

הצגת מקרה

ד"ר דנה בן חור

המכון הגסטרואנטרולוגי, בי"ח רמב"ם

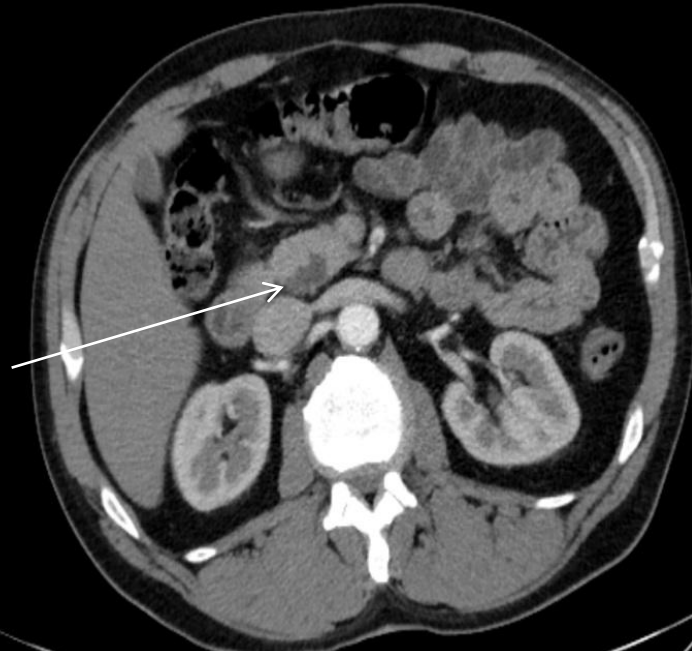
- בן 57, ברקע יל"ד, היפרליפיידמיה, תת-תריסיות, עישון.

- הופנה לבדיקת CT UROGRAPHY כחלק מבירור אורולוגי בשל אריתרוציטים בשתן.

- בבדיקת CT – נגע ציסטי 1.7×2 ס"מ בראש הלבלב.

Contrast: Iodine
Gantry: 0°
Time: 811 ms
Slice: 3 mm
Couch: 230.40
Pos: FFS
FoV: 424 mm

C: 60.0, W: 360.0
Rambam_IDT
AXIAL, iDose (3)
ASSUTA HAIFA
▲ # ▮



AXIAL
AXIAL, iDose (3)
Couch: 230.40
327 mAs
3

327 mAs
F: B
120 kV
Image no: 117
Image 117 of 347
9/08/2016
056Y
09/08/2016, 13:54:14



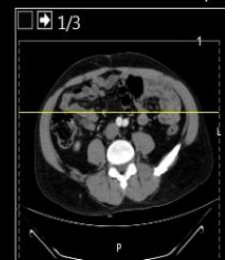
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Couch:
Pos: FFS
FoV: 405 mm

C: 60.0, W: 360.0
Rambam_IDT
COR, iDose (3)
ASSUTA HAIFA
▲ # ▮



COR
COR, iDose (3)
Couch:
249 mAs
7

249 mAs
F: B
120 kV
Image no: 41
Image 41 of 125
9/08/2016
056Y
09/08/2016, 14:03:20



- אסימפטומטי.

- בדיקה גופנית תקינה.

- בדיקות מעבדה ללא ממצאים חריגים (ספירה תקינה, אנזימי כבד ובילירובין תקינים, מרקרים תקינים).

- ללא סיפור משפחתי של ממאירויות.

- Cystic pancreatic lesions are found incidentally in 2.5% of patients undergoing abdominal imaging performed for unrelated reasons
- Their frequency increases with age to 10% in those aged 70 years

TABLE 2. Characteristics of pancreatic cystic lesions

	Pseudocyst	IPMN	Mucinous cystic neoplasm
Clinical features	History of moderate to severe pancreatitis	History of pancreatitis, abdominal pain, or found incidentally	Usually found incidentally but can cause abdominal pain and a palpable mass if large
Morphology/ EUS findings	Anechoic, thick-walled, rare septations, regional inflammatory nodes may be seen	Dilated main pancreatic duct or side branches; may appear as a septated cyst; may have a solid component	Macrocytic, occasionally septated; peripheral calcifications, solid components and regional adenopathy when malignant
Fluid characteristics	Thin, muddy-brown	Viscous or stringy, clear	Viscous or stringy, clear
Fluid chemistries	Elevated amylase, low CEA	Elevated amylase and CEA	Elevated CEA, low amylase
Cytology	Neutrophils, macrophages, histiocytes; negative staining for mucin	Mucinous columnar cells with variable atypia; fluid stains positive for mucin	Mucinous columnar cells with variable atypia; fluid stains positive for mucin
Malignant potential	None	Yes	Yes

TABLE 2. Continued

Serous cystic neoplasm	Cystic endocrine neoplasm	Solid pseudopapillary neoplasm	Ductal adenocarcinoma with cystic degeneration
Usually found incidentally but can cause abdominal pain and a palpable mass if large	May have clinical features of solid pancreatic endocrine neoplasm	Usually found incidentally; rarely causes abdominal discomfort	Presents with painless jaundice, abdominal/back pain or rarely pancreatitis
Microcystic with a “honeycomb” appearance; rarely has a macrocystic component; central calcification	Unilocular cyst occupies most of neoplasm	Solid and cystic components	Primarily solid mass with cystic spaces
Thin, clear to serosanguineous	Thin, clear	Bloody + necrotic debris	Bloody ± debris
Low CEA and amylase	Variable	Variable	Variable
Cuboidal epithelium that stains positive for glycogen	Monomorphic endocrine tumor cells; stains positive for chromagranin and synaptophysin	Monomorphic cells with round nuclei and eosinophilic or foamy cytoplasm; stains positive for vimentin and a-1-antitrypsin	Malignant adenocarcinoma may be seen, but varying degrees of atypia may be present in the specimen
Almost none (rare reports)	Yes	Yes	Already present

International consensus guidelines 2012 for the management of IPMN and MCN of the pancreas

Masao Tanakaa, Carlos Fernández-del Castillob, Volkan Adsayc, Suresh Charid, Massimo Falconie, Jin-Young Jangf, Wataru Kimurag, Philippe Levyh, Martha Bishop Pitmani, C. Max Schmidtj, Michio Shimizuk, Christopher L. Wolfgangl, Koji Yamaguchim, Kenji Yamaon

PANCREATOLOGY 12 (2012) 183-197

Criteria for distinction of Branch Duct-IPMN and main duct IPMN

- MD-IPMN is characterized by segmental or diffuse dilation of the main pancreatic duct (MPD) of >5 mm without other causes of obstruction.
- Pancreatic cysts of >5 mm in diameter that communicate with the MPD should be considered as BD-IPMN, with pseudocyst being in the differential diagnosis for patients with a prior history of pancreatitis.
- Mixed-type patients meet the criteria for both MD-IPMN and BD-IPMN.

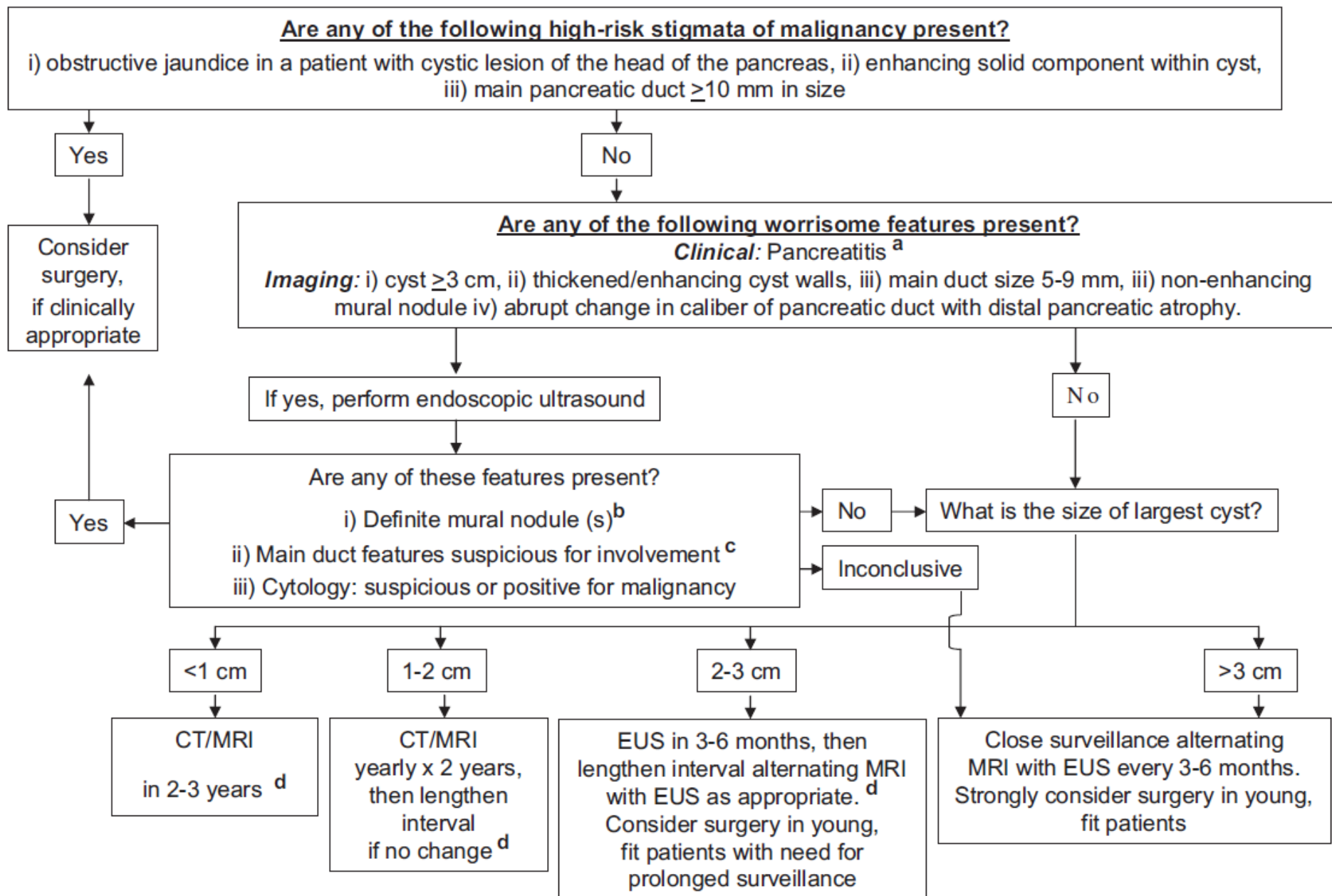
Table 2

Frequencies of malignancy in IPMNs according to the morphological types.

Total IPMNs					Main duct type			Branch duct type			Mixed type		
First author	Year	Total number	Malignant n (%)	Invasive n (%)	Number n (%)	Malignant n (%)	Invasive n (%)	Number n (%)	Malignant n (%)	Invasive n (%)	Number n (%)	Malignant n (%)	Invasive n (%)
Sugiyama [11]	2003	62	34 (54.8%)	20 (32.3%)	30 (48.4%)	21 (70.0%)	17 (56.7%)	32 (51.6%)	13 (40.6%)	3 (9.4%)			
Sohn ^a [12]	2004	136	>52 (38.2%)	52 (38.2%)	36 (26.5%)	>18 (50.0%)	18 (50.0%)	60 (44.1%)	>18 (30.0%)	18 (30.0%)	33 (24.3%)	>16 (48.5%)	16 (48.5%)
Salvia [13]	2004	140	83 (59.3%)	58 (41.4%)	140 (100%)	83 (59.3%)	58 (41.4%)						
Suzuki ^a [14]	2004	1024	>446 (43.6%)	446 (43.6%)	201 (19.6%)	>120 (59.7%)	120 (59.7%)	509 (49.7%)	>150 (29.5%)	150 (29.5%)	228 (22.3%)	148 (64.9%)	148 (64.9%)
Lee [15]	2005	67	24 (35.8%)	9 (13.4%)	27 (40.3%)	12 (44.4%)	3 (11.1%)	35 (52.2%)	10 (28.6%)	4 (11.4%)	5 (7.5%)	2 (40.0%)	2 (40.0%)
Serikawa [2]	2006	103	41 (39.8%)	28 (27.2%)	47 (45.6%)	30 (63.8%)	21 (44.7%)	56 (54.4%)	11 (19.6%)	7 (12.5%)			
Schmidt [3]	2007	156	50 (32.1%)	29 (18.6%)	53 (34.0%)	30 (56.6%)	15 (28.3%)	103 (66.0%)	20 (19.4%)	14 (13.6%)			
Rodriguez [20]	2007	145	32 (22.1%)	16 (11.0%)				145 (100%)	32 (22.1%)	16 (11.0%)			
Schnelldorfer [16]	2008	208	82 (39.4%)	63 (30.3%)	76 (36.5%)	49 (64.5%)		84 (40.4%)	15 (17.9%)		48 (23.1%)	18 (37.5%)	
Kim [17]	2008	118	36 (30.5%)	28 (23.7%)	70 (59.3%)	25 (35.7%)	23 (32.9%)	48 (40.7%)	>3 (6.3%)	3 (6.3%)			
Nagai [4]	2008	72	44 (61.1%)	30 (41.7%)	15 (20.8%)	15 (100%)	10 (66.7%)	49 (68.1%)	25 (51.0%)	18 (36.7%)	8 (11.1%)	4 (50.0%)	2 (25.0%)
Jang [21]	2008	138	26 (18.8%)	17 (12.3%)				138 (100%)	26 (18.8%)	17 (12.3%)			
Ohno [18]	2009	87	45 (51.7%)	19 (21.8%)	14 (16.1%)	11 (78.6%)	4 (28.6%)	48 (55.2%)	20 (41.7%)	9 (18.8%)	25 (28.7%)	14 (56.0%)	6 (24.0%)
Nara [19]	2009	123	82 (66.7%)	61 (49.6%)	26 (21.1%)	26 (100%)	21 (80.8%)	59 (48.0%)	26 (44.1%)	14 (23.7%)	38 (30.9%)	30 (78.9%)	26 (68.4%)
Bournet [7]	2009	99	24 (24.2%)	14 (14.1%)				47 (47.5%)	6 (12.8%)	4 (8.5%)	52 (52.5%)	18 (34.6%)	10 (19.2%)
Hwang [5]	2010	187	58 (31.0%)	43 (23.0%)	28 (15.0%)	20 (71.4%)	17 (60.7%)	118 (63.1%)	19 (16.1%)	14 (11.9%)	41 (21.9%)	19 (46.3%)	12 (29.3%)
Mimura [6]	2010	82	54 (65.9%)	29 (35.4%)	39 (47.6%)	34 (87.2%)	19 (48.7%)	43 (52.4%)	20 (46.5%)	10 (23.3%)			
Sadakari [22]	2010	73	6 (8.2%)	1 (1.4%)				73 (100%)	6 (8.2%)	1 (1.4%)			
Kanno [23]	2010	159	40 (25.2%)	19 (11.9%)				159 (100%)	40 (25.2%)	19 (11.9%)			
Crippa [10]	2010	389	181 (46.5%)	118 (30.3%)	81 (20.8%)	55 (68%)	39 (48%)	159 (40.9%)	34 (22%)	17 (11%)	149 (38.3%)	92 (62%)	62 (42%)
Total		3568	>1440 (>40.4%)	1100 (30.8%)	883 (24.7%)	>549 (>62.2%)	385 (43.6%)	2027 (56.8%)	>494 (>24.4%)	337 (16.6%)	627 (17.6%)	>361 (>57.6%)	284 (45.3%)

Abbreviation: IPMN: intraductal papillary mucinous neoplasm.

^a Since these reports only included invasive IPMNs, the frequency of malignant IPMNs is underestimated in this table owing to the absence of data for non-invasive IPMNs.



Roles of cyst fluid analysis and cytology obtained by EUS-FNA in the diagnosis of cystic lesions of the pancreas

- Elevated CEA is a marker that distinguishes mucinous from nonmucinous cysts, but not benign from malignant cysts.
- A cut-off of >192 ng/ml is 80% accurate for the diagnosis of a mucinous cyst.
- Cytology can be diagnostic, although the sensitivity is limited by the scant cellularity.
- **EUS-FNA with cytological and molecular analyses is recommended for evaluation of small BD-IPMNs without “worrisome features” only in centers with expertise in EUS-FNA and cytological interpretation**

American Gastroenterological Association Institute Guideline on the Diagnosis and Management of Asymptomatic Neoplastic Pancreatic Cysts

Santhi Swaroop Vege,¹ Barry Ziring,² Rajeev Jain,³ Paul Moayyedi,⁴ and the Clinical Guidelines Committee

GASTROENTEROLOGY 2015;148:819-822

These guidelines for asymptomatic mucinous cysts are different from all previously published guidelines in the following areas:

- ***2-year interval for cyst of any size undergoing surveillance***
- ***stopping surveillance after 5 years if no change***
- ***EUS-FNA for pancreatic cyst with at least 2 high risk features (size>3cm, dilated MPD, solid component).***
- ***surgery only if more than one concerning feature on MRI confirmed on EUS and only in centers with high volumes of pancreatic surgery***
- ***no surveillance after surgery if no invasive cancer or dysplasia.***

The role of endoscopy in the diagnosis and treatment of cystic pancreatic neoplasms

ASGE 2016

V. Raman Muthusamy, MD, FASGE, Vinay Chandrasekhara, MD, Ruben D. Acosta, MD,
David H. Bruining, MD, Krishnavel V. Chathadi, MD, Mohamad A. Eloubeidi, MD, MHS, FASGE,
Ashley L. Faulx, MD, FASGE, Lisa Fonkalsrud, BSN, RN, CGRN, SGNA representative,
Suryakanth R. Gurudu, MD, FASGE, Mouen A. Khashab, MD, Shivangi Kothari, MD,
Jenifer R. Lightdale, MD, MPH, FASGE, NASPGHAN representative, Shabana F. Pasha, MD,
John R. Saltzman, MD, FASGE, Aasma Shaukat, MD, MPH, FASGE, Amy Wang, MD, Julie Yang, MD,
Brooks D. Cash, MD, FASGE, Previous Committee Chair, John M. DeWitt, MD, FASGE, Chair

EUS morphology

- When surgical histology is used as a reference standard, the diagnostic accuracy of EUS imaging ranges from 40% to 96%.
-
- A single prospective study demonstrated that the sensitivity (56%) and specificity (45%) of EUS morphology alone for differentiating mucinous cysts (mucinous cystic neoplasms and IPMNs) from nonmucinous cysts were low, resulting in poor overall accuracy (51%).

Brugge WR, Lewandrowski K, Lee-Lewandrowski E, et al. Diagnosis of pancreatic cystic neoplasms: a report of the cooperative pancreatic cyst study. *Gastroenterology* 2004;126:1330-6.

FNA

- A recent study demonstrated that the addition of EUS-FNA to CT and magnetic resonance imaging increased the overall accuracy for diagnosing cystic pancreatic neoplasms by 36% and 54%, respectively.

Khashab MA, Kim K, Lennon AM, et al. Should we do EUS/FNA on patients with pancreatic cysts? The incremental diagnostic yield of EUS over CT/MRI for prediction of cystic neoplasms. *Pancreas* 2013;42: 717-21.

Cytology

- Cytology from EUS-FNA aspirates to distinguish mucinous from nonmucinous pancreatic cysts has a sensitivity of 54-63% and specificity of 88-93%.
- Malignancy within a cystic neoplasm can be identified by cytology with 83% to 99% specificity, although reported sensitivities vary from 25% to 88%.

Chemistries and tumor markers

- Reported sensitivities and specificities of chemical analyses have broad ranges, making interpretation difficult.
- When morphologic criteria, cytology, and CEA levels (cutoff 192 ng/mL) were taken together, EUS could differentiate mucinous from nonmucinous lesions with 91% sensitivity and 31% specificity.

Emerging techniques for cyst evaluation

- Intracystic visualization and direct intracystic biopsy
- Real-time in vivo microscopic imaging

בחזרה למטופל

- מטופל עם ממצא אקראי של ציסטה בראש לבלב, ללא הרחבה של MPD.
- מה המשך ה-MANAGEMENT במטופל זה?

EUS

ממצאים

דרכי מרה

כיס מרה

לבלב

ללא ממצא פתולוגי ,

ללא ממצא פתולוגי ,

ממצא פתולוגי מרקם תקין. וירסונג אינו מורחב.

נסרקה ציסטה בגודל 14X10MM בראש הלב. לב.

הציסטה דקת דופן וללא בליטות דופניות. ה-MPD עובר בסמוך מאוד אך אינו

מחובר לציסטה

בוצע ניקור. נשאב נוזל שקוף וצמיג מאוד (בקושי עובר במחט). נשלח לכימיה,

ממצא פתולוגי קשריות בחלון AP,

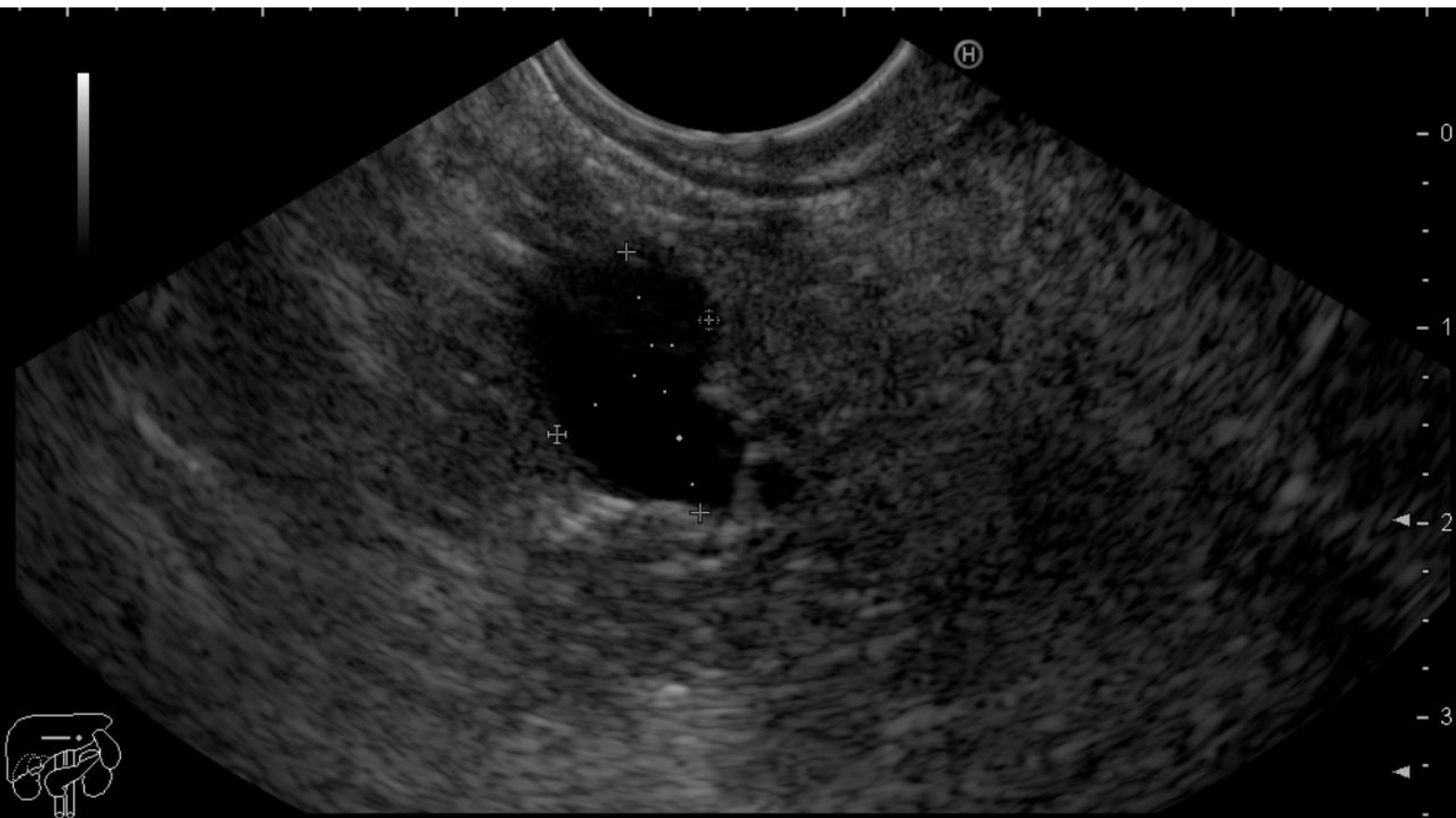
ללא ממצא פתולוגי ,

ללא ממצא פתולוגי ,

מיצר

כבד שמאל

קשריות לימפה



Calip					
+ D1	13.9 mm	⊕ D2	9.8 mm		



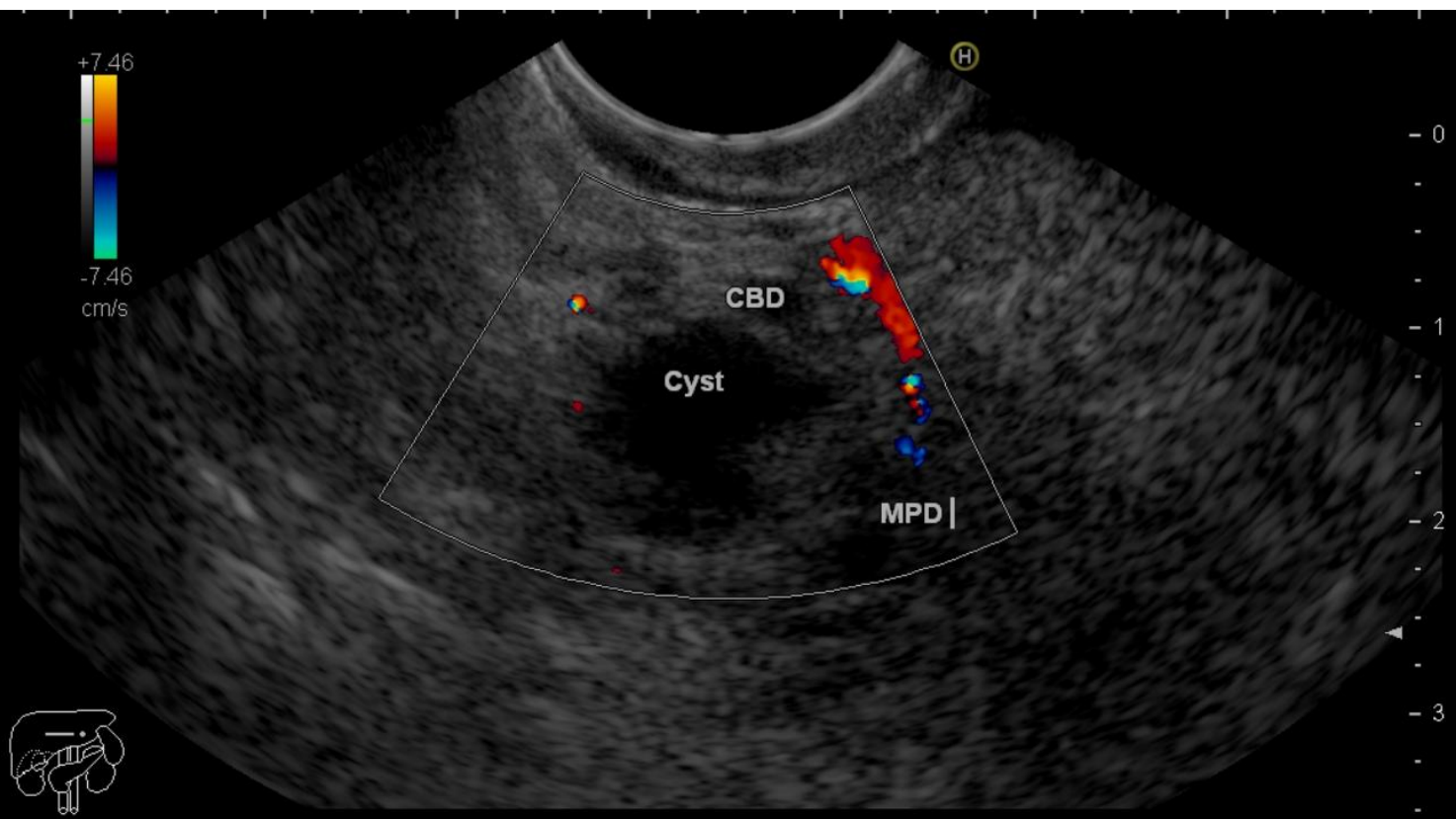
Arrow Menu

Navigation arrows: Up, Down, Left, Right, and a central selection arrow.

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7.5MHz 1k/5.0MHz

Image 7 of 14
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Couch:
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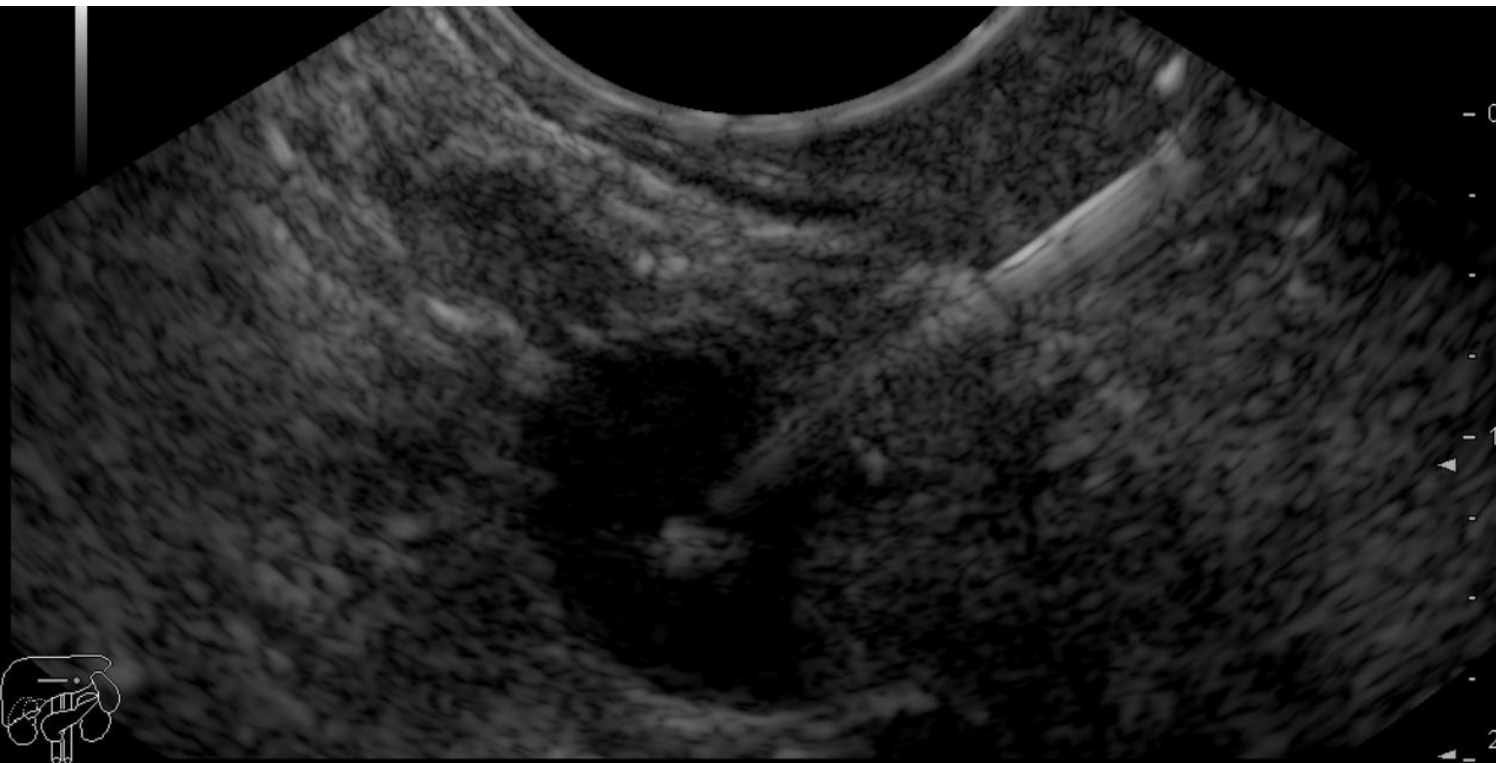


Image 10 of 14
//
24/08/2016, 17:46:54

FR:23
EG-3870UTK

BG:5 DR:65
7.5MHz

Couch:
1

מדדים בנוזל

• עמילאז – 39699 U/L

• CEA – 297ng/mL

- החליט לעבור ניתוח, עבר ניתוח ע"ש וויפל

- בפתולוגיה -

IPMN SIDE BRANCH WITH MODERATE DYSPLASIA