WELCOME TO
AK LIVER DISEASE ECHO

ALASKA NATIVE TRIBAL HEALTH CONSORTIUM

NPAIHB
Indian Leadership for Indian Health

This project is supported by a grant from the Northwest Portland Area Indian Health Board and funding is provided from the HHS Secretary's Minority HIV/AIDS Fund.

PLEASE PUT IN THE CHAT BOX:

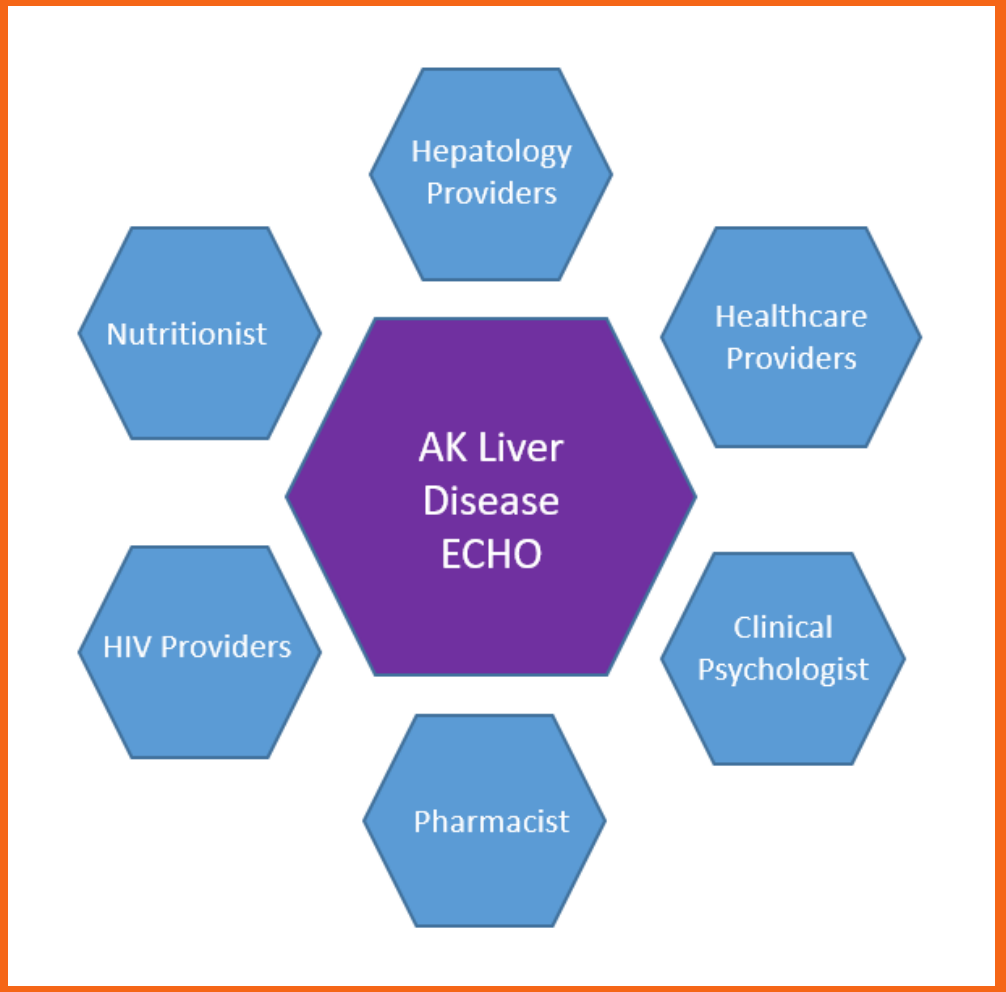
Your name
Where you are located
What brings you to the LD ECHO today

WHAT WE DO

- Didactic Presentations pertaining to ECHO topics
- We're accepting **case presentations and questions pertaining to:**
  - Elevated Liver Function Tests
  - Cirrhosis
  - Managing Complications of Decompensated Cirrhosis – Ascites, encephalopathy, esophageal varices
  - Alcohol-related liver disease, including Alcohol Hepatitis
  - Autoimmune liver disease – Autoimmune Hepatitis, Primary Biliary Cholangitis, Overlap
  - Nonalcoholic fatty liver disease/Nonalcoholic steatohepatitis
  - Hepatocellular carcinoma
- Provide Expert Panelists

CONSULTANT TEAM

- Brian McMahon, MD Hepatologist
- Youssef Barbour, MD Hepatologist
- Lisa Townshend, ANP Hepatology Provider
- Annette Hewitt, ANP Hepatology Provider
- Leah Besh, PA-C HIV/Hepatology Provider
- Anne Fleetwood, MS, RDN, NDN
- Brittany Keener, PharmD, MPH, BCPS
- Kena Desai, MD, Internal Medicine Specialist



Welcome to Alaska Liver Disease ECHO

Approved Provider Statements:

JOINTLY ACCREDITED PROVIDER™
INTERPROFESSIONAL CONTINUING EDUCATION

In support of improving patient care, Alaska Native Medical Center (ANMC) is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Contact Hours:

ANMC designates this activity for a maximum of 12 contact hours, including 3 total pharmacotherapeutics contact hours, commensurate with participation.

Financial Disclosures:

Youssef Barbour, MD & Lisa Townshend-Bulson, APRN / faculty for this educational event, are primary investigators in an ANTHC sponsored hepatitis C study funded in part by Gilead Sciences. All of the relevant financial relationships listed have been mitigated.

Requirements for Successful Completion:

To receive CE credit please make sure you have actively engaged in the entire activity, your attendance is recorded by the facilitator, and complete the course evaluation form found here: https://forms.gle/R8vibUZgMbRcoScw9.

For more information contact
jlfielder@anthc.org or (907) 729-1387

ALASKA NATIVE TRIBAL HEALTH CONSORTIUM

LIVER DISEASE ECHO SCHEDULE AT A GLANCE

- **June 16th AIH in AN/AI Population in Alaska**
- July 21st – PBC/Overlap
- August 18th – Most Common Liver Toxic Drugs
- September 15th – Trauma Informed Care and Liver Disease
- October 20th – Screening for Alcohol Use Disorder

LAND ACKNOWLEDGEMENT

Out of great respect, we acknowledge the Creator of all living things and the original inhabitants upon whose traditional lands we respectively now gather or reside.

Let us, forever, remember the benefits and bounty of the vast resources that stem from these traditional lands, and thank the original inhabitants for their past and present stewardship of the resources (i.e., waters, plants, animals), and the spiritual practices which they cherish on the lands we now call home.

AUTOIMMUNE HEPATITIS (AIH)

JANET JOHNSTON, PHD, MPH

ANTHC LIVER DISEASE AND HEPATITIS PROGRAM

DISCLOSURE

- No conflict of interest to disclose for this presentation.

PRE-TEST QUESTION 1

- Autoimmune hepatitis prevalence among Alaska Native people:
  a. Has decreased over the past 20 years
  b. Has increased over the past 20 years
  c. Has remained relatively constant over the past 20 years
  d. Cannot be estimated from existing data

PRE-TEST QUESTION 2

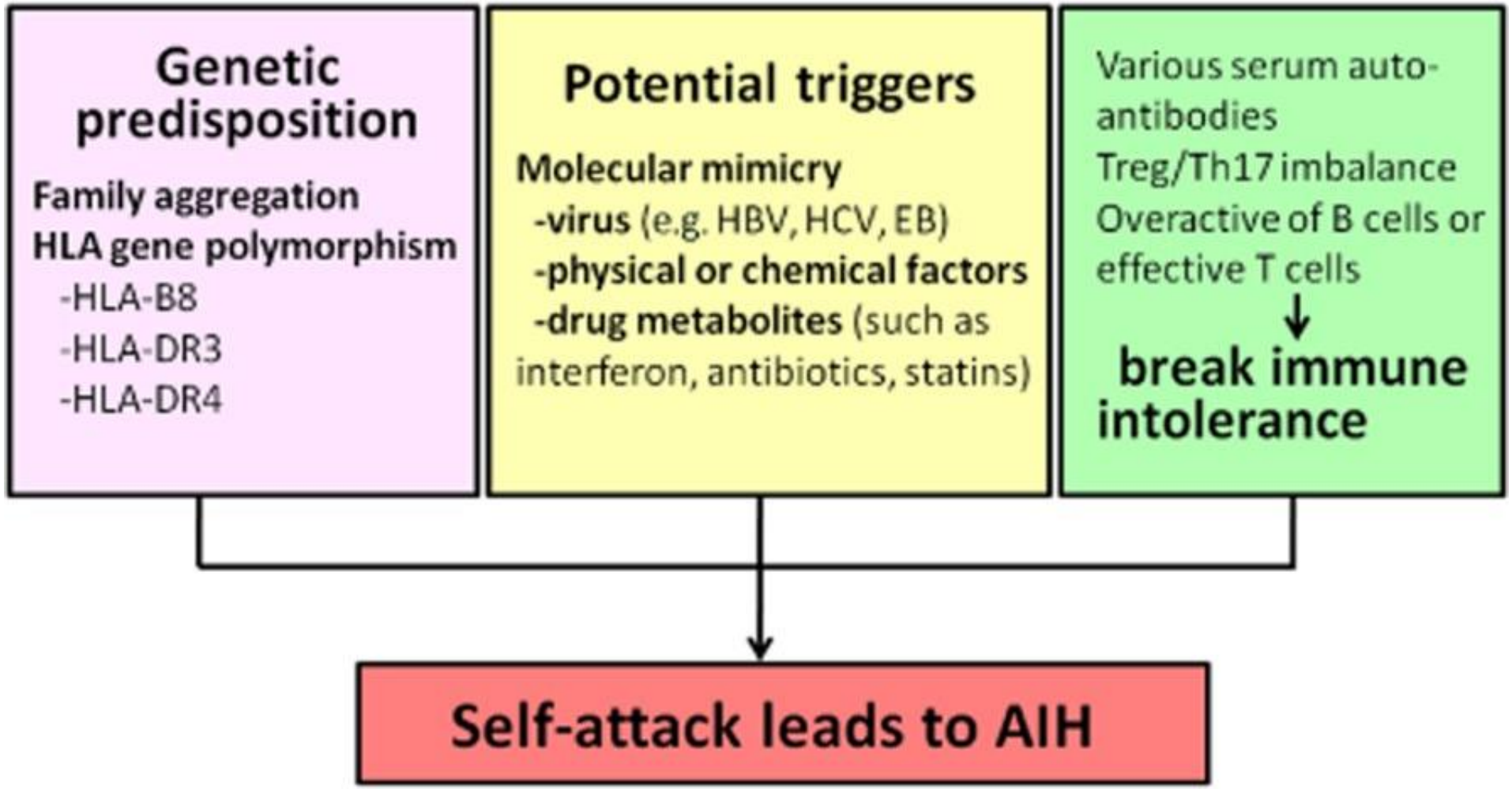
- In genetically susceptible individuals, autoimmune hepatitis may be triggered by:
  a. Viruses such as Hepatitis B, Hepatitis C, or Epstein-Barr
  b. Physical or chemical factors
  c. Drug metabolites including interferon, antibiotics, or statins
  d. All of the above

OUTLINE

- AIH Overview
- AIH in Alaska Native People
- COVID and AIH

AUTOIMMUNE HEPATITIS (AIH)

- Inflammatory liver disease
- Immune-mediated
- Affects all ages, genders, races/ethnicities
  - Female preponderance
  - Highest documented prevalence in Alaska Native population
- NAFLD features present in 17% to 30% of AIH patients



Zhu JY, Han Y. Autoimmune hepatitis: Unveiling faces. J of Digest Diseases, Volume: 16, Issue: 9, Pages: 483-488, First published: 30 August 2015, DOI: (10.1111/1751-2980.12285)

PRESENTATION

- Presentation may vary:
  - Acute hepatitis
  - Fulminant hepatitis (acute liver failure)
  - Cirrhosis
- May be preceded by long period of asymptomatic disease
- Varies by race and ethnicity

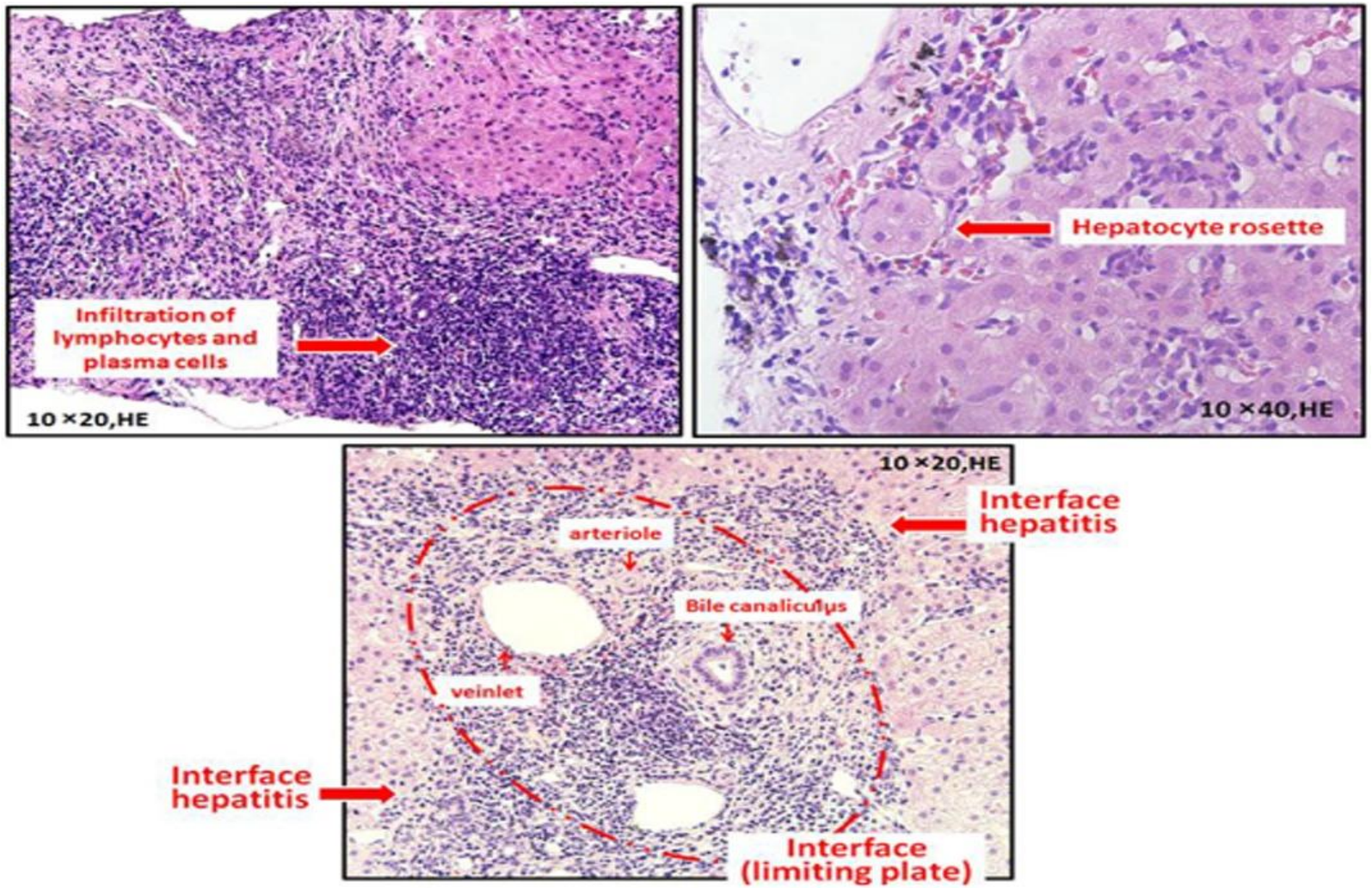
SYMPTOMS

Generally non-specific:

- Extreme tiredness (fatigue)
- Yellowing of the skin and eyes (jaundice)
- Belly (abdominal) pain
- Joint pain or swelling
- Mild flu-like symptoms
- Itching
- Large abdomen due to large liver and spleen

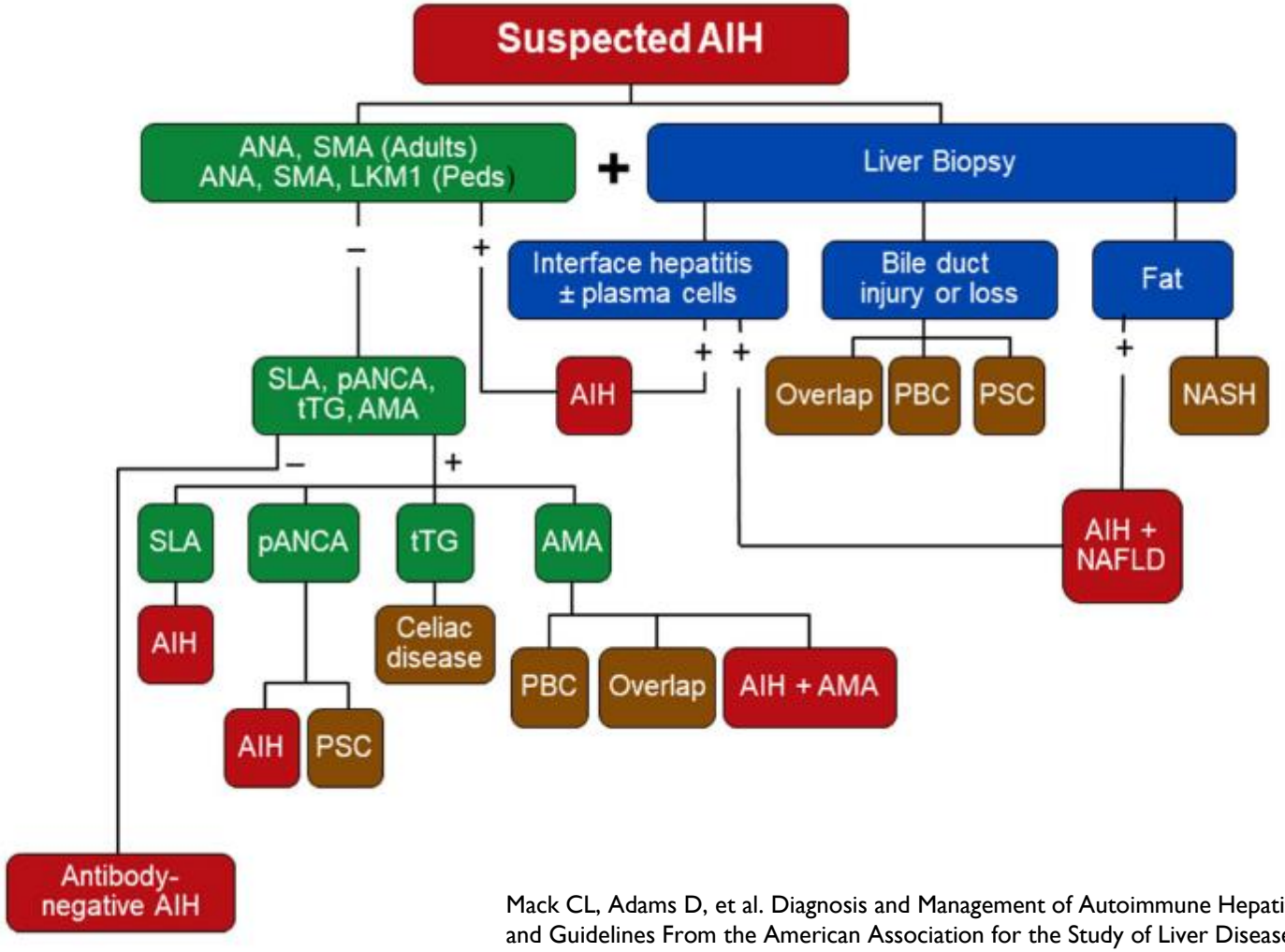
DIAGNOSIS

- Challenging!
- Characteristic clinical findings
- Lab results – AST, ALT, IgG, autoantibodies
- **Histology – interface hepatitis**
- Overlap syndrome



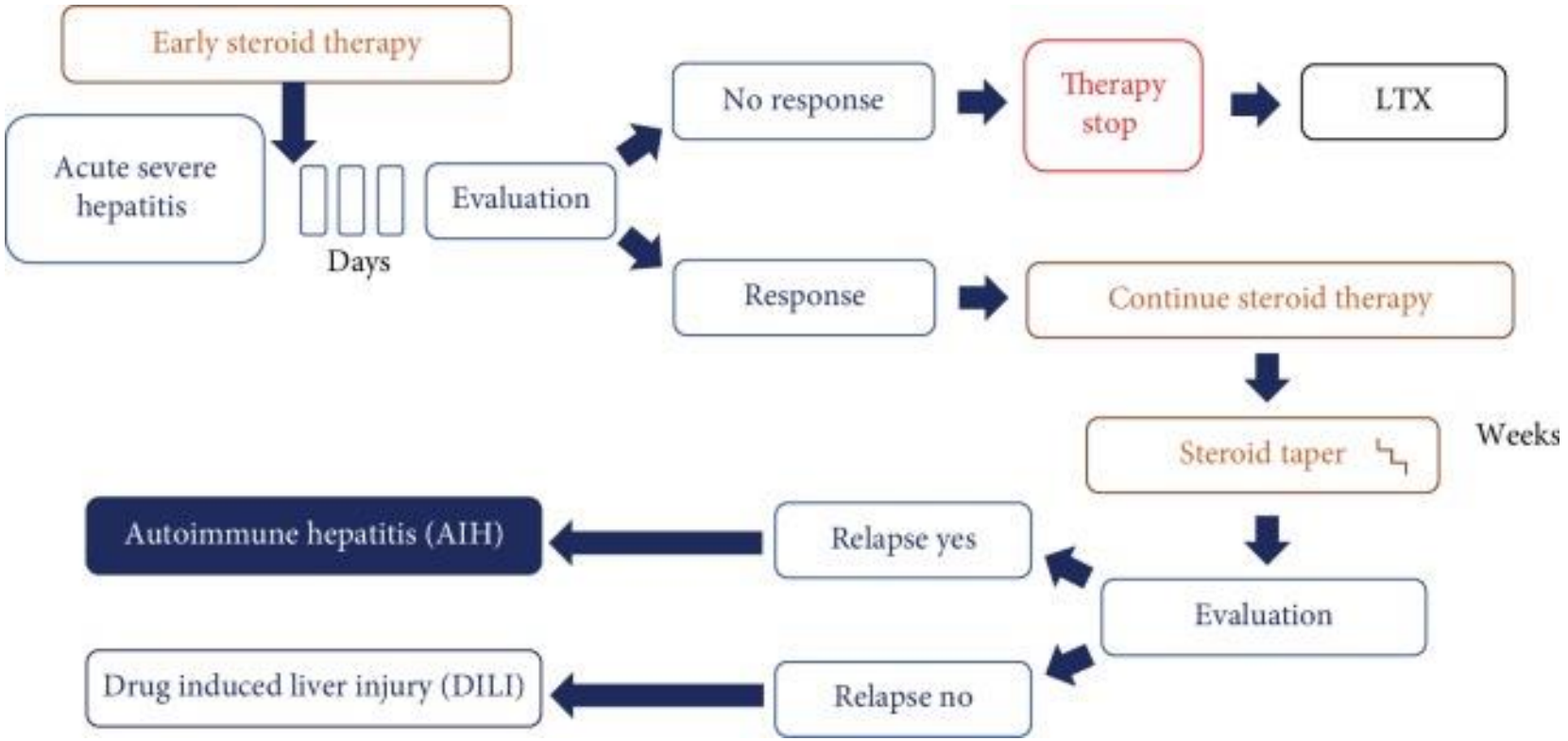
Zhu JY, Han Y. Autoimmune hepatitis: Unveiling faces. J of Digest Diseases, Volume: 16, Issue: 9, Pages: 483-488, First published: 30 August 2015, DOI: (10.1111/1751-2980.12285)

AASLD DIAGNOSTIC ALGORITHM



Mack CL, Adams D, et al. Diagnosis and Management of Autoimmune Hepatitis in Adults and Children: 2019 Practice Guidance and Guidelines From the American Association for the Study of Liver Diseases. Hepatology. 2020 Aug;72(2):671-722

TREATMENT



Sucher, Elisabeth et al. "Autoimmune Hepatitis-Immunologically Triggered Liver Pathogenesis-Diagnostic and Therapeutic Strategies." *Journal of immunology research* vol. 2019 9437043. 25 Nov. 2019, doi:10.1155/2019/9437043

PROGRESSION

If left untreated, AIH may progress to:

- Advanced fibrosis
- Cirrhosis
- Liver-related death
- Liver transplant

EPIDEMIOLOGY

- Incidence: 0.67 to 2.0 per 100,000 annually
- Prevalence: 4.0 to 42.9 (AN) per 100,000
- Female predominance: 70% to 95% female
- Increased risk for other autoimmune diseases
  - Sjogrem syndrome: OR 26.24 (95% CI: 24.11-28.5)
  - Systemic lupus erythematosus: OR 23.49 (95% CI: 21.95-25.13)
  - Ulcerative colitis: OR 10.50 (95% CI: 9.55-11.55)

CO-MORBID AUTOIMMUNE DISEASES

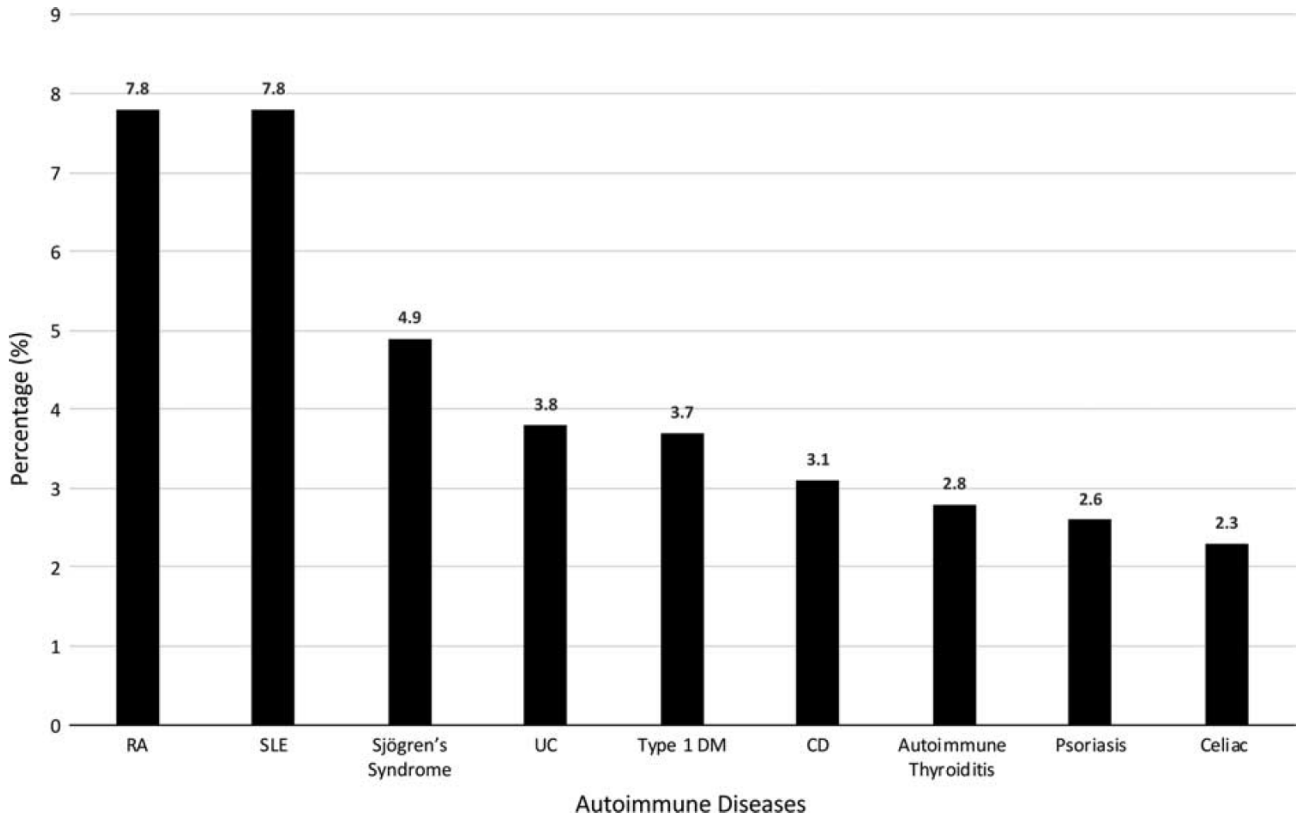


FIGURE 4. Percentage of patients with autoimmune hepatitis and other autoimmune diseases. CD indicates Crohn's disease; DM, diabetes mellitus; RA, rheumatoid arthritis; SLE, systemic lupus erythematosus; UC, ulcerative colitis.

AIH PREVALENCE IN AN POPULATION

- 2002: 42.9 per 100,000 (95% CI: 31.0-57.7)
- 2021: 77.0 per 100,000 (95% CI: 62.9-91.1)*

* Limited to patients who consented to join research cohort.

AN AIH REGISTRY

- 139 patients
  - 119 with AIH only and
  - 20 with Overlap Syndrome
- No patient deaths within 5 years of diagnosis
- Absolute 10-year survival rate following diagnosis was 96%
  - AIH only – 97%
  - Overlap Syndrome – 85%

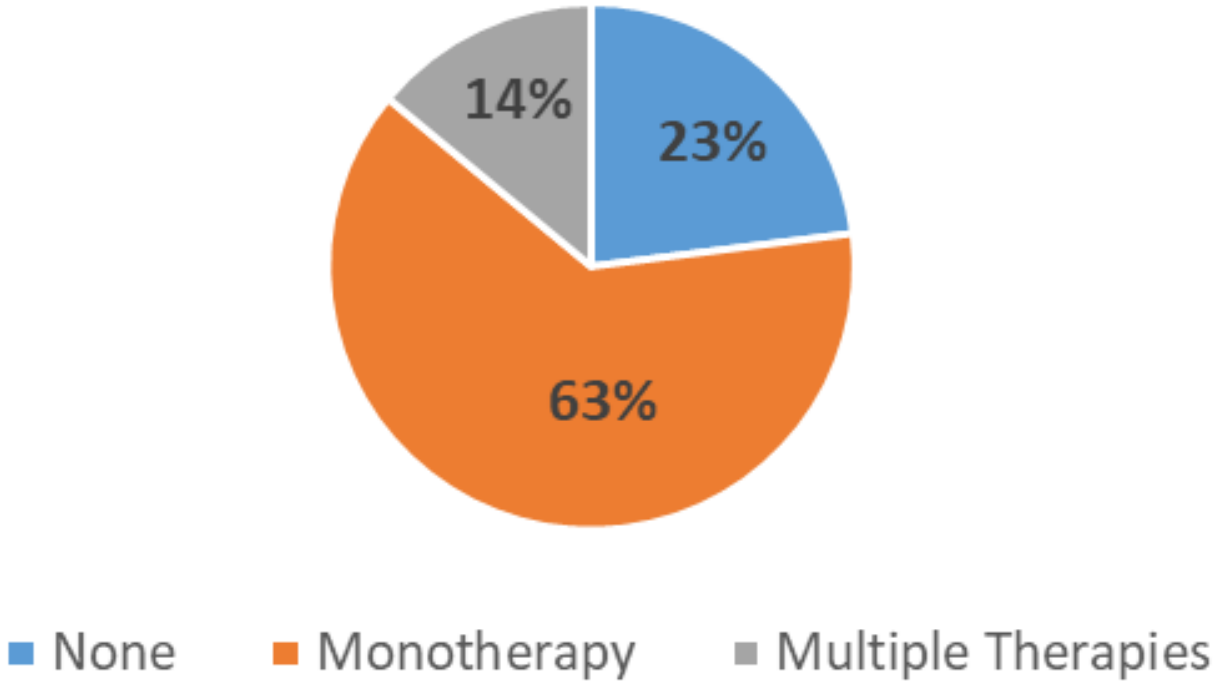
AN AIH REGISTRY PATIENT CHARACTERISTICS

	All AIH	AIH Only	Overlap Syndome
N	114	99	15
Median Age (range)	52 (15-86)	53 (17-86)	47 (15-75)
Female (%)	104 (91.2)	92 (92.9)	12 (80.0)
Acute (%)	85 (74.6)	78 (78.8)	7 (46.7)
Controlled (%)	64 (56.1)	56 (56.6)	8 (53.3)
High ANA (%)	64 (56.1)	56 (56.6)	8 (53.3)
High Actin (%)	84 (74.1)	76 (76.8)	8 (53.3)
High IgG (%)	81 (70.7)	72 (72.7)	9 (60.0)
F3-F4 Metavir at Dx	42 (40.8)	35 (38.9)	7 (53.0)

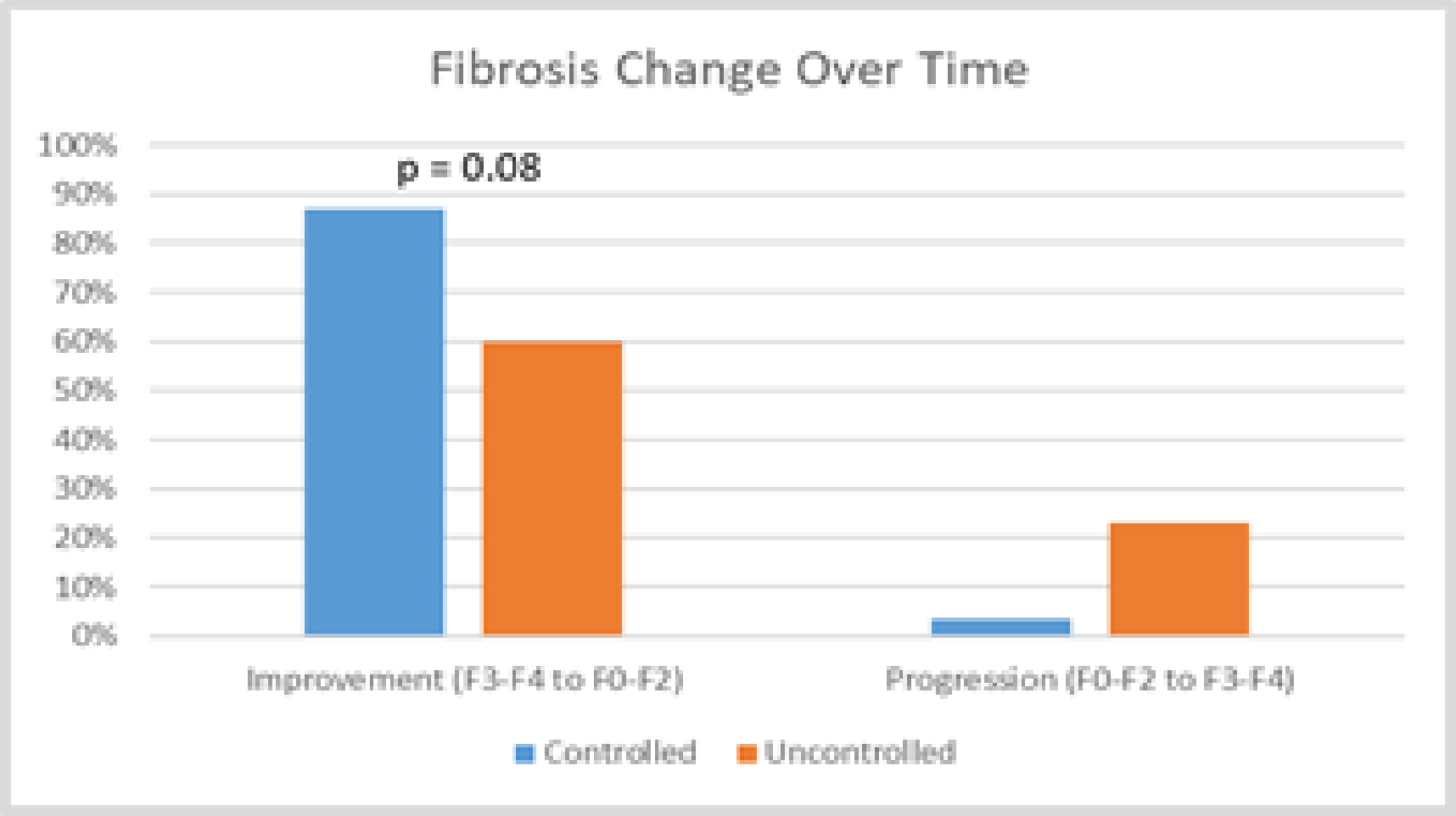
AIH CAN BE CONTROLLED WITH TREATMENT

- Controlled AIH: 56% of AN patients
  - Currently treated: 77%
- Medications:
  - Azathioprine: 60%
  - Prednisone: 18%
  - Tacrolimus: 8%
  - Ursodial: 5%
  - Mycophenolate mofetil: 3%

TREATMENT AMONG PATIENTS WITH CONTROLLED AIH



FIBROSIS IMPROVEMENT/PROGRESSION



AIH AND COVID-19

- Among 932 patients with chronic liver disease (70 with AIH) and COVID-19:
  - Hospitalization – 76% with AIH, 85% w/o AIH, p=0.06
  - ICU admission – 29% with AIH, 23% w/o AIH, p = 0.24
  - Death – 23% with AIH, 20% w/o AIH, p=0.643

AIH AND COVID-19

Propensity-score matched analysis – AIH vs no chronic liver disease (CLD):

- Increased risk of hospitalization: +18.4% (95% CI: 5.6% - 31.2%)
- Similar risk of death: +3.2% (95% CI: -9.1% - 15.6%)

AHA AND COVID-19

- Reference: Marjot T, Buescher G, et al. SARS-CoV-2 infection in patients with autoimmune hepatitis. J Hepatol. 2021 Jun;74(6):1335-1343. doi: 10.1016/j.jhep.2021.01.021. Epub 2021 Jan 26. PMID: 33508378; PMCID: PMC7835076.

AIH MEDICATION AND COVID-19

- 254 patients with AIH subsequently diagnosed with COVID-19
- Reference group: 20 patients (7.9%) not on immunosuppressive drugs on time of COVID-19 diagnosis

	OR Crude (95% CI)	OR Age-sex adjusted (95% CI)	OR fully adjusted (95% CI)
Glucocorticoids	4.49 (1.31-20.89)	3.92 (1.13-18.40)	4.73 (1.12-25.89)
Thiopurines	3.27 (1.04-14.45)	3.22 (1.02-14.28)	4.78 (1.33-23.50)
MMF	3.06 (0.74-15.88)	3.58 (0.85-18.78)	3.56 (0.76-20.56)
Tacrolimus	1.72 (0.32-10.05)	2.30 (0.42-13.75)	4.09 (0.69-27.00)

AIH MEDICATION AND COVID-19

- Reference: Efe C, Lammert C, ,et al. Effects of immunosuppressive drugs on COVID-19 severity in patients with autoimmune hepatitis. Liver Int. 2022 Mar;42(3):607-614. doi: 10.1111/liv.15121. Epub 2021 Dec 13. PMID: 34846800.

AIH AND COVID-19 VACCINE

- Systemic review: December 2019-November 2021
- 32 patients with AIH-like syndromes after receiving a COVID-19 vaccine (81% biopsied)
- 31 (96.9%) patients with improvement or complete resolution
- Estimated incidence 1 in 14 million vaccinated individuals
- Extremely rare, and treatable.

AIH AND COVID-19 VACCINE

- Reference: Chow KW, Pham NV, Ibrahim BM, Hong K, Saab S. Autoimmune Hepatitis-Like Syndrome Following COVID-19 Vaccination: A Systematic Review of the Literature. Dig Dis Sci. 2022 Apr 29:1–7. doi: 10.1007/s10620-022-07504-w. Epub ahead of print. PMID: 35486203; PMCID: PMC9052185.

SUMMARY

- AIH is a rare disease, but more common in AN population
  - May present with features of NAFLD
  - May overlap with Primary Biliary Cholangitis
  - May progress to cirrhosis, liver transplant, or liver related-death
- Can be controlled with treatment
  - Fibrosis may improve over time
  - Not everyone responds to or tolerates current treatment
- COVID risk similar for AIH and other liver disease patients

POST-TEST QUESTION 1

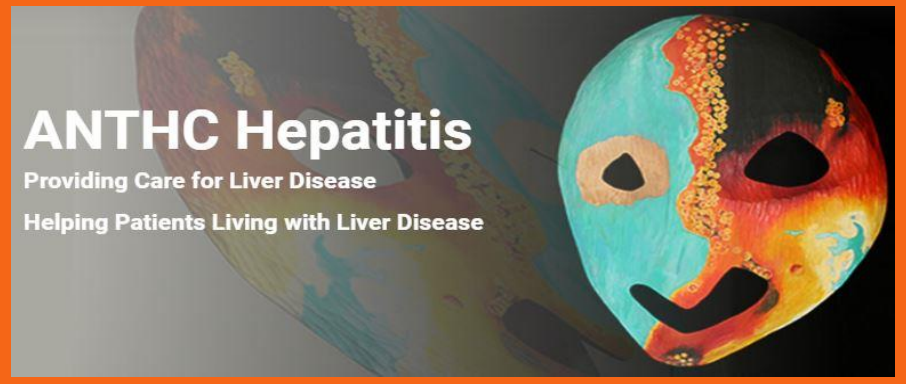
- Autoimmune hepatitis prevalence among Alaska Native people:
  a. Has decreased over the past 20 years
  b. Has increased over the past 20 years
  c. Has remained relatively constant over the past 20 years
  d. Cannot be estimated from existing data

POST-TEST QUESTION 2

- In genetically susceptible individuals, autoimmune hepatitis may be triggered by:
  a. Viruses such as Hepatitis B, Hepatitis C, or Epstein-Barr
  b. Physical or chemical factors
  c. Drug metabolites including interferon, antibiotics, or statins
  d. All of the above

ADDITIONAL LEARNING OPPORTUNITIES

- AK ID ECHO: HCV, HIV, PrEP, STIs
  - The 2nd Tuesday of every month from 12:00-1:00PM Alaska Standard Time
    - 1CE/CME offered per session
  - anthc.org/project-echo/hcv-hiv-prep-stis-echo
- LiverConnect Webinar Program
  - Second Tuesday of every month 8:00-9:00AM Alaska Standard Time
    - Full Hour didactic topics on Liver Disease and related topics 1CE/CME offered
  - anthc.org/what-we-do/clinical-and-research-services/hep/liverconnect/



HCV SIMPLIFIED TREATMENT TRAINING

- Receive the most current updates in patient care for screening and treatment of HCV.
- This training covers topics of HCV EPI, screening, confirmation of HCV, assessment of patient before treatment, HCV treatment, medication coverage, follow up and harm reduction.
- Continuing education credits available for enduring access credits.
- Presented by: Brian McMahon, MD, Leah Besh, PA-C, Lisa Townshend-Bulson, APRN, FNP-C and Annette Hewitt, APRN, FNP-C
- To complete the training, https://www.anthc.org/provider-resources/new-provider-webinars.
- *For more information contact Marla at mjwehrli@anthc.org.*

ALASKA NATIVE TRIBAL HEALTH CONSORTIUM

AK LIVER DISEASE ECHO -TEAM CONTACTS

- Lisa Townshend-Bulson, MSN, FNP-C, Program Manager, ltownshend@anthc.org
- Marla Wehrli, Program Coordinator, mjwehrli@anthc.org
- Wileina Rhodes, RN Nurse CE Coordinator, wsrhodes@anthc.org
- Annette Hewitt, FNP-C Pharmacology Content Reviewer, amhewitt@anthc.org
- Cindy Decker, RN Liver Disease ECHO Nurse Case Manager, cadecker@anthc.org
- ANTHC Liver Disease and Hepatitis Program: 907-729-1560
- Northwest Portland Area Indian Health Board
  - David Stephens: Director Indian Country ECHO, dstephens@npaihb.org
  - Jessica Leston: Clinical Programs Director, jleston@npaihb.org

Thank you

ALASKA NATIVE TRIBAL HEALTH CONSORTIUM

NPAIHB
Indian Leadership for Indian Health

This project is supported by a grant from the Northwest Portland Area Indian Health Board and funding is provided from the HHS Secretary's Minority HIV/AIDS Fund.