

**Supplementary Table 1 Search strategies**

<b>Database</b>	<b>Date</b>	<b>of Search Strategy</b>
	<b>search</b>	
Pubmed (124)	November 2021	1. Fatty liver (52829) "Non-alcoholic Fatty Liver Disease"[MeSH Terms] OR "fatty liver, alcoholic"[MeSH Terms] OR "Fatty Liver"[MeSH Terms] OR "liver fatty"[Title/Abstract] OR "Steatohepatitis"[Title/Abstract] OR "steatosis of liver"[Title/Abstract] OR "visceral steatosis"[Title/Abstract] OR ("Steatoses"[All Fields] AND "Visceral"[Title/Abstract]) OR "steatosis visceral"[Title/Abstract] OR (("Visceral"[All Fields] OR "viscerally"[All Fields]) AND "Steatoses"[Title/Abstract]) OR "liver steatosis"[Title/Abstract] OR "liver steatoses"[Title/Abstract] OR ("Steatoses"[All Fields] AND "Liver"[Title/Abstract]) OR "steatosis liver"[Title/Abstract] OR "Non-alcoholic Fatty Liver Disease"[Title/Abstract] OR "NAFLD"[Title/Abstract] OR "nonalcoholic fatty liver disease"[Title/Abstract] OR "fatty liver nonalcoholic"[Title/Abstract] OR ("Fatty Liver"[MeSH Terms] OR ("Fatty"[All Fields] AND "Liver"[All Fields]) OR "Fatty Liver"[All Fields] OR ("Fatty"[All Fields] AND "Livers"[All Fields]) OR "fatty livers"[All Fields]) AND "Nonalcoholic"[Title/Abstract]) OR "liver nonalcoholic fatty"[Title/Abstract] OR (("Liver"[MeSH Terms] OR "Liver"[All Fields] OR "Livers"[All Fields] OR "liver s"[All Fields]) AND "nonalcoholic fatty"[Title/Abstract]) OR "nonalcoholic

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fatty liver"[Title/Abstract] OR "nonalcoholic fatty livers"[Title/Abstract] OR "nonalcoholic steatohepatitis"[Title/Abstract] OR ("Fatty Liver"[MeSH Terms] OR ("Fatty"[All Fields] AND "Liver"[All Fields]) OR "Fatty Liver"[All Fields]) AND "Nonalcoholic"[Title/Abstract]) OR "steatohepatitis nonalcoholic"[Title/Abstract] OR "alcoholic fatty liver"[Title/Abstract] OR "alcoholic steatohepatitis"[Title/Abstract]

## 2. MR technique (867,634)

"Magnetic Resonance Imaging"[MeSH Terms] OR "Magnetic Resonance Spectroscopy"[MeSH Terms] OR ("imaging magnetic resonance"[Title/Abstract] OR "nmr imaging"[Title/Abstract] OR "imaging nmr"[Title/Abstract] OR "tomography nmr"[Title/Abstract] OR "tomography mr"[Title/Abstract] OR "mr tomography"[Title/Abstract] OR "nmr tomography"[Title/Abstract] OR "steady state free precession mri"[Title/Abstract] OR "steady state free precession mri"[Title/Abstract] OR "Zeugmatography"[Title/Abstract] OR "imaging chemical shift"[Title/Abstract] OR "chemical shift imagings"[Title/Abstract] OR ("Image"[All Fields] OR "image s"[All Fields] OR "imaged"[All Fields] OR "imager"[All Fields] OR "imager s"[All Fields] OR "imagers"[All Fields] OR "Images"[All Fields] OR "Imaging"[All Fields] OR "imaging s"[All Fields] OR "Imagings"[All Fields]) AND "chemical

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shift"[Title/Abstract]) OR "shift imaging  
chemical"[Title/Abstract] OR (((("Shift"[All Fields] OR  
"shifted"[All Fields] OR "shifting"[All Fields] OR  
"shiftings"[All Fields] OR "shifts"[All Fields]) AND  
("Image"[All Fields] OR "image s"[All Fields] OR  
"imaged"[All Fields] OR "imager"[All Fields] OR  
"imager s"[All Fields] OR "imagers"[All Fields] OR  
"Images"[All Fields] OR "Imaging"[All Fields] OR  
"imaging s"[All Fields] OR "Imagings"[All Fields]))  
AND "Chemical"[Title/Abstract]) OR "chemical shift  
imaging"[Title/Abstract] OR "magnetic resonance  
image"[Title/Abstract] OR "image magnetic  
resonance"[Title/Abstract] OR "magnetic resonance  
images"[Title/Abstract] OR "resonance image  
magnetic"[Title/Abstract] OR "magnetization transfer  
contrast imaging"[Title/Abstract] OR "mri  
scans"[Title/Abstract] OR "mri scan"[Title/Abstract] OR  
"scan mri"[Title/Abstract] OR "scans  
mri"[Title/Abstract] OR (("tomographie"[All Fields] OR  
"Tomography"[MeSH Terms] OR "Tomography"[All  
Fields] OR "tomographies"[All Fields] OR "tomography  
s"[All Fields] OR "tomography, x ray computed"[MeSH  
Terms] OR ("Tomography"[All Fields] AND "x ray"[All  
Fields] AND "computed"[All Fields]) OR "x-ray  
computed tomography"[All Fields] OR  
"tomographys"[All Fields]) AND "proton  
spin"[Title/Abstract]) OR "proton spin  
tomography"[Title/Abstract] OR "fMRI"[Title/Abstract]  
OR "mri functional"[Title/Abstract] OR "functional

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mri"[Title/Abstract] OR "functional  
mris"[Title/Abstract] OR ("MRIs"[All Fields] AND  
"Functional"[Title/Abstract]) OR "functional magnetic  
resonance imaging"[Title/Abstract] OR "magnetic  
resonance imaging functional"[Title/Abstract] OR "spin  
echo imaging"[Title/Abstract] OR "echo imaging  
spin"[Title/Abstract] OR (((("Echo"[Journal] OR  
"Echo"[All Fields]) AND ("Image"[All Fields] OR "image  
s"[All Fields] OR "imaged"[All Fields] OR "imager"[All  
Fields] OR "imager s"[All Fields] OR "imagers"[All  
Fields] OR "Images"[All Fields] OR "Imaging"[All  
Fields] OR "imaging s"[All Fields] OR "Imagings"[All  
Fields])) AND "Spin"[Title/Abstract]) OR "imaging spin  
echo"[Title/Abstract] OR (("Image"[All Fields] OR  
"image s"[All Fields] OR "imaged"[All Fields] OR  
"imager"[All Fields] OR "imager s"[All Fields] OR  
"imagers"[All Fields] OR "Images"[All Fields] OR  
"Imaging"[All Fields] OR "imaging s"[All Fields] OR  
"Imagings"[All Fields]) AND "spin  
echo"[Title/Abstract]) OR ("Spin"[All Fields] AND "echo  
imagings"[Title/Abstract]) OR "magnetic resonance  
spectroscopies"[Title/Abstract] OR "resonance  
spectroscopy magnetic"[Title/Abstract] OR "mr  
spectroscopy"[Title/Abstract] OR "spectroscopy  
mr"[Title/Abstract] OR "spectroscopy magnetic  
resonance"[Title/Abstract] OR "nuclear magnetic  
resonance"[Title/Abstract] OR "magnetic resonance  
nuclear"[Title/Abstract] OR "resonance nuclear  
magnetic"[Title/Abstract] OR "in vivo nmr

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spectroscopy"[Title/Abstract] OR "nmr spectroscopy in vivo"[Title/Abstract] OR "magnetic resonance"[Title/Abstract] OR "resonance magnetic"[Title/Abstract] OR "spectroscopy nuclear magnetic resonance"[Title/Abstract] OR "spectroscopy nmr"[Title/Abstract] OR "nmr spectroscopy"[Title/Abstract] OR "nmr spectroscopies"[Title/Abstract] OR "spectroscopies nmr"[Title/Abstract])

### 3. Fat quantification (3717)

"fat quantif\*"[Title/Abstract] OR "fat measure\*"[Title/Abstract] OR "fat analysis"[Title/Abstract] OR "lipid quantif\*"[Title/Abstract] OR "lipid measure\*"[Title/Abstract] OR "lipid analysis"[Title/Abstract]

### 4. Outcome (124)

("Non-alcoholic Fatty Liver Disease"[MeSH Terms] OR "fatty liver, alcoholic"[MeSH Terms] OR "Fatty Liver"[MeSH Terms] OR "liver fatty"[Title/Abstract] OR "Steatohepatitis"[Title/Abstract] OR "steatosis of liver"[Title/Abstract] OR "visceral steatosis"[Title/Abstract] OR ("Steatoses"[All Fields] AND "Visceral"[Title/Abstract]) OR "steatosis visceral"[Title/Abstract] OR ("Visceral"[All Fields] OR "viscerally"[All Fields]) AND "Steatoses"[Title/Abstract]) OR "liver steatosis"[Title/Abstract] OR "liver steatoses"[Title/Abstract] OR ("Steatoses"[All Fields]

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AND "Liver"[Title/Abstract]) OR "steatosis liver"[Title/Abstract] OR "Non-alcoholic Fatty Liver Disease"[Title/Abstract] OR "NAFLD"[Title/Abstract] OR "nonalcoholic fatty liver disease"[Title/Abstract] OR "fatty liver nonalcoholic"[Title/Abstract] OR ("Fatty Liver"[MeSH Terms] OR ("Fatty"[All Fields] AND "Liver"[All Fields]) OR "Fatty Liver"[All Fields] OR ("Fatty"[All Fields] AND "Livers"[All Fields]) OR "fatty livers"[All Fields]) AND "Nonalcoholic"[Title/Abstract]) OR "liver nonalcoholic fatty"[Title/Abstract] OR ("Liver"[MeSH Terms] OR "Liver"[All Fields] OR "Livers"[All Fields] OR "liver s"[All Fields]) AND "nonalcoholic fatty"[Title/Abstract]) OR "nonalcoholic fatty liver"[Title/Abstract] OR "nonalcoholic fatty livers"[Title/Abstract] OR "nonalcoholic steatohepatitis"[Title/Abstract] OR ("Fatty Liver"[MeSH Terms] OR ("Fatty"[All Fields] AND "Liver"[All Fields]) OR "Fatty Liver"[All Fields]) AND "Nonalcoholic"[Title/Abstract]) OR "steatohepatitis nonalcoholic"[Title/Abstract] OR "alcoholic fatty liver"[Title/Abstract] OR "alcoholic steatohepatitis"[Title/Abstract]) AND ("Magnetic Resonance Imaging"[MeSH Terms] OR "Magnetic Resonance Spectroscopy"[MeSH Terms] OR ("imaging magnetic resonance"[Title/Abstract] OR "nmr imaging"[Title/Abstract] OR "imaging nmr"[Title/Abstract] OR "tomography nmr"[Title/Abstract] OR "tomography mr"[Title/Abstract] OR "mr

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tomography"[Title/Abstract] OR "nmr  
tomography"[Title/Abstract] OR "steady state free  
precession mri"[Title/Abstract] OR "steady state free  
precession mri"[Title/Abstract] OR  
"Zeugmatography"[Title/Abstract] OR "imaging  
chemical shift"[Title/Abstract] OR "chemical shift  
imagings"[Title/Abstract] OR ("Image"[All Fields] OR  
"image s"[All Fields] OR "imaged"[All Fields] OR  
"imager"[All Fields] OR "imager s"[All Fields] OR  
"imagers"[All Fields] OR "Images"[All Fields] OR  
"Imaging"[All Fields] OR "imaging s"[All Fields] OR  
"Imagings"[All Fields]) AND "chemical  
shift"[Title/Abstract] OR "shift imaging  
chemical"[Title/Abstract] OR (((("Shift"[All Fields] OR  
"shifted"[All Fields] OR "shifting"[All Fields] OR  
"shiftings"[All Fields] OR "shifts"[All Fields]) AND  
("Image"[All Fields] OR "image s"[All Fields] OR  
"imaged"[All Fields] OR "imager"[All Fields] OR  
"imager s"[All Fields] OR "imagers"[All Fields] OR  
"Images"[All Fields] OR "Imaging"[All Fields] OR  
"imaging s"[All Fields] OR "Imagings"[All Fields]))  
AND "Chemical"[Title/Abstract]) OR "chemical shift  
imaging"[Title/Abstract] OR "magnetic resonance  
image"[Title/Abstract] OR "image magnetic  
resonance"[Title/Abstract] OR "magnetic resonance  
images"[Title/Abstract] OR "resonance image  
magnetic"[Title/Abstract] OR "magnetization transfer  
contrast imaging"[Title/Abstract] OR "mri  
scans"[Title/Abstract] OR "mri scan"[Title/Abstract] OR

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"scan mri"[Title/Abstract] OR "scans mri"[Title/Abstract] OR ("tomographie"[All Fields] OR "Tomography"[MeSH Terms] OR "Tomography"[All Fields] OR "tomographies"[All Fields] OR "tomography s"[All Fields] OR "tomography, x ray computed"[MeSH Terms] OR ("Tomography"[All Fields] AND "x ray"[All Fields] AND "computed"[All Fields]) OR "x-ray computed tomography"[All Fields] OR "tomographys"[All Fields]) AND "proton spin"[Title/Abstract] OR "proton spin tomography"[Title/Abstract] OR "fMRI"[Title/Abstract] OR "mri functional"[Title/Abstract] OR "functional mri"[Title/Abstract] OR "functional mris"[Title/Abstract] OR ("MRIs"[All Fields] AND "Functional"[Title/Abstract]) OR "functional magnetic resonance imaging"[Title/Abstract] OR "magnetic resonance imaging functional"[Title/Abstract] OR "spin echo imaging"[Title/Abstract] OR "echo imaging spin"[Title/Abstract] OR (((("Echo"[Journal] OR "Echo"[All Fields]) AND ("Image"[All Fields] OR "image s"[All Fields] OR "imaged"[All Fields] OR "imager"[All Fields] OR "imager s"[All Fields] OR "imagers"[All Fields] OR "Images"[All Fields] OR "Imaging"[All Fields] OR "imaging s"[All Fields] OR "Imagings"[All Fields]))) AND "Spin"[Title/Abstract]) OR "imaging spin echo"[Title/Abstract] OR ("Image"[All Fields] OR "image s"[All Fields] OR "imaged"[All Fields] OR "imager"[All Fields] OR "imager s"[All Fields] OR "imagers"[All Fields] OR "Images"[All Fields] OR



"Imaging"[All Fields] OR "imaging s"[All Fields] OR  
 "Imagings"[All Fields]) AND "spin  
 echo"[Title/Abstract] OR ("Spin"[All Fields] AND "echo  
 imagings"[Title/Abstract]) OR "magnetic resonance  
 spectroscopies"[Title/Abstract] OR "resonance  
 spectroscopy magnetic"[Title/Abstract] OR "mr  
 spectroscopy"[Title/Abstract] OR "spectroscopy  
 mr"[Title/Abstract] OR "spectroscopy magnetic  
 resonance"[Title/Abstract] OR "nuclear magnetic  
 resonance"[Title/Abstract] OR "magnetic resonance  
 nuclear"[Title/Abstract] OR "resonance nuclear  
 magnetic"[Title/Abstract] OR "in vivo nmr  
 spectroscopy"[Title/Abstract] OR "nmr spectroscopy in  
 vivo"[Title/Abstract] OR "magnetic  
 resonance"[Title/Abstract] OR "resonance  
 magnetic"[Title/Abstract] OR "spectroscopy nuclear  
 magnetic resonance"[Title/Abstract] OR "spectroscopy  
 nmr"[Title/Abstract] OR "nmr  
 spectroscopy"[Title/Abstract] OR "nmr  
 spectroscopies"[Title/Abstract] OR "spectroscopies  
 nmr"[Title/Abstract])) AND ("fat  
 quantif\*"[Title/Abstract] OR "fat  
 measure\*"[Title/Abstract] OR "fat  
 analysis"[Title/Abstract] OR "lipid  
 quantif\*"[Title/Abstract] OR "lipid  
 measure\*"[Title/Abstract] OR "lipid  
 analysis"[Title/Abstract]) AND ((humans[Filter]) AND  
 (english[Filter]))

Embase November ('fatty liver'/exp OR 'fat liver' OR 'fatty change in liver')

(306)

2021

OR 'fatty infiltration of liver' OR 'fatty liver' OR 'fatty liver disease' OR 'fatty liver infiltration' OR 'fatty liver syndrome' OR 'fatty metamorphosis of the liver' OR 'hepatic lipidosis' OR 'hepatic steatosis' OR 'hepato-steatosis' OR 'hepatolipidosis' OR 'hepatosteato-sis' OR 'liver fatty change' OR 'liver fatty infiltration' OR 'liver lipidosis' OR 'liver steatosis' OR 'liver, fatty' OR 'steato-hepatosis' OR 'steatohepatopathy' OR 'steatohepatosis' OR 'steatosis, liver' OR 'steatotic hepatopathy' OR 'steatotic liver' OR 'nonalcoholic fatty liver'/exp OR 'nafld (nonalcoholic fatty liver disease)' OR 'non alcoholic fatty liver disease' OR 'non alcoholic hepato-steatosis' OR 'non alcoholic hepatosteato-sis' OR 'non alcoholic liver steatosis' OR 'non alcoholic steatotic hepatopathy' OR 'non-alcoholic fld' OR 'non-alcoholic fatty liver' OR 'non-alcoholic fatty liver disease' OR 'non-alcoholic hepatic steatosis' OR 'nonalcoholic fld' OR 'nonalcoholic fatty liver' OR 'nonalcoholic fatty liver disease' OR 'nonalcoholic hepatic steatosis' OR 'nonalcoholic hepatosteato-sis' OR 'nonalcoholic liver steatosis' OR 'alcoholic fatty liver'/exp OR 'a fld (alcoholic fatty liver disease)' OR 'alcoholic fld' OR 'alcoholic fatty liver' OR 'alcoholic hepatic steatosis' OR 'alcoholic hepatosteato-sis' OR 'alcoholic liver steatosis' OR 'alcoholic steatotic liver' OR 'fatty liver, alcoholic') AND ('nuclear magnetic resonance imaging'/exp OR 'mri' OR 'nmr imaging' OR 'imaging, magnetization transfer' OR 'magnetic resonance imaging' OR 'magnetic resonance tomography' OR 'magnetization transfer

imaging' OR 'mr imaging' OR 'nuclear magnetic resonance imaging' OR 'nuclear magnetic resonance spectroscopy'/exp OR 'mr spectroscopy' OR 'nmr spectrometry' OR 'nmr spectroscopy' OR 'high field nmr' OR 'magnetic resonance spectroscopy' OR 'mnr spectroscopy' OR 'nmr spectral analysis' OR 'nmr spectral identification' OR 'nmr spectrum' OR 'nuclear magnetic resonance spectral analysis' OR 'nuclear magnetic resonance spectrometry' OR 'nuclear magnetic resonance spectroscopy' OR 'nuclear magnetic resonance spectrum' OR 'spectroscopy, nuclear magnetic resonance') AND ('fat quantification' OR 'fat measurement' OR 'lipid analysis'/exp OR 'analysis, lipid' OR 'fat analysis' OR 'fat determination' OR 'fat separation' OR 'lipid analysis' OR 'lipid assay' OR 'lipid determination' OR 'lipid fractionation' OR 'lipid partitionation' OR 'lipid screening' OR 'lipid segregation' OR 'lipid separation' OR 'separation, fat' OR 'separation, lipid' OR 'lipid quantification' OR 'lipid measurement') AND [english]/lim AND [humans]/lim AND [1984-2021]/py

Cochrane	November	ID Search
Library	2021	#1 MeSH descriptor: [Fatty Liver] explode all trees
(321)		#2 (Steatosis of Liver):ti,ab,kw OR (Liver, Fatty):ti,ab,kw OR (Steatoses, Liver):ti,ab,kw OR (Visceral Steatoses):ti,ab,kw OR (Steatosis, Visceral):ti,ab,kw (Word variations have been searched)
		#3 (Visceral Steatosis):ti,ab,kw OR (Steatosis, Liver):ti,ab,kw OR (Liver Steatosis):ti,ab,kw OR (Liver

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Steatoses):ti,ab,kw OR (Steatoses, Visceral):ti,ab,kw  
(Word variations have been searched)

#4 (Steatohepatitis):ti,ab,kw OR  
(Steatohepatitides):ti,ab,kw OR (Non alcoholic Fatty  
Liver Disease):ti,ab,kw OR (Nonalcoholic Fatty Liver  
Disease):ti,ab,kw OR (Nonalcoholic Fatty Liver):ti,ab,kw  
(Word variations have been searched)

#5 (Nonalcoholic Fatty Livers; Livers):ti,ab,kw OR  
(Nonalcoholic Fatty):ti,ab,kw OR (Liver, Nonalcoholic  
Fatty):ti,ab,kw OR (Fatty Livers, Nonalcoholic):ti,ab,kw  
OR (Fatty Liver, Nonalcoholic):ti,ab,kw (Word  
variations have been searched)

#6 (Steatohepatitides, Nonalcoholic):ti,ab,kw OR  
(Nonalcoholic Steatohepatitides):ti,ab,kw OR  
(Steatohepatitis, Nonalcoholic):ti,ab,kw OR  
(Nonalcoholic Steatohepatitis):ti,ab,kw OR  
(NAFLD):ti,ab,kw (Word variations have been  
searched)

#7 (Alcoholic Fatty Liver):ti,ab,kw OR (Alcoholic  
Steatohepatitis):ti,ab,kw (Word variations have been  
searched)

#8 #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7

#9 MeSH descriptor: [Magnetic Resonance Imaging]  
explode all trees

#10 MeSH descriptor: [Magnetic Resonance  
Spectroscopy] explode all trees

#11 (Resonance Image, Magnetic):ti,ab,kw OR (Magnetic  
Resonance Images):ti,ab,kw OR (Image, Magnetic  
Resonance):ti,ab,kw OR (Magnetic Resonance

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Image):ti,ab,kw OR (Shift Imagings, Chemical):ti,ab,kw  
(Word variations have been searched)

#12 (Shift Imaging, Chemical):ti,ab,kw OR (Chemical  
Shift Imaging):ti,ab,kw OR (Imagings, Chemical  
Shift):ti,ab,kw OR (Imaging, Chemical Shift):ti,ab,kw OR  
(Chemical Shift Imagings):ti,ab,kw (Word variations  
have been searched)

#13 (Zeugmatography):ti,ab,kw OR (Tomography,  
MR):ti,ab,kw OR (Imaging, Magnetic  
Resonance):ti,ab,kw OR (Imaging, NMR):ti,ab,kw OR  
(NMR Tomography):ti,ab,kw (Word variations have  
been searched)

#14 (Steady State Free Precession MRI):ti,ab,kw OR  
(Steady-State Free Precession MRI):ti,ab,kw OR (NMR  
Imaging):ti,ab,kw OR (MR Tomography):ti,ab,kw OR  
(Tomography, NMR):ti,ab,kw (Word variations have  
been searched)

#15 (MRIs, Functional):ti,ab,kw OR (Functional  
MRI):ti,ab,kw OR (Magnetic Resonance Imaging,  
Functional):ti,ab,kw OR (Functional Magnetic  
Resonance Imaging):ti,ab,kw OR (fMRI):ti,ab,kw (Word  
variations have been searched)

#16 (Functional MRIs):ti,ab,kw OR (MRI,  
Functional):ti,ab,kw OR (MRI Scans):ti,ab,kw OR (Scans,  
MRI):ti,ab,kw OR (MRI Scan):ti,ab,kw (Word variations  
have been searched)

#17 (Scan, MRI):ti,ab,kw OR (Echo Imagings,  
Spin):ti,ab,kw OR (Spin Echo Imaging):ti,ab,kw OR  
(Imaging, Spin Echo):ti,ab,kw OR (Spin Echo

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Imagings):ti,ab,kw (Word variations have been searched)

#18(Echo Imaging, Spin):ti,ab,kw OR (Imagings, Spin Echo):ti,ab,kw OR (Tomography, Proton Spin):ti,ab,kw OR (Proton Spin Tomography):ti,ab,kw OR (Magnetization Transfer Contrast Imaging):ti,ab,kw (Word variations have been searched)

#19(Spectroscopy, NMR):ti,ab,kw OR (Spectroscopies, NMR):ti,ab,kw OR (Spectroscopy, Nuclear Magnetic Resonance):ti,ab,kw OR (NMR Spectroscopy):ti,ab,kw OR (NMR Spectroscopies):ti,ab,kw (Word variations have been searched)

#20(Resonance, Magnetic):ti,ab,kw OR (Magnetic Resonance):ti,ab,kw OR (Resonance, Nuclear Magnetic):ti,ab,kw OR (Nuclear Magnetic Resonance):ti,ab,kw OR (Magnetic Resonance, Nuclear):ti,ab,kw (Word variations have been searched)

#21(Magnetic Resonance Spectroscopies):ti,ab,kw OR (Spectroscopy, Magnetic Resonance):ti,ab,kw OR (MR Spectroscopy):ti,ab,kw OR (Resonance Spectroscopy, Magnetic):ti,ab,kw OR (Spectroscopy, MR):ti,ab,kw (Word variations have been searched)

#22(NMR Spectroscopy, In Vivo):ti,ab,kw OR (In Vivo NMR Spectroscopy):ti,ab,kw (Word variations have been searched)

#23 #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22

#24(fat quantification):ti,ab,kw OR (fat analysis):ti,ab,kw OR (fat measurement):ti,ab,kw OR

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(lipid quantification):ti,ab,kw OR (lipid analysis):ti,ab,kw (Word variations have been searched)

#25 (lipid measurement):ti,ab,kw (Word variations have been searched)

#26 #24 OR #25

#27 #26 AND #23 AND #8

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## Supplementary material

**Methods of study quality assessment:** The signaling questions in each domain were answered, the mean outcomes of the signaling questions were as an overall risk in each of the four domains, and the cumulative result of these four domains determine an overall risk of bias for each study. A study was judged to be at low risk of bias if the answers to all the signal questions are “yes”. A study was judged to be at high risk of bias if the outcomes for at least one domain was “no”. A study was judged to be of “unclear” risk of bias if there was an unclear result in at least one domain.