

**Fang Liu, MD, PhD**

Fang Liu, MD, PhD, is a board-certified medical oncologist and hematologist providing comprehensive cancer and blood disorder care at Northwest Georgia Oncology Centers, P.C. Dr. Liu has a strong clinical and research background, with a special interest in gastrointestinal cancers, hematologic malignancies, and personalized cancer therapies.

Dr. Liu earned her medical degree from Peking University in Beijing, China, and completed her PhD in cancer biology at Dartmouth College, where her research focused on novel targeted therapies for pancreatic cancer. She completed her internal medicine residency at Metrowest Medical Center in Massachusetts and her hematology and oncology fellowship at University Hospitals in Cleveland, Ohio.

She is board-certified in internal medicine, medical oncology, and hematology, and is committed to delivering evidence-based, compassionate care. Dr. Liu actively participates in clinical trials and multidisciplinary cancer conferences to ensure her patients have access to the latest advances in cancer treatment.

Dr. Liu provides patient-focused oncology care at NGOC's Marietta Cancer Center.

**EDUCATION**

9/2002 – 7/2008

M.D., Peking University, Beijing, China

8/2008 – 12/2013

Ph.D., Dartmouth College, NH, US

Thesis: Novel targeted therapies for pancreatic cancer

**POSTGRADUATE TRAINING**

6/2015 – 6/2018

Residency, Internal Medicine Program at Metrowest Medical Center, Framingham, MA

7/2018 – 6/2021

Fellowship, Hematology and Oncology Fellowship Program at University Hospitals, Cleveland, OH

**LICENSURE/CERTIFICATION**

2018 – Present

Board certified in Internal Medicine

2021 - Present

Board certified in Medical Oncology

2021 - Present     Board certified in Hematology

**CURRENT PRACTICE**

9/2021 – 8/2025

Cleveland Clinic Foundation Akron General, Akron OH

General hematology oncology practice, average 20-30 patients a day, 4.5 days each week  
Comfortable managing variety disease types and supervising infusion center

Close relationship with tertiary specialists and clinical trial research teams

Active in multidisciplinary tumor board and educational activities for residents and students

### **RESEARCH EXPERIENCE**

7/2020 – 6/2021

A phase Ib dose-escalation and cohort-expansion study of safety and activity of vactosertib in combination with nivolumab, gemcitabine and nab-paclitaxel in metastatic pancreatic cancer.

University Hospitals Cleveland Medical Center Faculty advisor: Dr. David Bajor

Current progress: This proposal is selected for 2020 Vail Workshop.

4/2020 – 8/2020

Racial differences in the molecular signature of newly diagnosed multiple myeloma

University Hospitals Cleveland Medical Center

Role: Co-PI

Faculty adviser: Dr. Timothy O'Brien

Description: This retrospective study aims to investigate the racial differences of cytogenetic abnormalities in newly diagnosed multiple myeloma and smoldering myeloma. Particularly, we studied the incidence of t(11;14) in African Americans versus Caucasian Americans and its implication in prognosis and response to therapy. This study is selected for poster presentation at 2020 ASH annual meeting.

9/2019 – 5/2020

The role of neoadjuvant chemotherapy for resectable pancreatic cancer University Hospitals Cleveland Medical Center

Role: PI

Faculty adviser: Dr. David Bajor

Major findings: This study retrospectively enrolled 181 patients with resectable pancreatic cancer from 2011 to 2019. We observed a signal of tumor downstaging, higher R0 rate, and improved overall survival with neoadjuvant chemotherapy compared with upfront surgery. This study is selected for poster presentation at 2020 ASCO annual meeting.

1/2016 – 7/2017

MTHFR A1298C and C677T polymorphisms and the risk of venous thromboembolism

Metrowest Medical Center, Framingham, MA

Role: PI

Faculty adviser: Dr. Kala Seetharaman

Major findings: This retrospective study included 188 patients who were tested for MTHFR polymorphisms at Metrowest coagulation laboratory between 2011 and 2016. We found that heterozygous or homozygous MTHFR variants, especially the compound mutation, are associated with increased risk of venous thromboembolism. This study is published in Acta Haematologica in 2017.

2008 – 2013

Molecular biology and novel therapeutics of pancreatic cancer Dartmouth Medical School, Hanover, NH

Role: project leader

Faculty adviser: Dr. Murray Korc

Major findings: We characterized the therapeutic potential of targeting cyclin- dependent kinase 4/6 and dual-specificity phosphatase 1 to treat pancreatic cancer. These findings lead to 2 first-author papers and 2 national meeting abstracts

2006 – 2008

The role of Anaplastic Lymphoma Kinase (ALK) in the pathogenesis and disease progression of anaplastic large cell lymphoma

Peking University Health Science Center Role: research assistant

Faculty adviser: Dr. Zi-Fen Gao

## **PUBLICATIONS**

- **Liu F**, Friedman J, Yoest J, Dowlati A, Bruno DS. Durable complete remission in ALK-rearranged metastatic NSCLC treated with pembrolizumab: A case report. In preparation.
- **Liu F**, Arvind D, Dowlati A, Mohamed A. Role of immunotherapy in gastro-enteropancreatic neuroendocrine neoplasms (GEP-NENS): Current advances and future directions. *J Neuroendocrinol.* 2021;33:e12943.
- **Liu F**, Mirsky M, Wu S, et al. Survival outcomes of patients with resectal pancreatic cancer treated with upfront surgery versus neoadjuvant chemotherapy: a retrospective tertiary care center experience. *Journal of Clinical Oncology* 2020 38:15\_suppl, 4623-4623.
- Jain P, Bugarin J, Guha A, Jain C, Shen T, Stanevich I, Margevicius S, Fu P, **Liu F**, et al. Risk factors for myocarditis associated with immune checkpoint inhibitors using real-world clinical data. *Journal of Clinical Oncology* 2020 38:15\_suppl, e15100-e15100.
- **Liu F**, Saif MW. T-cell optimization for the treatment of pancreatic cancer. *Expert Opin Biol Ther.* 2017;17:1493-1501.
- **Liu F**, Silva D, Malone M, Seetharaman K. MTHFR A1298C and C677T polymorphisms are associated with increased risk of venous thromboembolism: A retrospective chart review study. *Acta Haematol.* 2017;138:208-215.
- **Liu F**, Gore AJ, Wilson JL, Korc M. DUSP1 as a novel therapeutic target for enhancing pancreatic cancer cell sensitivity to gemcitabine. *PLoS One.* 2014;9(1):e84982.
- **Liu F**, Korc M. Cdk4/6 inhibition induces epithelial-mesenchymal transition and enhances invasiveness in pancreatic cancer cells. *Mol Cancer Ther.* 2012;11:2138-48.
- Galimberti F, Busch AM, Chinyengetere F, Ma T, Sekula D, Memoli VA, Dragnev KH, **Liu F**, Johnson KC, Guo Y, Freemantle SJ, Andrew AS, Greninger P, Robbins DJ, Settleman J, Benes C, Dmitrovsky  
E. Response to inhibition of smoothened in diverse epithelial cancer cells that lack smoothened or patched 1 mutations. *Int J Oncol.* 2012;41:1751-61.
  - Shi Y, Zhou C, Liu C, Li M, Huang X, Dong G, Huang Y, Yin W, Yang Y, **Liu F**, Ma X, Du J, Gao  
Z. Expression of ALK, TIA-1 and granzyme B in primary systemic anaplastic large cell lymphoma and their significance on clinical outcome. *Journal of Leukemia and Lymphoma.* 2008;17(2):114-118.
  - **Liu F**, Liu YR. New Progress in the Pathogenesis, Diagnosis and Treatment of Amniotic Fluid Embolism. *Chinese Journal of Clinical Gynecology and Obstetrics.* 2007;8:467-469.

## **PRESENTATIONS AND MEETING ABSTRACTS**

- **Liu F**, Kort J, Shetty S, Kyasaram R, Shanahan, O'Brien T. Analysis of racial differences in the incidence of a targetable biomarker, t(11;14), in patients with multiple myeloma. Poster presentation at 2020 ASH meeting.
- **Liu F**, Mirsky M, Wu S, Fu P, Cao S, Jain P, Shanahan J, Kyasaram RK, Hardacre J, Winter JM, Ammori J, Bajor DL. Survival outcomes of patients with resectable pancreatic cancer treated with upfront surgery versus neoadjuvant chemotherapy: A retrospective tertiary care center experience. Poster presentation at 2020 ASCO annual meeting.
- **Liu F**. Locally advanced non-small cell lung cancer. Oral presentation at Medical Oncology and Surgical Oncology Joint Conference of MetroHealth Medical Center, Aug 2019.
- **Liu F**, Seetharaman K. Lymphoplasmacytic lymphoma with IgG paraproteinemia. Poster presentation at 2016 Lymphoma & Myeloma Conference, Oct 2016.
- **Liu F**. Coexistence of myeloproliferative and lymphoproliferative neoplasms: A report of two cases. Poster presentation at 4<sup>th</sup> International Conference on Advances in Hematology and Oncology, Aug 2016.
- **Liu F**, Korc M. DUSP1 is a novel target for enhancing pancreatic cancer cell sensitivity to gemcitabine. Poster presentation at 2013 American Association for Cancer Research Meeting, Apr 2013.
- **Liu F**, Korc M. PD-0332991, a selective cyclin-dependent-kinase 4/6 Inhibitor, upregulates multiple genes promoting invasion and metastasis in pancreatic ductal adenocarcinoma. Poster presentation at 2012 American Association for Cancer Research Meeting, Apr 2012.
- **Liu F**. Cyclin D1-Cdk4/6 as therapeutic targets in pancreatic ductal adenocarcinoma. Research-In- Progress Seminar at Department of Pharmacology and Toxicology, Dartmouth Medical School, Mar 2011.
- **Liu F**. Cell cycle independent functions of cyclin D1 in pancreatic ductal adenocarcinoma. Research- In-Progress Seminar at Department of Pharmacology and Toxicology, Dartmouth Medical School, Mar 2010.
- **Liu F**. A case report of amniotic fluid embolism. Oral presentation at Annual Meeting of Obstetric Society, Beijing, Jul 2007.

## **AWARDS AND HONORS**

2013 Travel Award for American Association for Cancer Research Meeting  
2006 Outstanding Teaching Assistant Award, Peking University Health Science Center, Beijing  
2004 Caiyuanpei Award for Academic Excellence, Peking University, Beijing

## **PROFESSIONAL MEMBERSHIP**

2018 – Present  
Member of American Society of Clinical Oncology  
2015 – Present  
Member of American College of Physicians  
2012 – Present  
Member of American Association for Cancer Research  
2011 – Present  
Member of American Pancreatic Association

## **VOLUNTEER ACTIVITIES**

8/2008  
Volunteer at 2008 Olympics, Beijing  
2014 – 2018  
Volunteer at St. Anne Free Clinic, Shrewsbury, MA