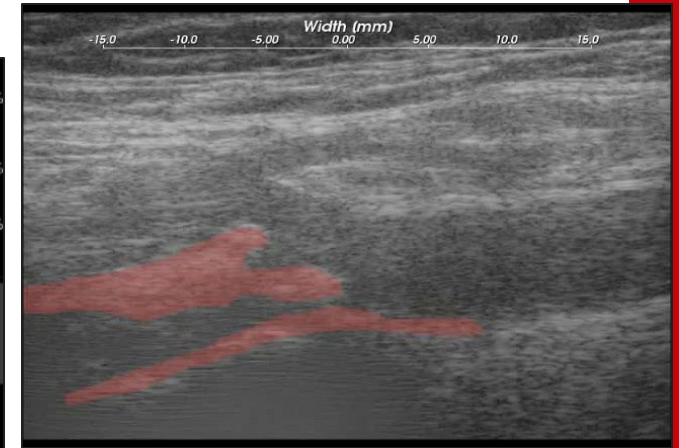
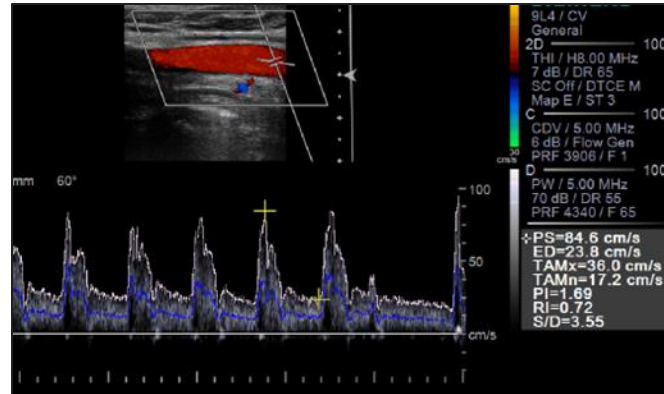
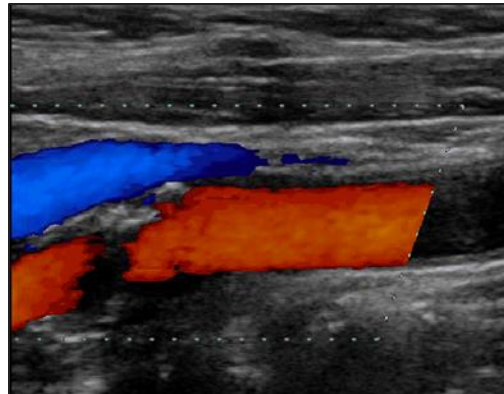
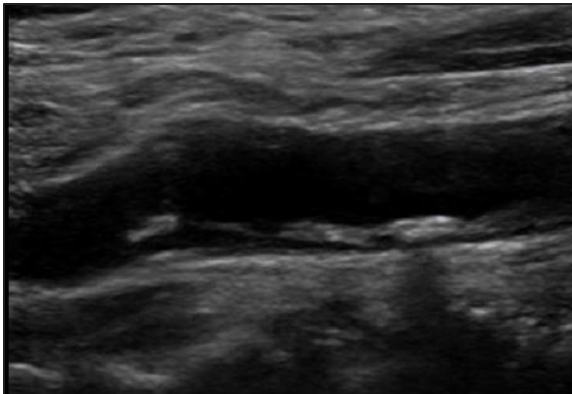
- Comprehensive carotid ultrasound imaging
- Health Assessment - includes medical and family history
- Neurocognitive Assessment
- Coaching visit
- Bloodwork



Ultrasound



- Comprehensive carotid ultrasound
 - Bilateral imaging B-mode, Color Doppler, Pulse wave Doppler
 - Common carotid artery
 - Grayscale analyses (plaque presence/absence, plaque texture features)
 - Carotid bulb
 - Internal carotid artery
 - External carotid artery
 - Vertebral artery
 - Doppler hemodynamic measures (peak systolic velocity, end diastolic velocity, resistive index, pulsatility index, systolic:diastolic ratio)
- Carotid strain imaging (baseline exam only)



Ultrasound

- Plaque analysis
 - Confirm presence of plaque
 - Compute total plaque area (sum area of all plaques)
 - Lowest grayscale median value



Plaque parameters

File Help

Image region

Image colouring (10 contours)

Zoom

Select drive

A:
B:
C:
D:
E:
F:
G:
H:

Meas. Dark area close to lumen
1 comp. All plaque
Perc. of dark area:
Dark area mm2:
Dark area

Dark area
Close to lumen No

Patient status

Discrete white areas No

Type of plaque
Type 4

Percent Stenosis 1-99%

HELP
In order to calculate the parameters for a plaque file, double click on the appropriate ...pl (version 1.x) or ...plq(version2.x) file

% STENOSIS

ECST NASCET

50 12
55 20
60 30
65 40
70 47
72 50
77 60
80 65
83 70
88 80
90 82
95 90
99 99

Histogram measures

Kurtosis 1.72823
Total number of pixels 736
Plaque area mm2 1.84
Perc. of pix below lev.30 0%
Perc. of pix below lev.50 0%

Contours

Black 0%
0%
7.609%
29.62%
38.72%
17.12%
5.978%
0.9511%
White 0%
0%

Intensity image - colour percent.

Texture measures

SGLDM measures

Ang.S.Mom 0.00174691
Contrast 56.1258
Correl 0.954469
Variance 616.568
Homoge. 0.180341
Sum Aver. 224.004
Sum Var. 2410.15
Sum Entr. 5.07224
Entropy 6.61693
Diff. 22.5282
Inf.Meas1 2.66856
Inf.Meas2 -0.52373

First ord. stats

Mean 109.798
Variance 625.452
Median 109.5
Skewn. 0.352697
Energy 0.0136756
Entropy 4.49412

GLDM measures

Homog. 0.181777
Contr. 55.4217
Energy 0.0795368
Entropy 2.74629
Mean 5.57016

Runlength meas.

SRE 0.955817
LRE 1.33907
GLD 9.03872
RLD 610.329
RP 0.665283

Fourier power spec.

Radial 1681.4
Angular 1287.86

Save Parameters ACSRS eq. risk Close



Health Assessment



American Stroke Association.
A division of the American Heart Association.

STROKE RISK ASSESSMENT

DIRECTIONS:

- For each risk factor, select the box (higher risk or lower risk) that applies to you. Select only one box per risk factor.
- Enter a 1 on the blank line next to each checked box.
- Add up your total for each vertical column.

RISK FACTORS*	HIGHER RISK	LOWER RISK
Is your blood pressure greater than 120/80 mm/Hg?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
Have you been diagnosed with atrial fibrillation?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
Is your blood sugar greater than 100 mg/dL?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
Is your body mass index greater than 25 kg/m ² ?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
Is your diet high in saturated fat, trans fat, sweetened beverages, salt, excess calories**?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
Is your total blood cholesterol greater than 160 mg/dL?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
Have you been diagnosed with diabetes mellitus?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
Do you get less than 150 minutes of moderate to vigorous-intensity activity per week?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
Do you have a personal or family history of stroke, TIA or heart attack?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
Do you use tobacco or vape?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
TOTAL SCORE (add your points for each column)	_____	_____

*Some stroke risk factors cannot be changed such as age, family history, race, gender, and prior stroke. **Excess calories means eating more than your body can burn off in a day.

Study ID: _____
Visit: (circle one) Baseline Interim 2 Year Follow-up

Health History/Screening

- 1. Participant complete Stroke Risk Activity.
<https://www.stroke.org/en/about-stroke/stroke-risk-factors/stroke-quiz-english>
- 2. DOB & Age: _____
- 3. Sex: _____
- 4. Tribal Member: Y or N
- 5. Anthropometric measurements:
Height: _____
Weight: _____
Body Mass Index: _____ (18.5-24.9 is the ideal)
Body Mass Index \geq 30 Yes No (circle one)
- 6. Blood Pressure:
Systolic BP: _____ mmHg
Diastolic BP: _____ mmHg
_____ Right Arm _____ Left Arm
- 7. Health History:
History of TIA: _____
History of CAD: _____
History of HTN: _____
History of diabetes: _____
History of Substance abuse (drug and alcohol) _____
Current smoker: (pack/year, when stopped) _____
Previous coaching: _____
Physical Activity (minutes per week) _____
High Cholesterol: _____
Diabetes: _____
Did you contract COVID-19 yes no
COVID-19 Vaccine: (first dose, second dose, single shot, booster) _____
Living situation: _____
Work: Yes No Retired
- 8. Cholesterol Results (from baseline labwork)
Total Cholesterol: _____
LDL: _____
HDL: _____
Non-HDL: _____
- 9. Hemoglobin A1c (from baseline labwork)
Hemoglobin A1c: _____
- 10. ACC AHA ASCVD Risk Calculator-
<http://tools.acc.org/ASCVD-Risk-Estimator-Plus/#!/calculate/estimate/>
ASCVD Score: _____ (Calculated after lab work results are provided)
- 11. Leave history/health screening and move to neurocognitive testing
- 12. Area(s) of emphasis for coaches: _____



Neurocognitive Testing

MoCA First Nations

Native American Acculturation Scale

TabCAT - Tabled-based Cognitive Assessment Tool

K6 - Kessler Screening Scape for Psychological Distress

Native American Acculturation Scale (NAAS)

Instructions: This questionnaire will collect information about your background and cultural identity. For each item, circle the one answer that best describes you.

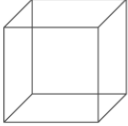
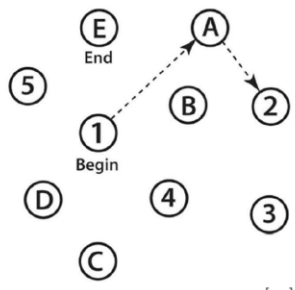
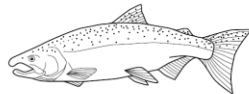
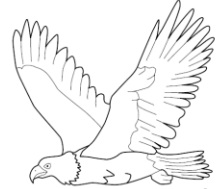
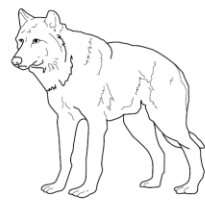
- What language can you speak?**
 - Tribal language only (e.g., Oneida, other _____)
 - Mostly tribal language and English about equally well (bilingual)
 - Mostly English, some tribal language
 - English only
- What language do you prefer?**
 - Tribal language only (e.g., Oneida)
 - Mostly tribal language, some English
 - Tribal language and English about equally well (bilingual)
 - Mostly English, some tribal language
 - English only
- How do you identify yourself?**
 - Native American
 - Native American and some non-Native American (e.g., White, African American, Hispanic/Latino, and Asian American)
 - Native American and Non-Native American (bicultural)
 - Non-Native American and some Native American
 - Non-Native American (e.g., White, African American, Hispanic/Latino, and Asian American)
- What was the ethnic origin of friends you had as a child up to age 6?**
 - Only Native Americans
 - Mostly Native Americans
 - About equally Native Americans and non-Native Americans
 - Mostly non-Native Americans (e.g., White, African American, Hispanic/Latino, and Asian American)
 - Only non-Native Americans
- What was the ethnic origin of friends you had as a child 6-18?**
 - Only Native Americans
 - Mostly Native Americans

- Mostly Native American music
 - Equally Native American and other music
 - Mostly other music (e.g., rock, pop, country, and rap)
- What movies do you prefer?**
 - Native American movies only
 - Mostly Native American movies
 - Equally Native American and other movies
 - Mostly other movies
 - Other movies only
 - Where were you born?**
 - Reservation, Native American community
 - Rural area, Native American community
 - Urban area, Native American community
 - Urban or Rural area, near Native American community
 - Urban or Rural area, away from Native American community
 - Where were you raised?**
 - Reservation, Native American community
 - Rural area, Native American community
 - Urban area, Native American community
 - Urban or Rural area, near Native American community
 - Urban or Rural area, away from Native American community
 - What contact have you had with the Native American community?**

- Other foods only
- In what language do you think?**
 - Tribal language only (e.g., Oneida)
 - Mostly tribal language, some English
 - Tribal language and English about equally well (bilingual)
 - Mostly English, some tribal language
 - English only
 - Do you**
 - Read only a tribal language (e.g., Oneida)
 - Read a tribal language better than English
 - Read both a tribal language and English about equally well
 - Read English better than a tribal language
 - Read only English
 - Do you**
 - Write only a tribal language (e.g., Oneida)
 - Write a tribal language better than English
 - Write both a tribal language and English about equally well
 - Write English better than a tribal language
 - Write only English
 - How much pride do you have in Native American culture and heritage?**
 - Extremely proud
 - Moderately proud
 - A little pride
 - No pride, but do not feel negative

MONTREAL COGNITIVE ASSESSMENT (MOCA®) Version 8.1 Vancouver Island Coastal First Nations

Name: _____ Date of birth: _____
 Education: _____ Sex: _____ DATE: _____ ve

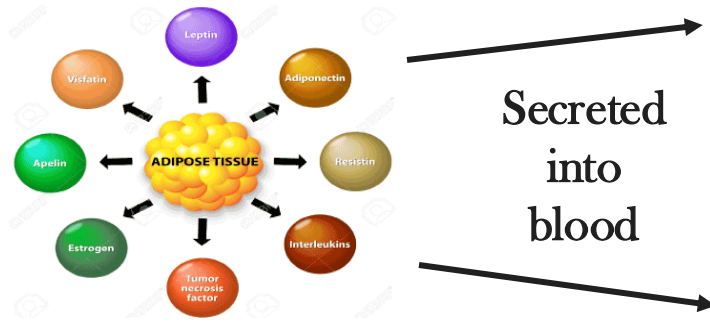
VISUOSPATIAL / EXECUTIVE		POINTS
 <p>Copy square box []</p>  <p>[] [] []</p>	<p>Draw CLOCK (Ten past eleven) (3 points)</p> <p>[] [] []</p> <p>Contour Numbers Hands</p>	<p>___/5</p>
NAMING		POINTS
 <p>[]</p>	 <p>[]</p>	 <p>[]</p> <p>___/3</p>

Bloodwork

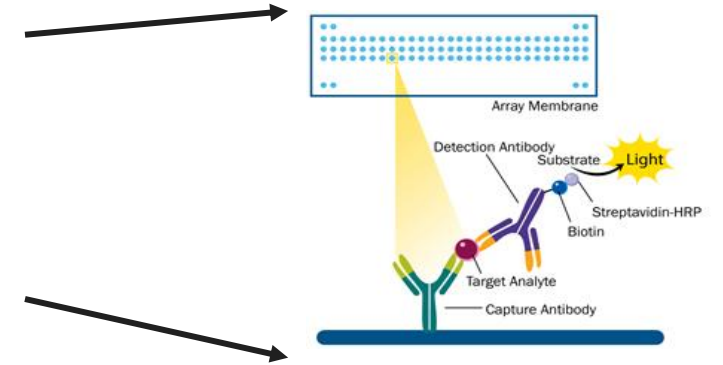
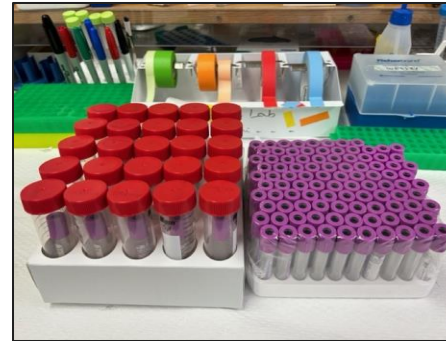


Proteomic profiling to detect the blood/plasma adipokine biomarkers of NA subjects as compared to control Caucasian subjects

-Genetics
-Obesity
-Life style
↓
-signature circulating proteins

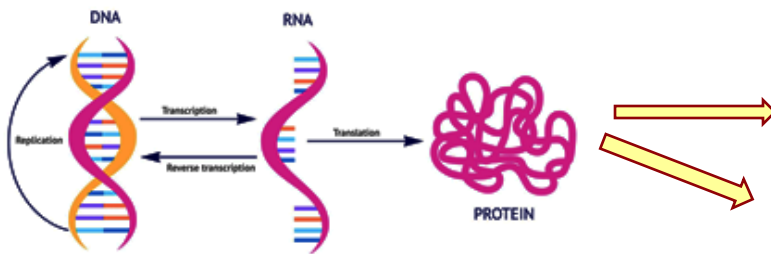


Secreted into blood



Proteome profiler antibody array

TRANSCRIPTION AND TRANSLATION



Biomarker protein levels indicates Health OR Disease Status



Serve as future target for therapies





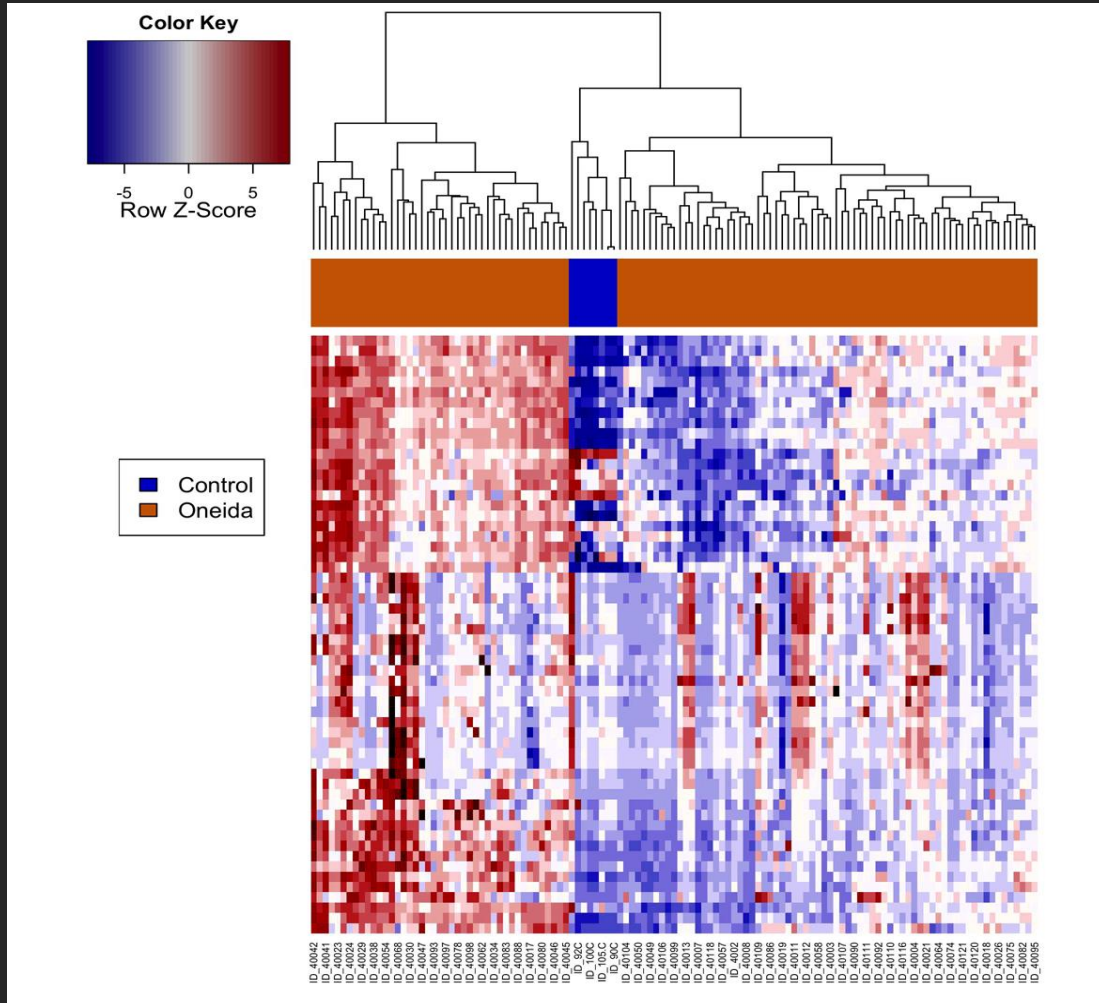
Baseline Characteristics of Oneida Nation NA population (n=119)

Variable	Median (IQR) or n (%)
Body Mass Index (BMI) kg/m ²	31.2 (8.5)
Hemoglobin A1C (%)	6.1 (1.0)
Clinical history of Coronary Artery Disease (Yes)	33 (27.7%)
Clinical history of hypertension (Yes)	76 (63.9%)
Clinical history of diabetes (Yes)	52 (43.7%)
Clinical history of TIA (Yes)	16 (13.4%)
Current smoker	17 (14.3%)
Plaque present (Yes)	97 (81.5 %)
Total plaque area mm²	17.1 (29.44)

Cognitive Domain	Variable	Mean (SD)	Median
Global functioning	MoCA Total Raw Score	24.06 (3.24)	24.00

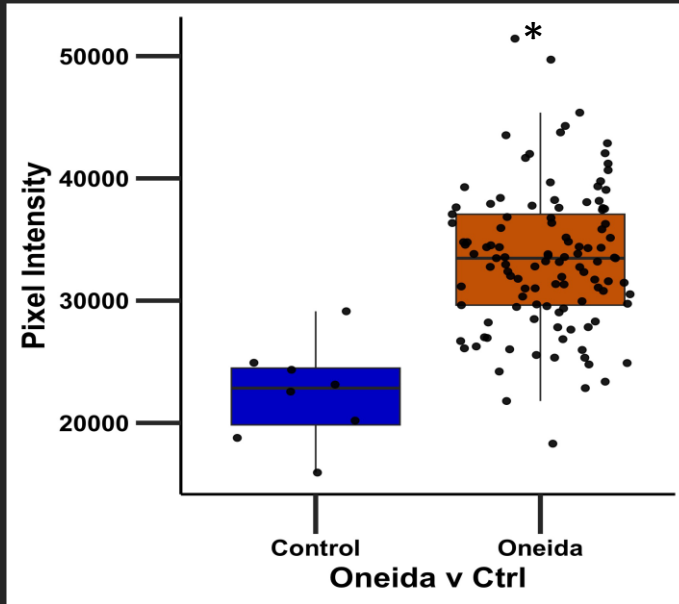


A heatmap displaying the relative expression of the 58 tested obesity and CVD related adipokines amongst the Oneida NA participants (orange) and the Caucasian participants (blue)



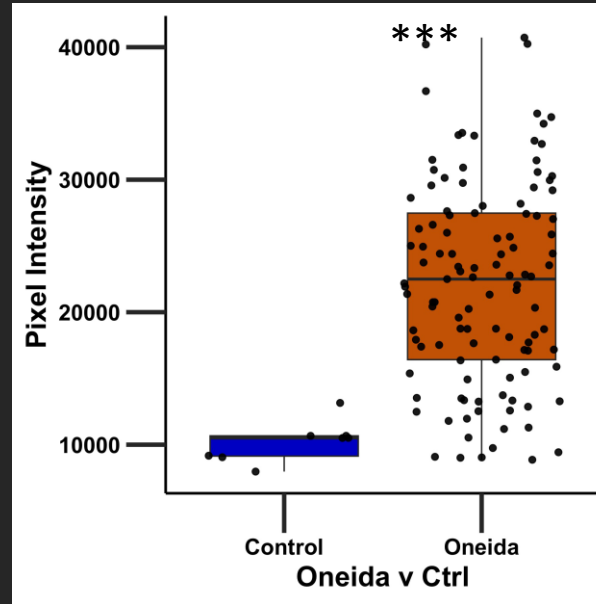


We identified 26 significantly altered CVD related adipokines and inflammation biomarkers in NA as compared to Caucasian population



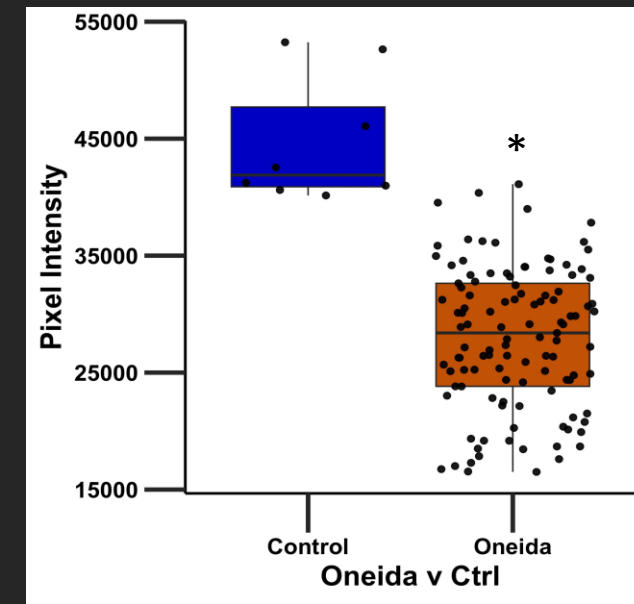
DPPIV

(Insulin metabolism, Diabetes, vascular diseases)



Resistin

(Inflammation, Obesity)



Complementary factor D

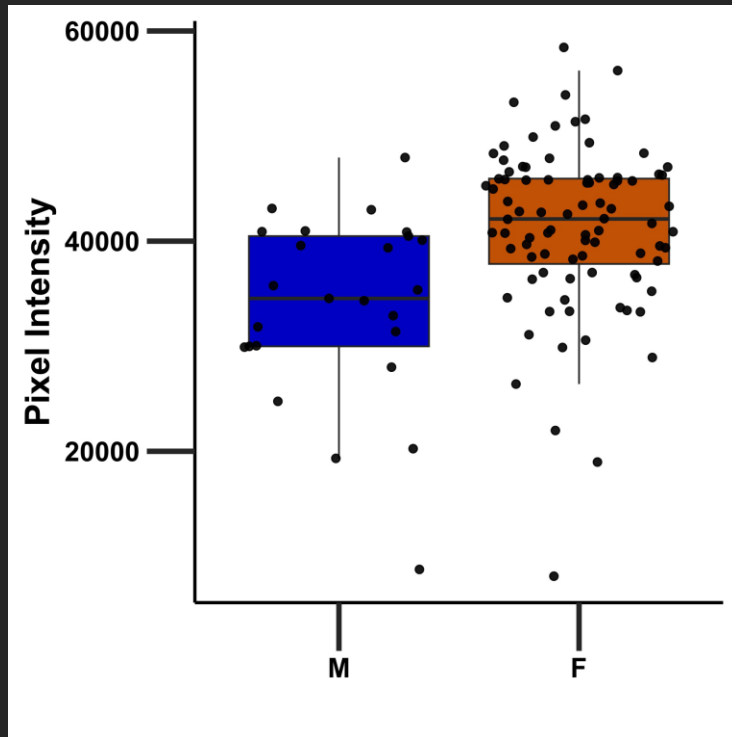
(Inflammation, Immune response)

*** = P < 0.01
* = P < 0.05

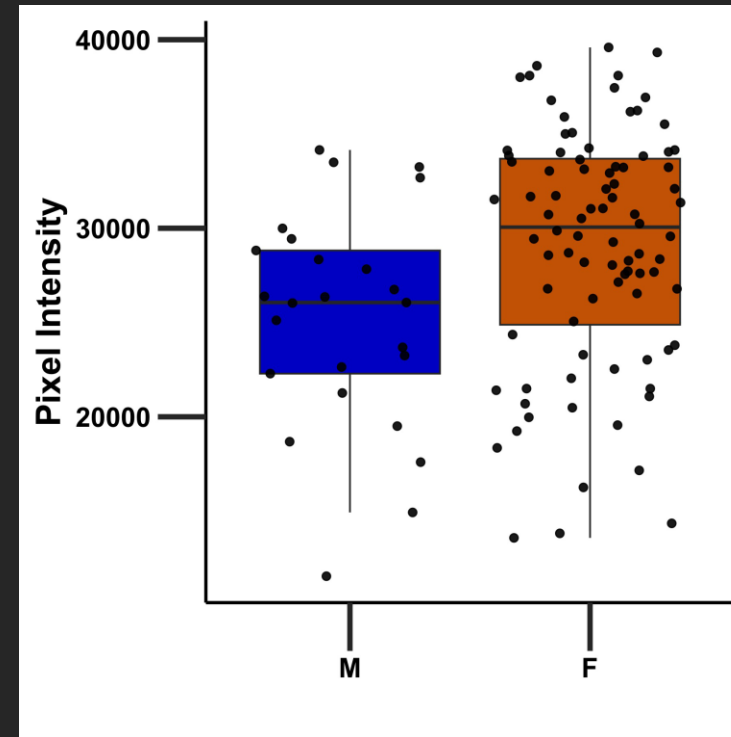
Representative graphs showing the significantly increased levels of DPPIV and Resistin, which increases inflammation and CVD, and decreased levels of complementary factor D which is protective against inflammation in NA subjects of Oneida Nation as compared to control Caucasians. *Blue indicates the controls and orange indicates Oneida Nation population.*



Within NA, two obesity and CVD related blood biomarkers Leptin and Angiotensin-like 3 are increased in females as compared to males



Leptin

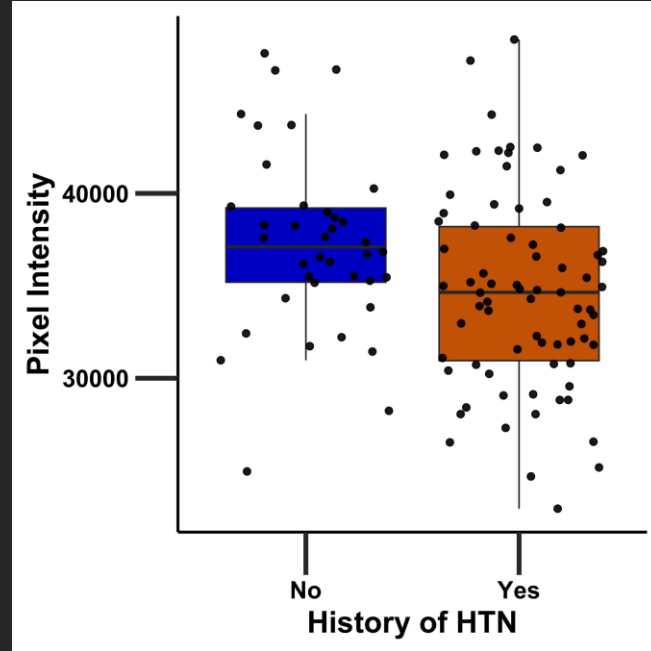


Angiotensin-like 3

Blue indicates the males and orange indicates females Oneida Nation population

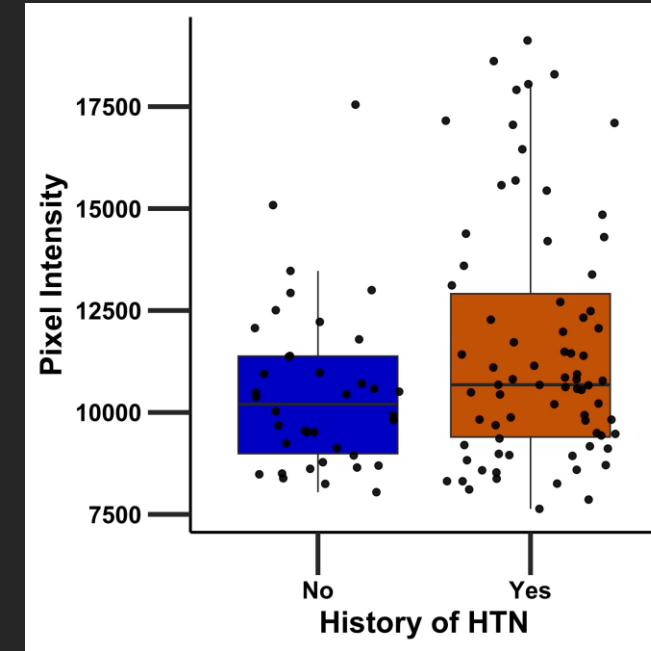


Within NA, hypertension is associated with significantly altered levels of four blood biomarkers including adiponectin and CCL2



Adiponectin

Adiponectin regulates lipid metabolism
Decreased adiponectin is associated with increased obesity



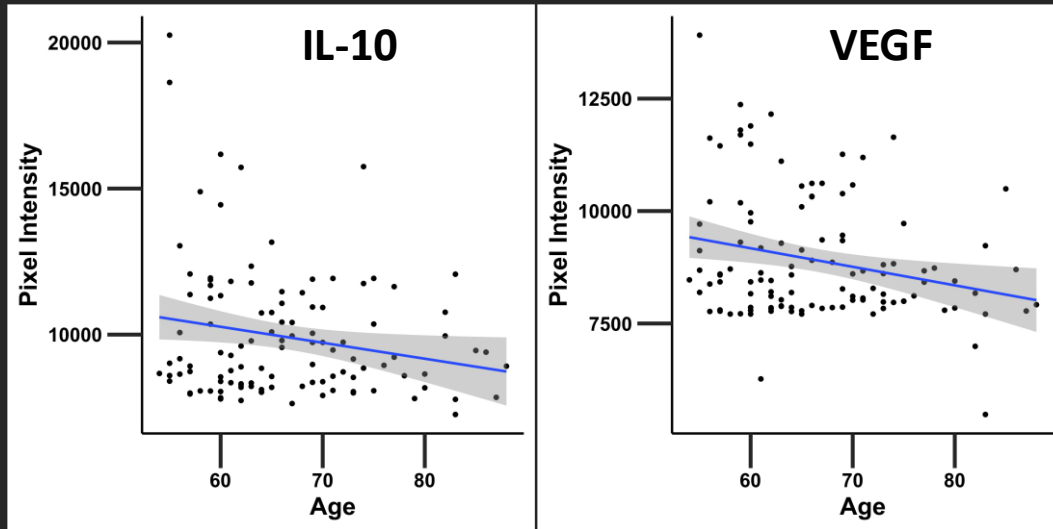
CCL2/MCP-1

(a pro-inflammatory chemokine)

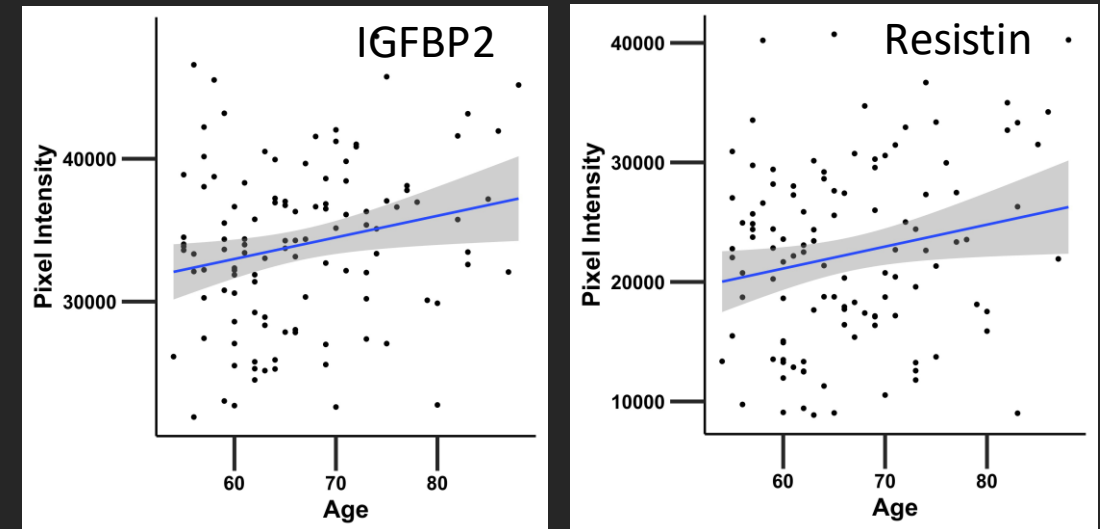
Blue indicates the no history of hypertension and orange indicates the history of hypertension in Oneida Nation population



Within NA, 18 proteins were significantly altered as a function of increased aging



Increased aging correlates with decrease in anti-inflammatory IL-10 and growth factors including VEGF in NA population

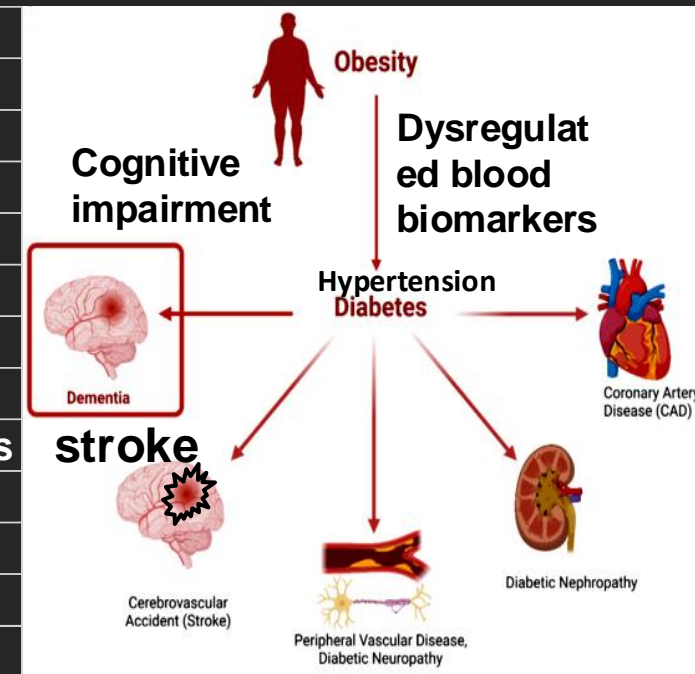


Increase in aging correlates with increase in pro-inflammatory IGFBP2 and adipokine resistin in NA population



Significantly altered blood biomarkers were identified in NA and the functions of selected proteins

Biomarker	Protein function
Angiopietin-2	Endothelial permeability and angiogenic functions-Vascular-related diseases
Cathepsin L	Inflammation, blood coagulation, innate immunity, angiogenesis, proliferation
Complement Factor D	Alternative complement pathway part of innate immunity
DPPIV CD26	Hyperglycemia - type 2 diabetes mellitus, coronary disease, stroke
IGFBP-2	Prolong half-life of IGFs, directly modulate IGFs' actions
TGF-beta1	Cell proliferation, differentiation, adhesion, migration, and inflammation
Leptin	Regulates body weight, high levels of leptin is associated with obesity
CCL5 RANTES	Recruits T cells, macrophages, eosinophils, and basophils into inflammatory sites
Resistin	Insulin resistance, obesity, diabetes, and inflammation
Serpin E1 PAI-1	Important proteolytic cascades, including the mammalian coagulation pathways
Adiponectin	Obesity, atrial fibrillation, regulates glucose levels, lipid metabolism
Fibrinogen	Blood clotting, inflammation responsive





SUMMARY

- Altered levels of vascular-inflammatory adipokines are associated with traditional risk factors in NA.
- Our study supports an approach to measure targeted circulating stroke risk biomarkers in NA population.

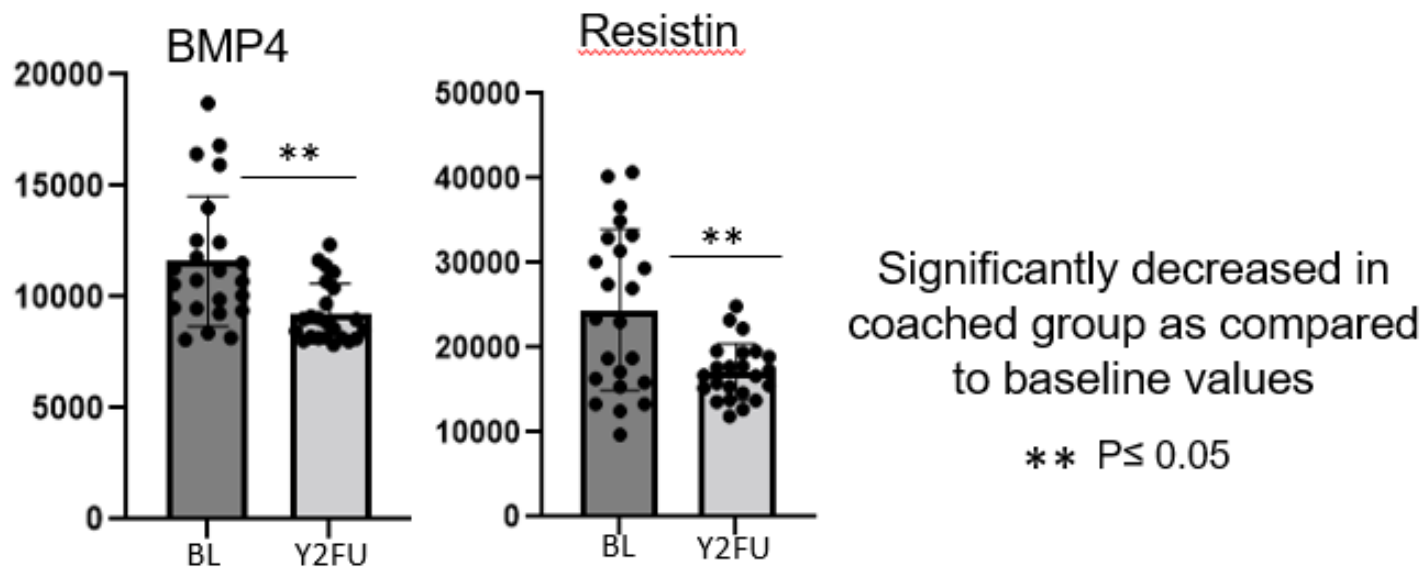
- ➔ CVD related vascular-inflammatory biomarkers were significantly increased in NA
- ➔ Within NA, 18 inflammatory proteins were significantly altered as a function of increased aging
- ➔ Within NA, women show increased circulating risk factors/biomarkers compared to men
- ➔ Increased BMI/obesity is associated with increased levels of pro-inflammatory TNF-alpha and Leptin that regulates the balance between food intake and energy expenditure
- ➔ Hypertension is associated with four significantly altered blood biomarkers in NA population
- ➔ Increased cholesterol in NA is linked to eight significantly altered inflammatory and obesity related biomarkers

Can we change these risk factors?

NATIVE AMERICAN ELDERS WITH 2-YEAR COUNSELING BY TRIBAL HEALTH COACH SIGNIFICANTLY IMPROVED:

- Change in weight (pounds)
- Change in low density lipoprotein cholesterol (LDL) (mg/dL)
- Change in hemoglobin A1c (%)
- Change in average blood glucose (mg/dL)





Significantly decreased in coached group as compared to baseline values

** $P \leq 0.05$

BL=Base line value; **Y2FU**= Year 2 follow up.
N=23 for High-Coaching; **N=11** for High - SOC

Coaching may favorably impact high risk Oneida tribal subjects by decreasing key circulating vascular inflammatory biomarker proteins including BMP4, Resistin, ICAM-1, and bFGF. Representative graphs for BMP4 and Resistin are shown.

YAY, COACHES!





2-YEARS COUNSELING IN HIGH-RISK PATIENTS SHOWED:

Change in BMI

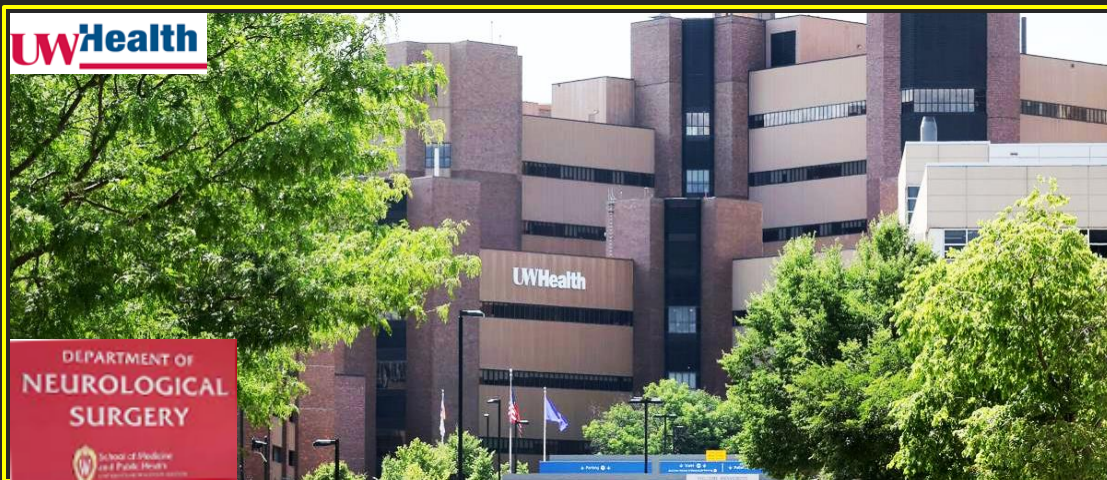
- Participants in the standard of care & coaching group lowered their median BMI, systolic blood pressure & increased their HDL from baseline to year 2, but these changes were not significant compared to the standard of care group.



Future Directions



- Identify and Validate blood biomarkers of stroke and TIA in older and younger population
- Develop therapies based on these proteins
- Prevent or decrease stroke and TIA, and vascular dementia /cognitive impairment
- Emphasize healthy living style on the nation
- Build a strong 2-way relationship between UW – Oneida Nation



TO PROTECT THE FUTURE OF THOSE THAT COME AFTER US

On<yote>a=k@ Core Values

Kalihwi=y% (Galeeh-wee-yo)

The Use of the Good Words About Ourselves, Our Nation and Our Future.

Twahwahts\$lay< (Dwah-wah-jee-leye)

All of Us Are Family.

Yukwats\$stay^ (You-gwa-jees-stai)

Our Fire, Our Spirit Within Each One of Us.

Kahletsyal&sla (Gahlay-ja-loo-sla)

The Heart Felt Encouragement of the Best in Each of Us.

Kanolukhw@sla (Gano-loo-kwa-sla)

Compassion, Caring, Identity and Joy of Being.

Ka>nikuhli=y% (Ga-nee-goo-hlee yo)

The Openness of the Good Spirit and Mind.

Ka>tshatst^sla (Ga-stat-stuh-sla)

The Strength of Belief and Vision as a People.



Yaw^ko

Questions, Request for Information, Comments:

Oneida Comprehensive Health Division - Administration

ohc_admin@oneidanation.org

920.869.2711, ext. 0

Meeting Survey QR Code



A good mind. A good heart. A strong fire.

