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MEETING SUMMARY

ILCA 2018, London, UK

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HCC EARLY DETECTION AND SCREENING

DISCLAIMER

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Please note:

The views expressed within this presentation are the personal opinion of the author. They do not necessarily represent the views of the author's academic institution or the rest of the HCC CONNECT group

SURVEILLANCE IMAGING AND ALPHA FETOPROTEIN FOR EARLY DETECTION OF HCC IN PATIENTS WITH CIRRHOSIS: A META-ANALYSIS

Abstract O-016

Kristina Tzartzeva et al.

BACKGROUND

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- Hepatocellular carcinoma (HCC) is the leading cause of death in patients with cirrhosis
- Tumor stage is of prognostic and therapeutic significance
  - Median survival >5 years for early HCC vs. ~1-2 years for advanced HCC
- Surveillance can improve early detection and overall survival
- Ultrasound-based surveillance fails in many patients, highlighting a need for better tests
- The benefit of AFP for surveillance has long been debated

AFP, alpha fetoprotein

Heimbach J, et al. Hepatology 2018;67:358-380; European Association For The Study Of The Liver. J Hepatol 2018;69:182-236.

METHODS

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- Searched MEDLINE and SCOPUS from January 1990 through August 2016
- Included studies that evaluated imaging +/- AFP in a surveillance manner in a cohort of patients with cirrhosis
- Abstracted per-patient sensitivity and specificity for each study
- Pooled estimates calculated using random effects model
- Pre-planned subgroup analyses by:
  - study design (prospective vs. retrospective)
  - study period
  - study location
  - and study population (proportion of patients with cirrhosis)

AFP, alpha fetoprotein.
Tzartzeva K, et al. Oral presentation at ILCA 2018. Abstract O-016

SENSITIVITY OF ULTRASOUND ALONE FOR EARLY HCC

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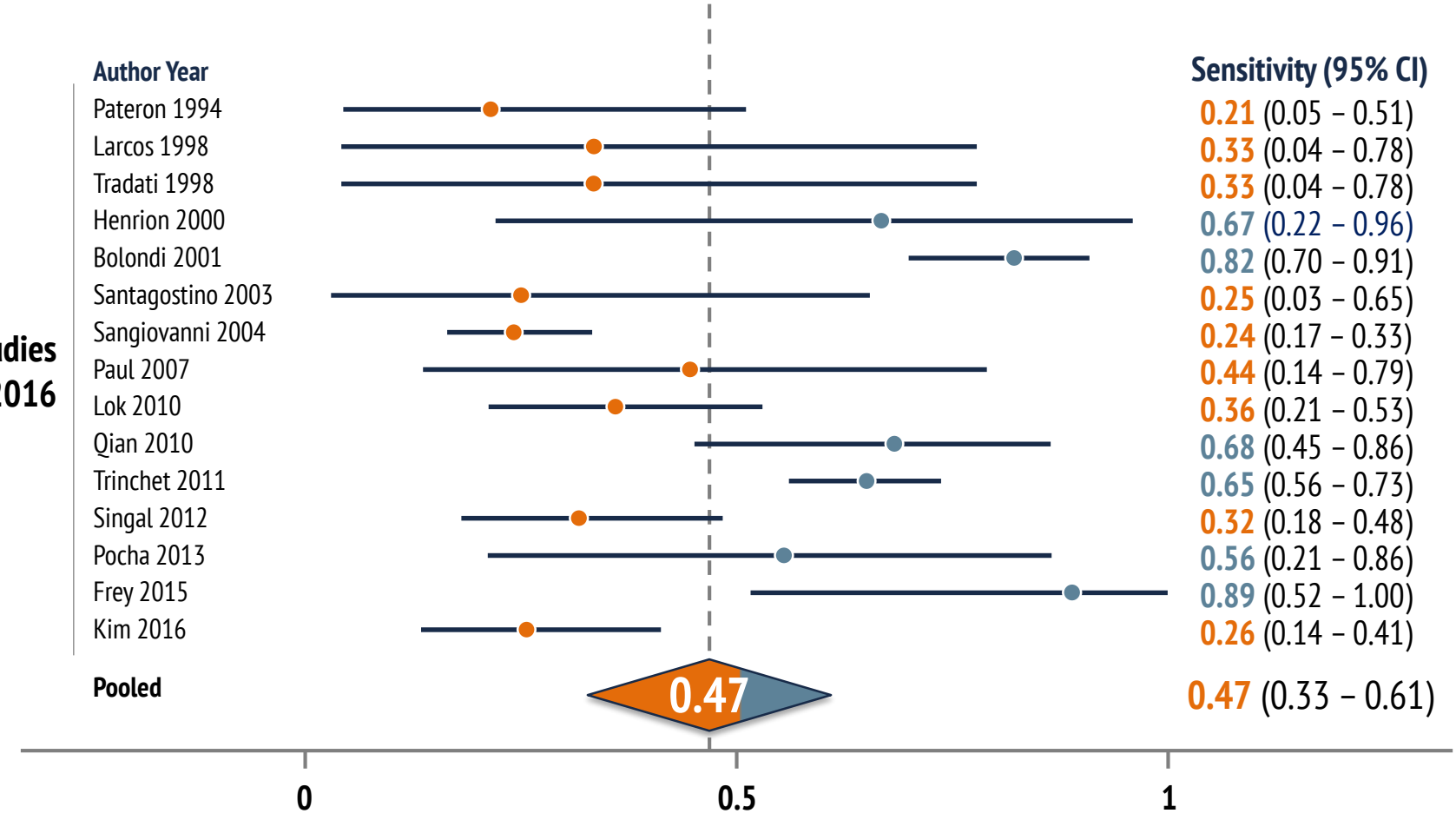
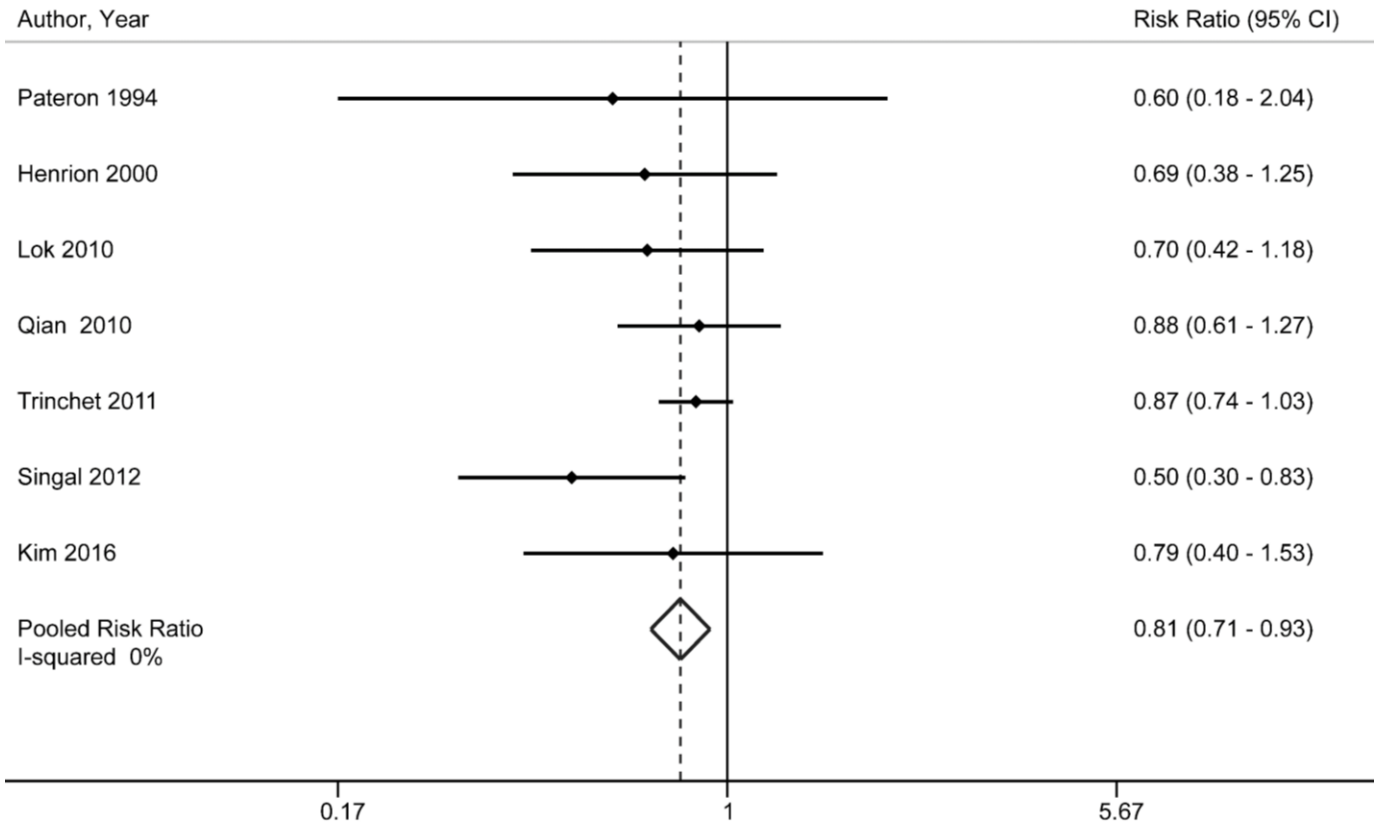
15 studies
1994 – 2016



CI, confidence interval; HCC, hepatocellular carcinoma
Tzartzeva K, et al. Oral presentation at ILCA 2018. Abstract O-016

SENSITIVITY OF ULTRASOUND +/- AFP FOR EARLY HCC



Benefit of AFP consistent across subgroups

Prospective studies:
RR 0.78 (0.66 – 0.92)

Studies in United States:
RR 0.59 (0.41 – 0.85)

Cirrhosis-only studies:
RR 0.76 (0.60 – 0.95)

Studies after 2000:
RR 0.79 (0.66 – 0.95)

Sensitivity ultrasound 45% (30–62%) vs. ultrasound + AFP: 63% (48–75%)

AFP, alpha fetoprotein; RR, relative risk.
Tzartzeva K, et al. Oral presentation at ILCA 2018. Abstract O-016

LONGITUDINAL ASSESSMENT OF AFP, LECTIN-REACTIVE AFP, AND DES-GAMMA-CARBOXY PROTHROMBIN FOR THE EARLY DETECTION OF HCC

Abstract P-016

Jonggi Choi et al.

BACKGROUND

- HCC surveillance is recommended in patients with cirrhosis
- Although ultrasound forms the cornerstone of HCC surveillance, biomarkers are often used in combination with ultrasound
- Most studies have assessed biomarkers in isolation and using single threshold measurements
  - Fewer have evaluated longitudinal measurements or biomarkers in combination

HCC, hepatocellular carcinoma.

Choi J, et al. Poster presented at ILCA 2018. Abstract P-016; Heimbach J, et al. Hepatology 2018;67:358-380; European Association For The Study Of The Liver. J Hepatol 2018;69:182-236.

METHODS

- Nested case-control study among 689 patients with chronic HBV or cirrhosis who participated in randomized trials
- 42 HCC patients were matched to 168 controls (1:4) for age, sex, cirrhosis, and duration of follow-up
- Samples at time of diagnosis, t-6 months, and t-12 months were tested for AFP, AFP-L3 and DCP

AFP, alpha fetoprotein; AFP-L3, lectin-reactive alpha fetoprotein; DCP, des-gamma-carboxy prothrombin; HBV, hepatitis B virus; HCC, hepatocellular carcinoma

Choi J, et al. Poster presented at ILCA 2018. Abstract P-016

ACCURACY OF BIOMARKERS TO DIFFERENTIATE HCC CASES AND CONTROLS

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	AUROC at month 0	AUROC at month t-6	AUROC at month t-12
AFP	0.77 (0.68 – 0.86)	0.70 (0.61 – 0.79)	0.63 (0.53 – 0.72)
AFP-L3	0.73 (0.65 – 0.81)	0.69 (0.61 – 0.77)	0.60 (0.51 – 0.69)
DCP	0.71 (0.61 – 0.80)	0.59 (0.49 – 0.70)	0.54 (0.42 – 0.66)
AFP + AFP-L3	0.83 (0.74 – 0.92)	0.78 (0.69 - 0.87)	0.71 (0.62 – 0.80)
AFP + DCP	0.77 (0.67 – 0.87)	0.61 (0.51 – 0.70)	0.52 (0.43 – 0.62)
All 3 markers	0.86 (0.76 – 0.95)	0.69 (0.59 – 0.79)	0.60 (0.51 – 0.70)

AFP, alpha fetoprotein; AFP-L3, lectin-reactive alpha fetoprotein; AUROC, area under the curve of the receiver operating characteristic; DCP, des-gamma-carboxy prothrombin; HCC, hepatocellular carcinoma
Choi J, et al. Poster presented at ILCA 2018. Abstract P-016

IMPACT OF A HCC SURVEILLANCE PROGRAM IN PATIENTS WITH CIRRHOSIS: FREQUENCY AND OUTCOMES OF ABNORMAL IMAGING

Abstract P-018

Monica Konerman et al.

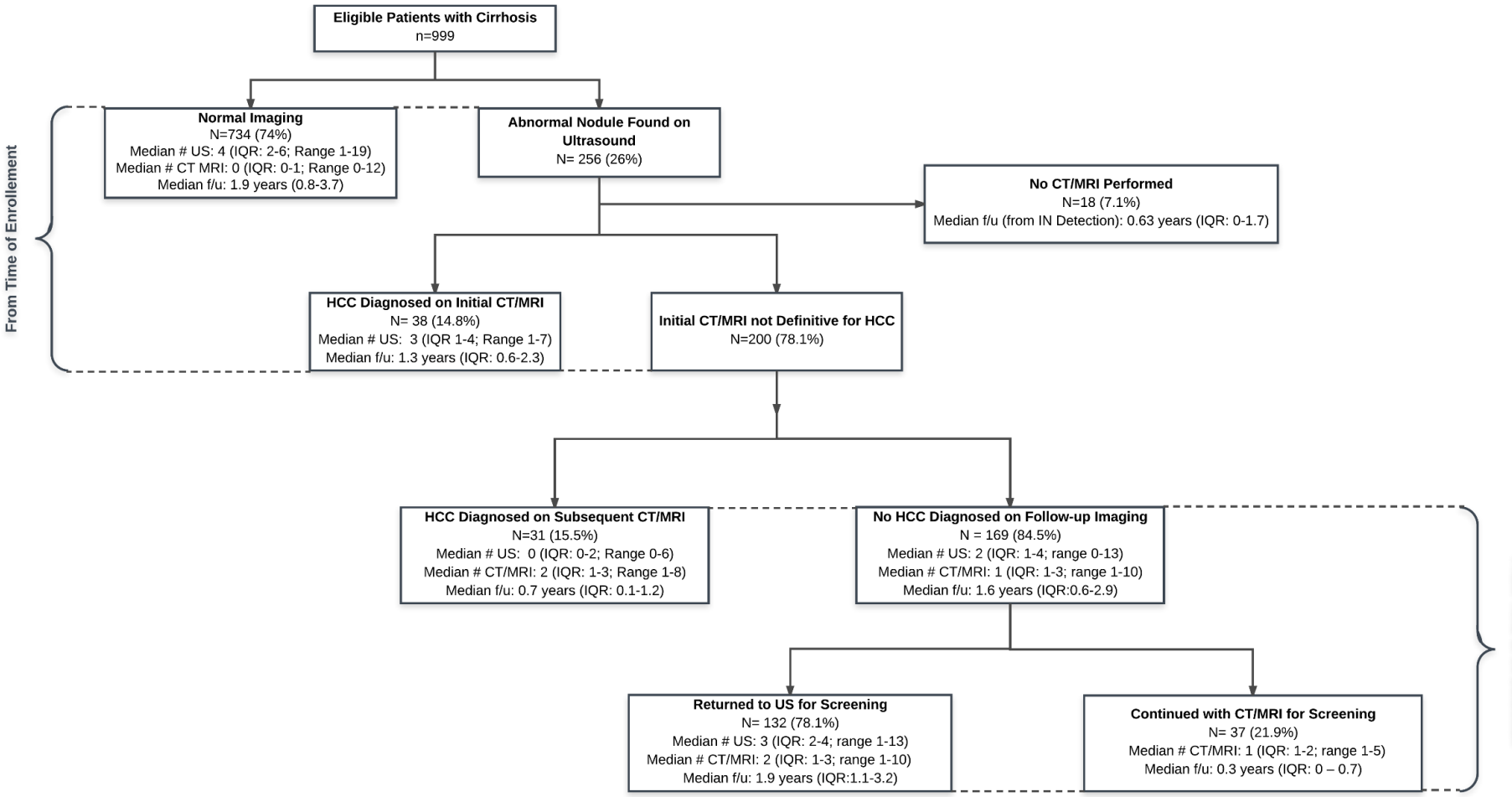
BACKGROUND

- HCC surveillance is recommended in patients with cirrhosis
- There are limited data on downstream effects of HCC surveillance, including frequency of false positive results[1]
- The authors aimed to quantify the incidence of indeterminate nodules and follow-up testing needed to resolve these findings among a large cohort of patients enrolled in a structured HCC surveillance program[1]

HCC, hepatocellular carcinoma

Konerman M, et al. Poster presented at ILCA 2018. Abstract P-018; Atiq O, et al. Hepatology 2017;65:1196-1205

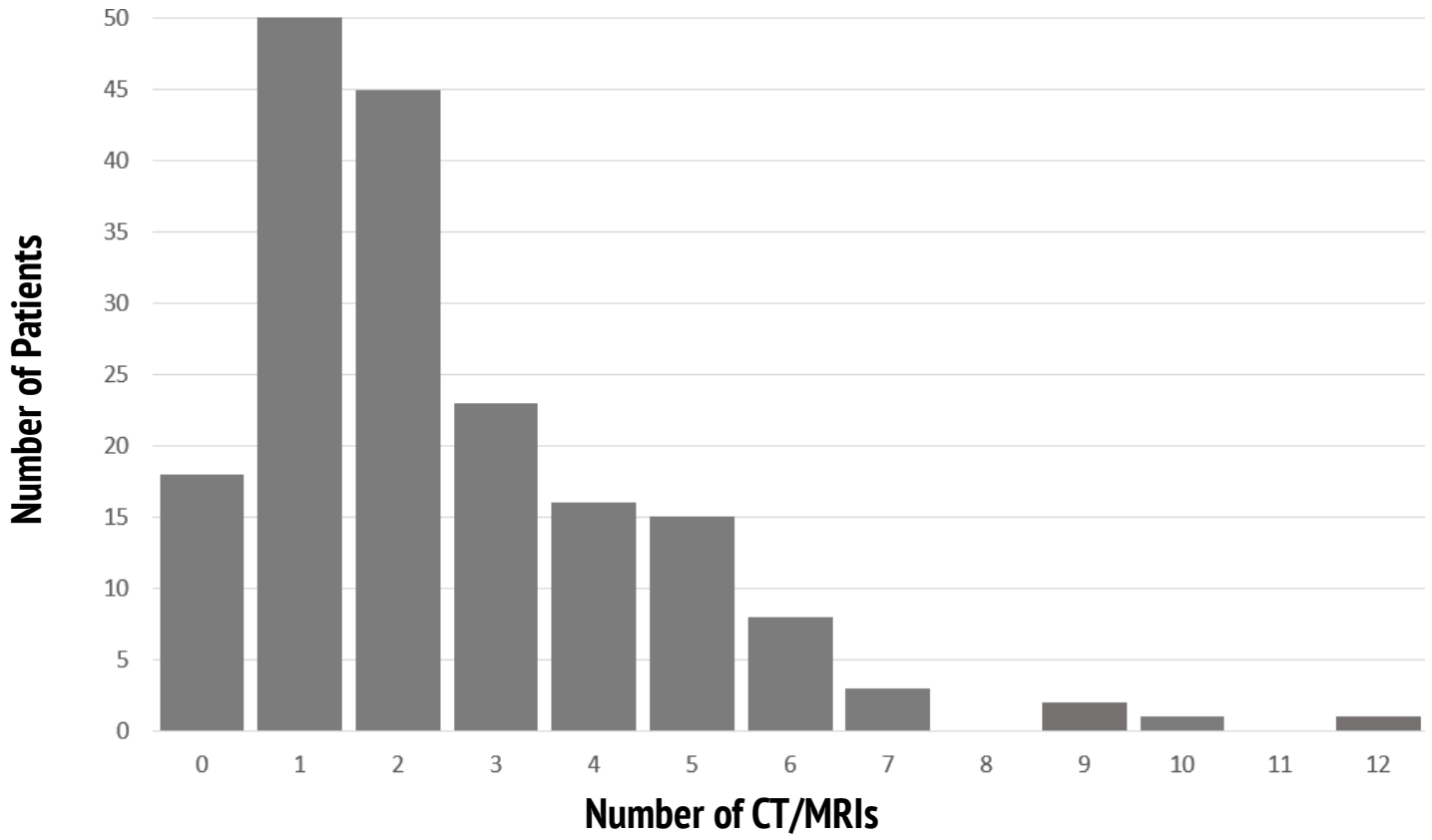
RESULTS OF STRUCTURED HCC SURVEILLANCE PROGRAM



CT, computed tomography; f/u, follow up; IQR, interquartile range; HCC, hepatocellular carcinoma; IN, indeterminate nodules; MRI, magnetic resonance imaging; US, ultrasound

Konerman M et al. Poster presented at ILCA 2018. Abstract P-018

USE OF DIAGNOSTIC IMAGING FOR FALSE POSITIVE SURVEILLANCE TESTS



CT, computed tomography; MRI, magnetic resonance imaging
Konerman M et al. Poster presented at ILCA 2018. Abstract P-018

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