Case

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Kennis / Ervaring / Zorg

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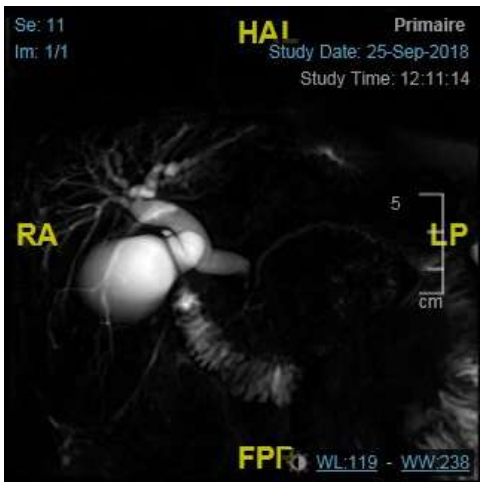
- ♀, 53 yr
- Symptoms: icterus, fatigue, pruritus



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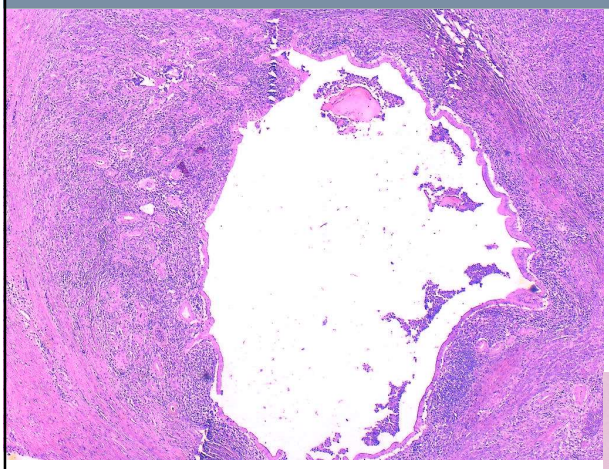

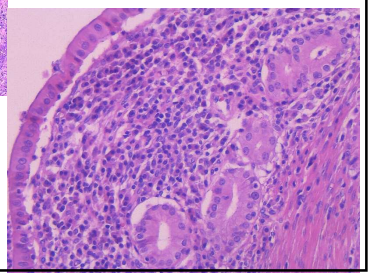

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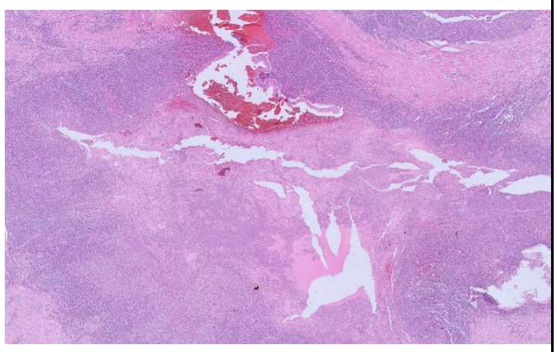

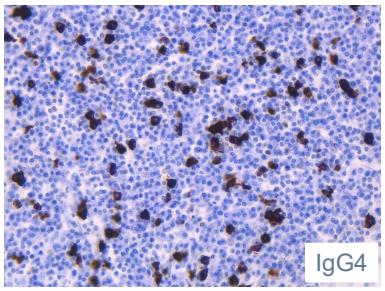

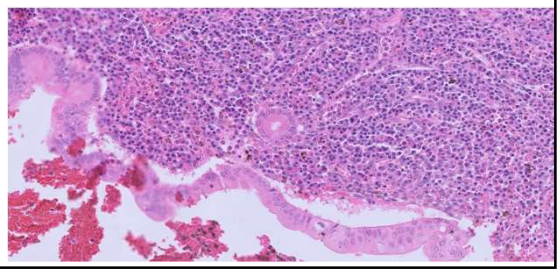

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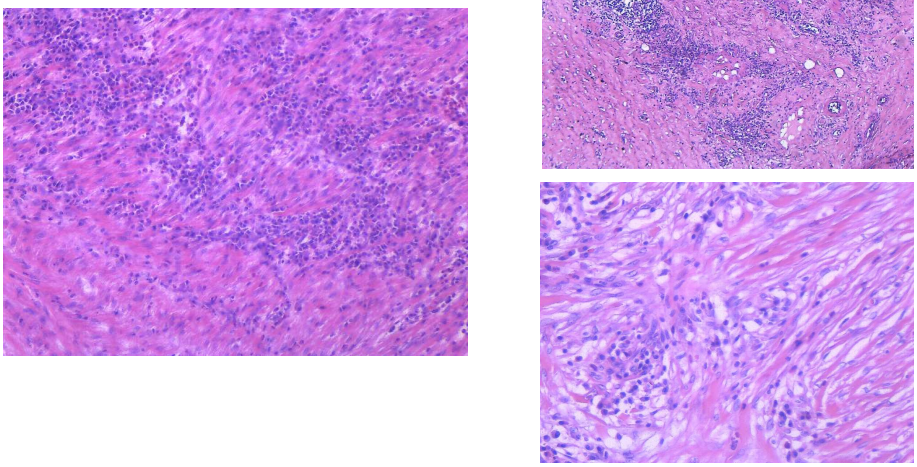

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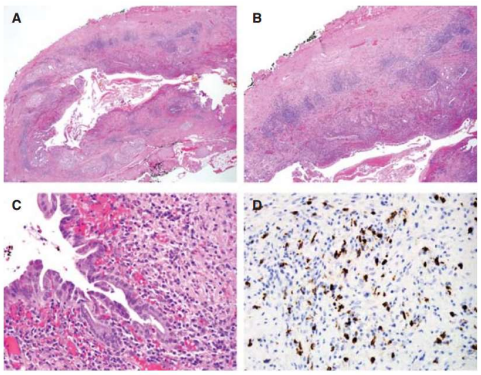
IgG4-related sclerosing cholangitis in the absence of autoimmune pancreatitis mimicking extrahepatic cholangiocarcinoma

JINGMEI LIN[1], OSCAR W. CUMMINGS[1], JOEL K. GREENSON[3], MICHAEL G. HOUSE[2], XIULI LIU[5], ILKE NALBANTOGLU[4], RISH PAI[5], DARELL D. DAVIDSON[1] & SARAH A. REUSS[1]

Scandinavian Journal of Gastroenterology. 2015; 50: 447–453



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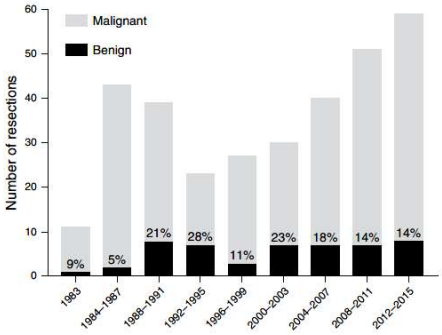
IgG4-Associated Cholangitis in Patients Resected for Presumed Perihilar Cholangiocarcinoma: a 30-Year Tertiary Care Experience

Eva Roos, MD, MSc[1], Lowiek M. Hubers, MD, MSc[2], Robert J. S. Coelen, MD, PhD[1], Marieke E. Doorenspleet, MD, PhD[3], Niek de Vries, MD, PhD[3], Joanne Verheij, MD, PhD[4], Ulrich Beuers, MD[2] and Thomas M. van Gulik, MD, PhD[1]

Am J Gastroenterol (2018) 113:765–772. https://doi.org/10.1038/s41395-018-0036-5



CONCLUSIONS: **Liver and bile duct resections for PHC during three decades disclosed in 15% benign biliary disorders mimicking PHC of which 42% were definitely diagnosed as IAC. IgG4-RD remains active in the majority of patients with IAC years after surgery. Novel diagnostic tests for IAC might reduce misdiagnosis, unnecessary surgery, and life-threatening complications.**

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Case

Table 1 Various names used in the medical literature to designate IgG4-related disease

IgG4-related disease
IgG4-associated disease
IgG4-related systemic disease
IgG4-related sclerosing disease
IgG4-related systemic sclerosing disease
IgG4-related autoimmune disease
Hyper-IgG4 disease
IgG4-positive multiorgan lymphoproliferative syndrome
Systemic IgG4-related plasmacytic syndrome
IgG4 syndrome

Consensus IgG4-related disease

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Case

	PSC	IAC
Age, years	25–45	65
Gender, male	65%	80%
Response to steroids	–	+++
Association with IBD	+++	–
Association with cholangiocarcinoma	+++	?
Other organ involvement	?	+++
Histological findings	obliterative cholangitis and cirrhosis	abundant IgG4-positive plasma cells
Dominant cholangiographic findings	band-like strictures with a beaded appearance	segmental strictures and distal bile duct strictures
Elevated serum IgG4	7–9%*	around 70%

Pruritus
Asymptomatic

Obstructive jaundice

Digestion 2009

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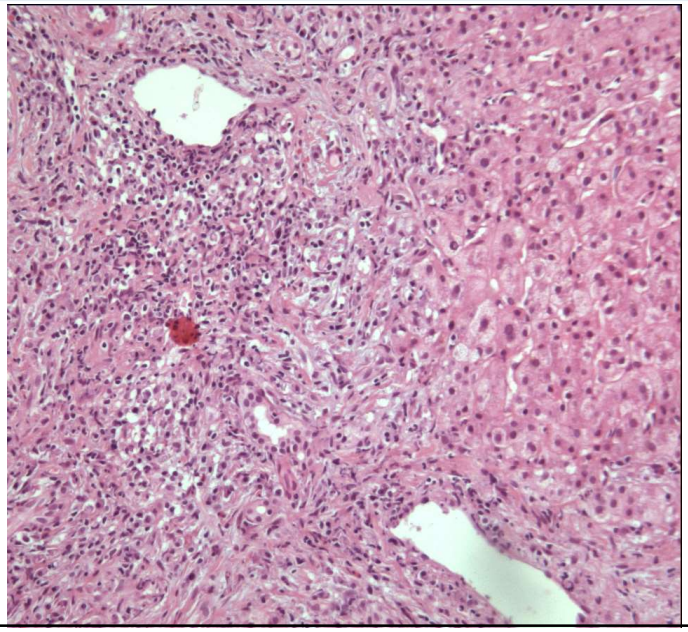
IgG4



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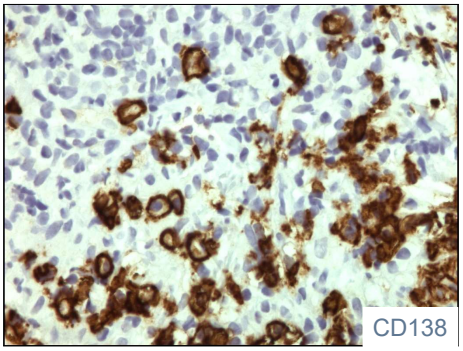
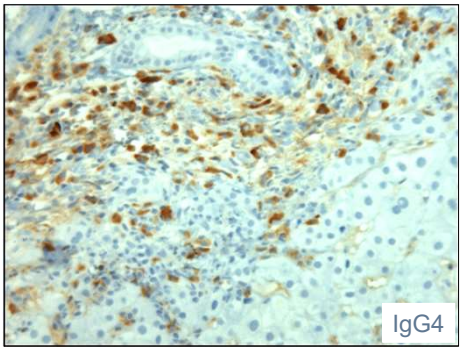
IgG4





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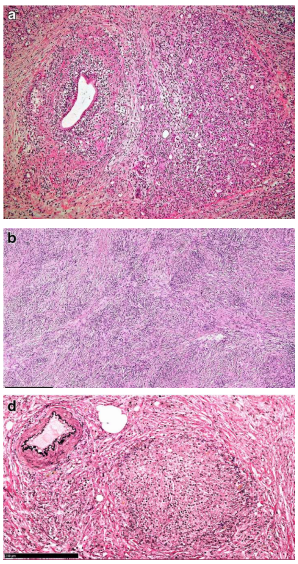
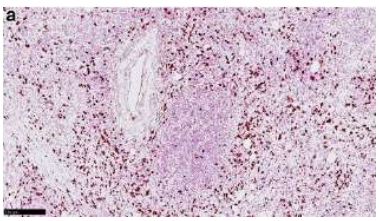
IgG4





Characteristics	Type 1
Age	Seventh decade
Sex	Predominantly male
Presentation	Jaundice ~75%, acute pancreatitis ~15%
Extrapancreatic manifestations	Frequent
Serum immunoglobulin G4	Increased in 80% of cases
Inflammatory bowel disease	Rare
Histology	Periductal inflammation with 1 or more of the following features: 1. Storiform fibrosis 2. Obliterative phlebitis
Long-term outcome	Frequent relapses Relapses could involve the pancreas, liver, and other systemic sites

Deshpande Arch Pathol Lab Med 2015

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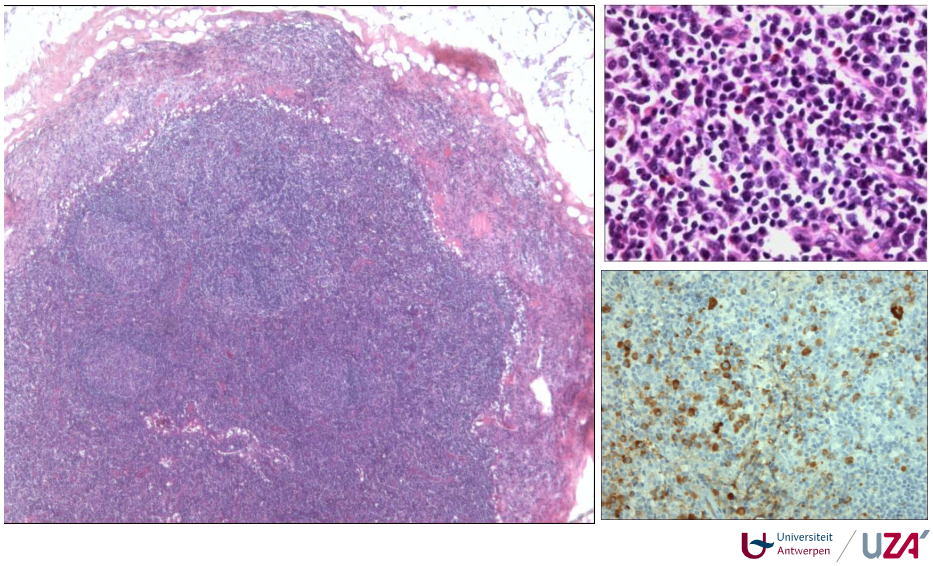
IgG4



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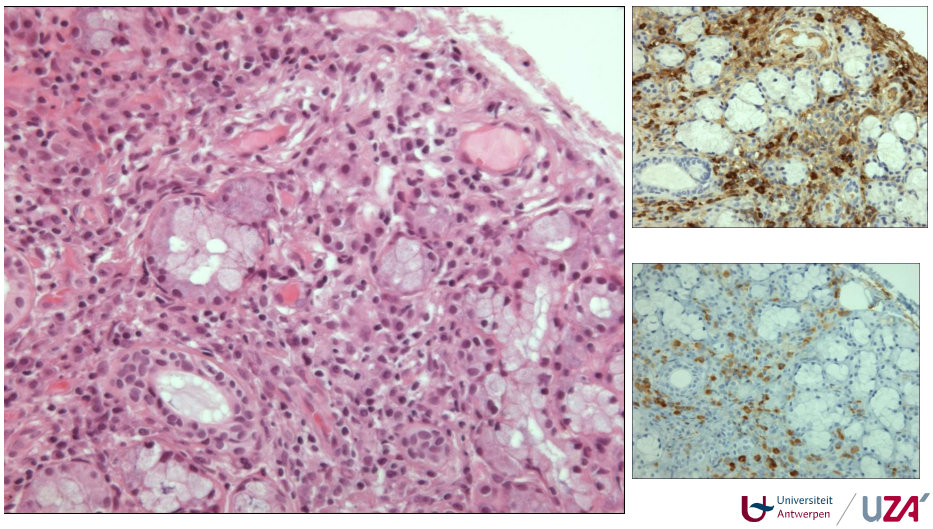
IgG4



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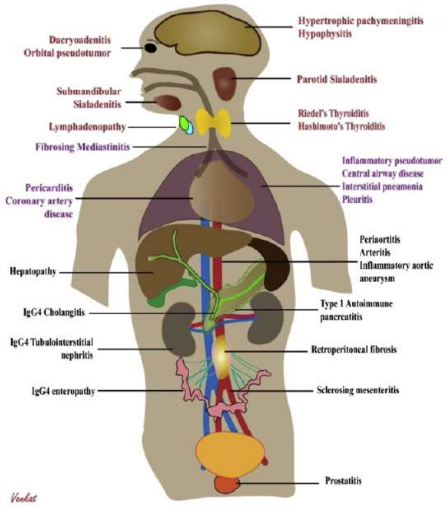
IgG4



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Katabathina Radiol Clin North Am 2016

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MODERN PATHOLOGY (2012) 25, 1181–1192

Consensus statement on the pathology of IgG4-related disease

Vikram Deshpande[1,31], Yoh Zen[2,31], John KC Chan[3], Eunhee E Yi[4], Yasuharu Sato[5], Tadashi Yoshino[5], Günter Klöppel[6], J Godfrey Heathcote[7], Arezou Khosroshahi[8], Judith A Ferry[1], Rob C Aalberse[9], Donald B Bloch[8], William R Brugge[10], Adrian C Bateman[11], Mollie N Carruthers[8], Suresh T Chari[12], Wah Cheuk[3], Lynn D Cornell[13], Carlos Fernandez-Del Castillo[14], David G Forcione[10], Daniel L Hamilos[15], Terumi Kamisawa[16], Satomi Kasashima[17], Shigeyuki Kawa[18], Mitsuhiro Kawano[19], Gregory Y Lauwers[1], Yasufumi Masaki[20], Yasuni Nakanuma[21], Kenji Notohara[22], Kazuichi Okazaki[23], Ji Kon Ryu[24], Takako Saeki[25], Dushyant V Sahani[26], Thomas C Smyrk[13], James R Stone[1], Masayuki Takahira[27], George J Webster[28], Motohisa Yamamoto[29], Giuseppe Zamboni[30], Hisanori Umehara[20] and John H Stone[8]

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IgG4

- Although the combination of histopathological features and immunohistochemistry provide a strong supportive evidence for the diagnosis of IgG4-related disease
- Careful correlation with the clinical presentation and imaging of a patient is essential to make a final diagnosis
- Neither an increase in serum IgG4 nor elevated numbers of IgG4 positive plasma cells in tissue is specific for IgG4 related disease

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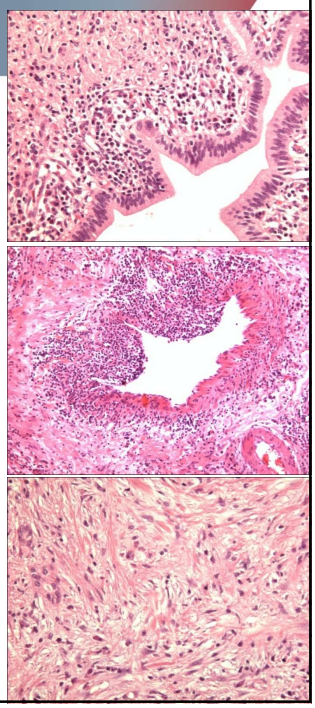
IgG4

Criteria (Mayo Clinic): HISORt

- Histology & >10 IgG4+ pm/HPF
  - Lymphoplasmacytic infiltration
  - Obliterative phlebitis
  - Atrophy
  - Irregular fibrosis
  - Eosinophilic infiltration
- Immunohistochemistry:
  - IgG4+ plasmacells (>10/HPF)
  - Elevated CD4, CD8+ T-cells
- Imaging
- Serology (IgG4 >140 mg/dl)
- Other organ involvement
- Response to corticosteroid therapy



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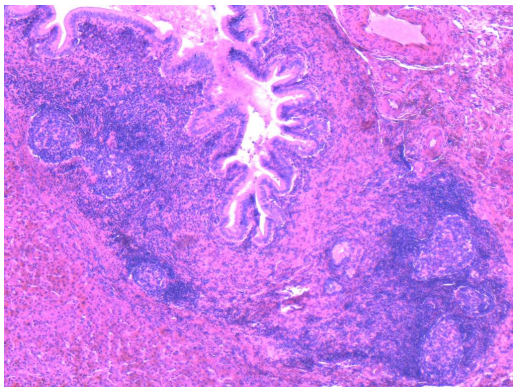
IgG4

Differential diagnosis



Follicular cholangitis

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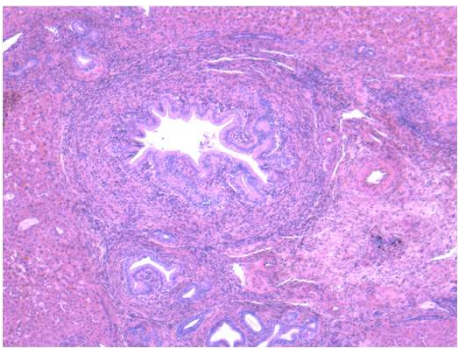
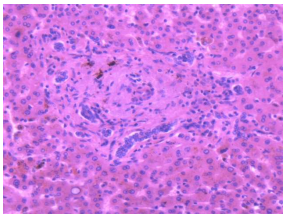
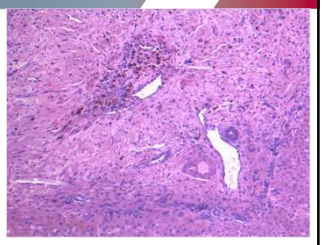
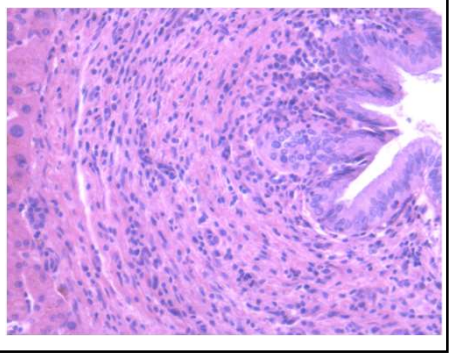
IgG4

- Primary sclerosing cholangitis









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IgG4

	Follicular cholangitis and pancreatitis	Primary sclerosing cholangitis*	IgG4-related sclerosing cholangitis†
Age	Adult	Child and adult	Adult
Gender	Almost equal§	Male predominance	Male predominance
Preferential site	Hilar bile ducts, pancreatic head	Large and small bile ducts	Intrapancreatic and hilar bile ducts
Shape	Localized	Diffuse	Localized > diffuse
Serology	No specific marker	pANCA (~80%)	Raised IgG4 (80%)
Associated conditions	None	Inflammatory bowel disease (~80%)	IgG4-related disease (90%); e.g. pancreatitis, retroperitoneal fibrosis, sialadenitis
Histology	Duct-centred inflammation with many lymphoid follicles	Fibro-obliteration of bile ducts, mucosal ulceration, xanthogranulomatous inflammation	Bile duct wall thickening, obliterative phlebitis, $IgG4^+$ plasma cells

Zen et al. Histopathology 2012

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- Zen Y: The pathology of IgG4-related disease in the bile duct and the pancreas. Seminars Liver Disease 2016;36:242

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