

● Subject Index to Volume 34

2D

- Synonyms:** 2-D, two dimensional, two-dimensional, 2-dimensional
- Search String:** 2D OR 2-D OR “two dimensional” OR two-dimensional OR 2-dimensional
- Booi RC, Carson PL, O’Donnell M, Roubidoux MA, Hall AL, Rubin JM. Characterization of cysts using differential correlation coefficient values from two dimensional breast elastography: Preliminary study. 34:12-21.
- Chranowski L, Drozd J, Strzelecki M, Krzeminska-Pakula M, Jedrzejewski KS, Kasprzak JD. Application of neural networks for the analysis of intravascular ultrasound and histological aortic wall appearance-an *in vitro* tissue characterization study. 34:103-113.
- Hoyt K, Castaneda B, Parker KJ. Two-dimensional sonoelastographic shear velocity imaging. 34:276-288.
- Migrino RQ, Aggarwal D, Konorev E, Brahmabhatt T, Bright M, Kalyanaraman B. Early detection of doxorubicin cardiomyopathy using two-dimensional strain echocardiography. 34:208-214.
- Patil AV, Krouskop TA, Ophir J, Srinivasan S. On the differences between two-dimensional and three-dimensional simulations for assessing elastographic image quality: A simulation study. 34:1129-1138.
- Ying M, Yung DMC, Ho KKL. Two-dimensional ultrasound measurement of thyroid gland volume: A new equation with higher correlation with 3-D ultrasound measurement. 34:56-63.

3D

- Synonyms:** 3-D, three dimensional, three-dimensional, 3-dimensional
- Search String:** 3D OR 3-D OR “three dimensional” OR three-dimensional OR 3-dimensional
- Chang CH, Tsai PY, Yu CH, Ko HC, Chang FM. Predicting fetal growth restriction with renal volume using 3-D ultrasound: Efficacy evaluation. 34:533-537.
- Chatterjee R, Deng D, Pellerin D, Todd-Pokropek A, Neild GH, Lees WR, Rodeck CH. Feasibility of dynamic 3-D color Doppler ultrasound for imaging penile vascular change in renal transplant patients with erectile dysfunction responding to sildenafil. 34:885-891.
- Egger M, Chiu B, Spence JD, Fenster A, Parraga G. Mapping spatial and temporal changes in carotid atherosclerosis from three-dimensional ultrasound images. 34:64-72.

- Ghanem A, Troatz C, Elhafi N, Dewald O, Heeschen C, Nickenig G, Stypmann J, Tiemann K. Quantitation of myocardial borderzone using reconstructive 3-D echocardiography after chronic infarction in rats - Incremental value of low-dose dobutamine. 34:559-566.
- Gooding MJ, Kennedy S, Noble JA. Volume segmentation and reconstruction from freehand three-dimensional ultrasound data with application to ovarian follicle measurement. 34:183-195.
- Hsu PW, Prager RW, Gee AH, Treece GM. Real-time freehand 3D ultrasound calibration. 34:239-251.
- Ivancevich N, Pinton G, Nicoletto H, Bennett E, Laskowitz D, Smith S. Real-Time 3-D Contrast-Enhanced Transcranial Ultrasound and Aberration Correction. 34:1387-1395.
- Li F, Wang Q, Yao GH, Zhang PF, Ge ZM, Zhang M, Zhang Y. Impact of the number of image planes of real-time three-dimensional echocardiography on the accuracy of left atrial and ventricular volume measurements. 34:40-46.
- Li XC, Yao GH, Zhang C, Zhang M, Zhang PF, Zhang W, Hu YY, Ji XP, Zhang Y. Quantification of regional volume and systolic function of the left ventricle by real-time three-dimensional echocardiography. 34:379-384.
- Little SH, Igo SR, McCulloch M, Hartley CJ, Nose Y, Zoghbi WA. Three-dimensional ultrasound imaging model of mitral valve regurgitation: Design and evaluation. 34:647-654.
- Patil AV, Krouskop TA, Ophir J, Srinivasan S. On the differences between two-dimensional and three-dimensional simulations for assessing elastographic image quality: A simulation study. 34:1129-1138.
- Po-Wei Hsu, Graham M.Treece, Richard W.Prager, Neil E.Houghton, Andrew H.Gee. Comparison of Freehand 3-D Ultrasound Calibration Techniques Using a Stylus. 34:1610-1621.
- Treece GM, Lindop JE, Gee AH, Prager RW. Freehand ultrasound elastography with a 3-D probe. 34:463-474.
- van Stralen M, Leung KYE, Voormolen MM, de Jong N, Van Der Steen AFW, Reiber JHC, Bosch JG. Time continuous detection of the left ventricular long axis and the mitral valve plane in 3-D echocardiography. 34:196-207.
- Ying M, Yung DMC, Ho KKL. Two-dimensional ultrasound measurement of thyroid gland volume: A new equation

with higher correlation with 3-D ultrasound measurement. 34:56-63.

Yoo Y, Sikdar S, Karadayi K, Kolokythas O, Kim Y. Adaptive Clutter Rejection for 3D Color Doppler Imaging: Preliminary Clinical Study. 34:1221-1231.

4D

Synonyms: 4-D, four dimensional, four-dimensional, 4-dimensional

Search String: 4D OR 4-D OR "four dimensional" OR four-dimensional OR 4-dimensional

John B, Rowland D, Ratnam L, Walkden M, Nayak S, Patel U, Anson K, Nassiri D. Percutaneous Renal Intervention: Comparison of 2-D and Time-Resolved 3-D (4-D) Ultrasound for Minimal Calyceal Dilation Using an Ultrasound Phantom and Fluoroscopic Control. 34:1765-1769.

A

Abdominal ultrasound

Synonyms: Abdominal imaging, Abdomen

Search String: "Abdominal ultrasound" OR "Abdominal imaging" OR Abdomen

See also: kidney, liver, spleen, pancreas, gall bladder

Fraser KH, Meagher S, Blake JR, Easson WJ, Hoskins PR. Characterization of an abdominal aortic velocity waveform in patients with abdominal aortic aneurysm. 34:73-80.

Acoustic emission

Synonyms: AE, passive detection

Search String: "acoustic emission" OR AE OR "passive detection"

See also: cavitation

Mast T, Salgaonkar V, Karunakaran C, Besse J, Datta S, Holland C. Acoustic Emissions During 3.1 MHz Ultrasound Bulk Ablation *in vitro*. 34:1434-1448.

Acoustic microscopy

Synonyms: scanning acoustic microscopy (SAM), ultrasound/ultrasonic microscopy, biomicroscopy

Search String: "acoustic microscop*" OR "ultra* microscop*" OR "bio*microscop*" OR SAM

See also: high frequency ultrasound

Brand S, Weiss E, Lemor R, Kolios M. High Frequency Ultrasound Tissue Characterization and Acoustic Microscopy of Intracellular Changes. 34:1396-1407.

Acoustic properties of tissues

Synonyms: ultrasound/ultrasonic properties

Search String: tissue* AND "acoustic properties" OR "ultra* properties"

See also: tissue characterisation, attenuation, velocity, dispersion, tissue elasticity, backscatter

Booi RC, Carson PL, O'Donnell M, Roubidoux MA, Hall AL, Rubin JM. Characterization of cysts using differential

correlation coefficient values from two dimensional breast elastography: Preliminary study. 34:12-21.

Fraser KH, Meagher S, Blake JR, Easson WJ, Hoskins PR. Characterization of an abdominal aortic velocity waveform in patients with abdominal aortic aneurysm. 34:73-80.

Kotha SP, DePaula CA, Mann AB, Guzelsu N. High frequency ultrasound prediction of mechanical properties of cortical bone with varying amount of mineral content. 34:630-637.

Libgot-Calle R, Ossant F, Gruel Y, Lermusiaux P, Patat F. High frequency ultrasound device to investigate the acoustic properties of whole blood during coagulation. 34:252-264.

Rosengarten B, Lutz H, Kaps M. The neurovascular coupling bears properties of a feedforward and feedback regulative mechanism. 34:1-6.

Tsuzuki K, Hasegawa H, Ichiki M, Tezuka F, Kanai H. Optimal region-of-interest settings for tissue characterization based on ultrasonic elasticity imaging. 34:573-585.

Zhang M, Nigwekar P, Castaneda B, Hoyt K, Joseph JV, Agnese AD, Messing EM, Strang JG, Rubens DJ, Parker KJ. Quantitative characterization of viscoelastic properties of human prostate correlated with histology. 34:1033-1042.

Adaptive filtering

Synonyms: adaptive algorithm, optimising filter, noise cancellation, denoising, adaptive clutter rejection

Search String: "adaptive filt*" OR "optimising filt*" OR "adaptive algorithm" OR "adaptive clutter rejection" OR "Least squares" OR "cost function" OR "finite impulse response" OR "noise cancellation" OR denoising

See also: Image processing

Yoo Y, Sikdar S, Karadayi K, Kolokythas O, Kim Y. Adaptive Clutter Rejection for 3D Color Doppler Imaging: Preliminary Clinical Study. 34:1221-1231.

Aneurysm

Synonyms: aneurism

Search String: Aneur*sm OR AAA

See also: atherosclerosis, hypertension

Fraser KH, Meagher S, Blake JR, Easson WJ, Hoskins PR. Characterization of an abdominal aortic velocity waveform in patients with abdominal aortic aneurysm. 34:73-80.

Angiogenesis

Synonyms: increase in vascularity, vascularisation

Search String: Angiogenesis OR "increase in vascularity" OR "vascularity index" OR VI OR vasculari*ation OR "capillary density" OR "microvessel density" OR neoangiogenesis OR neovasculari*ation

Kuo WH, Chen CN, Hsieh FJ, Shyu MK, Chang LY, Lee PH, Liu LYD, Cheng CH, Wang J, Chang KJ. Vascularity change and tumor response to neoadjuvant chemotherapy for advanced breast cancer. 34:857-866.

Animal studies

Synonyms: animal model

Search String: "animal stud*" OR "animal model" OR mouse OR dog OR bovine OR murine OR canine OR porcine OR rabbit OR pig OR rat

Chen HM, Duan YY, Li J, Zhou N, Yuan LJ, Cao TS, Hou WH, Zhang HX, Cao W, Yang YH. A rabbit model with acute thrombo-embolic pulmonary hypertension created with echocardiography guidance. 34:221-227.

Kim K, Johnson LA, Jia CX, Joyce JC, Rangwalla S, Higgins PDR, Rubin JM. Noninvasive ultrasound elasticity imaging (UEI) of Crohn's disease: Animal model. 34:902-912.

Li YB, Garson CD, Xu YQ, French BA, Hossack JA. High frequency ultrasound imaging detects cardiac dyssynchrony in noninfarcted regions of the murine left ventricle late after reperfused myocardial infarction. 34:1063-1075.

Mule S, De Cesare A, Lucidarme O, Frouin F, Herment A. Regularized estimation of contrast agent attenuation to improve the imaging of microbubbles in small animal studies. 34:938-948.

Arrays

Synonyms: phased array, beam steering, compound imaging

Search String: array* OR "phased array*" OR "beam steering*" OR compound* OR "multi* element*" OR "beam forming"

See also: transducers

Xu XC, Sun L, Cannata JM, Yen JT, Shung KK. High-frequency ultrasound Doppler system for biomedical applications with a 30-MHZ linear array. 34:638-646.

Artefacts

See image artifacts

Artery

Synonyms: Arterial vessel

Search String: Arter* OR aorta OR carotid

See also: blood vessels, carotid

Claridge MW, Bate GR, Dineley JA, Hoskins PR, Marshall T, Adam DA, Bradbury AW, Wilmlink AB. A reproducibility study of a TDI-based method to calculate indices of arterial stiffness. 34:215-220.

Gemignani V, Bianchini E, Faita F, Giannarelli C, Plantinga Y, Ghiadoni L, Demi M. Ultrasound measurement of the brachial artery flow-mediated dilation without ECG gating. 34:385-391.

Hoskins PR. Simulation and validation of arterial ultrasound imaging and blood flow. 34:693-717.

Jiang B, Liu B, McNeill KL, Chowienczyk PJ. Measurement of pulse wave velocity using pulse wave Doppler ultrasound: Comparison with arterial tonometry. 34:509-512.

Parthenis DG, Kardoulas DG, Ioannou CV, Antoniadis PN, Kafetzakis A, Angelidou KI, Katsamouris AN. Total occlusion of the common carotid artery: A modified classification and its relation to clinical status. 34:867-873.

Robertson JW, Debert CT, Frayne R, Poulin MJ. Variability of middle cerebral artery blood flow with hypercapnia in women. 34:730-740.

Thelen A, Kelly A, Williamson E, Dengel D. Examining the Time Course of Endothelium-Independent Dilatation by Nitroglycerin. 34:1217-1220.

Thrush AJ, Brewin MP, Birch MJ. Assessment of tissue Doppler imaging measurements of arterial wall motion using a tissue mimicking test rig. 34:446-453.

Wikstrom J, Gronros J, Gan LM. Adenosine induces dilation of epicardial coronary arteries in mice - Relationship between coronary flow velocity reserve and coronary flow reserve *in vivo* using transthoracic echocardiography. 34:1053-1062.

Stoner L, Sabatier MJ, Black CD, McCully KK. Occasional Cigarette Smoking Chronically Affects Arterial Function. 34:1885-1892.co;1

Atherosclerosis

Synonyms: vascular disease, atheromatous plaque, arterial hardening

Search String: Atherosclerosis OR plaque OR stenosis OR "vascular disease" OR atheromatous OR "arter* hardening"

See also: blood vessels, Aneurysm

Egger M, Chiu B, Spence JD, Fenster A, Parraga G. Mapping spatial and temporal changes in carotid atherosclerosis from three-dimensional ultrasound images. 34:64-72.

Shi H, Varghese T, Dempsey R, Salamat M, Zagzebski J. Relationship Between Ultrasonic Attenuation; Size and Axial Strain Parameters for *ex vivo* Atherosclerotic Carotid Plaque. 34:1666-1677.

Yamagami H, Sakaguchi M, Furukado S, Hoshi T, Abe Y, Hougaku H, Hori M, Kitagawa K. Statin Therapy Increases Carotid Plaque Echogenicity in Hypercholesterolemic Patients. 34:1353-1359.

Attenuation

Synonyms: BUA

Search String: attenuat* OR BUA

See also: acoustic properties of tissues

Kim H, Varghese T. Hybrid Spectral Domain Method for Attenuation Slope Estimation. 34:1808-1819.

Klinkosz T, Lewa CJ, Paczkowski J. Propagation velocity and attenuation of a shear wave pulse measured by ultrasound detection in agarose and polyacrylamide gels. 34:265-275.

Mule S, De Cesare A, Lucidarme O, Frouin F, Herment A. Regularized estimation of contrast agent attenuation to

improve the imaging of microbubbles in small animal studies. 34:938-948.

Tang MX, Mari JM, Wells PNT, Eckersley RJ. Attenuation Correction in Ultrasound Contrast Agent Imaging: Elementary Theory and Preliminary Experimental Evaluation. 34:1998-2008.

B

Backscatter

Synonyms: back scatter, backscattering

Search String: Backscatter* OR "Back scatter*" OR Nakagami

See also: Acoustic properties of tissues

Khan Z, Boughner D, Lacefield J. Anisotropy of High-Frequency Integrated Backscatter from Aortic Valve Cusps. 34:1504-1512.

Okubo M, Kawasaki M, Ishihara Y, Takeyama U, Kubota T, Yamaki T, Ojio S, Nishigaki K, Takemura G, Saio M, Takami T, Minatoguchi S, Fujiwara H. Development of integrated backscatter intravascular ultrasound for tissue characterization of coronary plaques. 34:655-663.

Trobaugh JW, Arthur RM, Straube WL, Moros EG. A simulation model for ultrasonic temperature imaging using change in backscattered energy. 34:289-298.

Wu XQ, Yang ZY, Qian DJ, Wang Q, Bo XP, Zhu JQ. Very early stage detection of acute myocardial infarction by harmonic ultrasonic integrated backscatter. 34:567-572.

Beam focusing

Synonyms: beam forming, dynamic focusing

Search String: Beam AND focus*ing OR forming OR "dynamic focusing"

See also: arrays

Goldstein A. Steady state spherically focused, circular aperture beam patterns (vol 32, pg 1441, 2006). 34:1021-1021.

Biological effects

Synonyms: Bioeffects, Biochemical effect

Search String: "bio*effect*"

See also: cell damage, therapeutic effects of ultrasound, toxicity, thermal effects

Miller D, Dou C, Wiggins R. Frequency Dependence of Kidney Injury Induced by Contrast-Aided Diagnostic Ultrasound in Rats. 34:1678-1687.

Nedelmann M, Reuter P, Walberer M, Sommer C, Alessandri B, Schiel D, Ritschel N, Kempfski O, Kaps M, Mueller C, Bachmann G, Gerriets T. Detrimental Effects of 60 kHz Sonothrombolysis in Rats with Middle Cerebral Artery Occlusion. 34: 2019- 2027.

Biometrics

Synonyms: Identification

Search String: "bio*metric*"

Narayanasamy G, Fowlkes J, Kripfgans O, Jacobson J, De Maeseneer M, Schmitt R, Carson P. Ultrasound of the Fingers for Human Identification Using Biometrics. 34: 392-399.

Blood

Synonyms:

Search String: Blood OR hem* OR haem* OR "red cell*" OR platelet* or leukocyte* OR "white cell*"

Jungehulsing GJ, Brunecker P, Nolte CH, Fiebach JB, Kunze C, Doepp F, Villringer A, Schreiber SJ. Diagnostic transcranial ultrasound perfusion-imaging at 2.5 MHz does not affect the blood-brain barrier. 34:147-150.

Libgot-Calle R, Ossant F, Gruel Y, Lermusiaux P, Patat F. High frequency ultrasound device to investigate the acoustic properties of whole blood during coagulation. 34: 252-264.

Liu HL, Wai YY, Chen WS, Chen JC, Hsu PH, Wu XY, Huang WC, Yen TC, Wang JJ. Hemorrhage detection during focused-ultrasound induced blood-brain-barrier opening by using susceptibility-weighted magnetic resonance imaging. 34:598-606.

Nam KH, Paeng DG, Choi MJ, Shung KK. Ultrasonic observation of blood disturbance in a stenosed tube: Effects of flow acceleration and turbulence downstream. 34:114-122.

Nguyen LC, Yu FTH, Cloutier G. Cyclic changes in blood echogenicity under pulsatile flow are frequency dependent. 34:664-673.

Nillesen MM, Lopata RGP, Gerrits IH, Kapusta L, Thijssen JM, de Korte CL. Modeling envelope statistics of blood and myocardium for segmentation of echocardiographic images. 34:674-680.

Blood perfusion

Synonyms: tissue perfusion

Search String: Blood OR tissue AND perfusion OR "flash replenishment"

Wasmeier GH, Zimmermann WH, Schineis N, Melnychenko I, Voigt JU, Eschenhagen T, Flachskampf FA, Daniel WG, Nixdorff U. Real-time myocardial contrast echocardiography for assessing perfusion and function in healthy and infarcted Wistar rats. 34:47-55.

Blood flow

Synonyms: haemodynamics, venous reflux

Search String: "Blood flow" OR "h*emodynamic*(s)" OR "venous reflux" OR "flow index"

See also: Doppler

Bonnin P, Debbabi H, Mariani J, Charriaut-Marlangue C, Renolleau S. Ultrasonic assessment of cerebral blood flow changes during ischemia-reperfusion in 7-day-old rats. 34: 913-922.

Hoskins PR. Simulation and validation of arterial ultrasound imaging and blood flow. 34:693-717.

Robertson JW, Debert CT, Frayne R, Poulin MJ. Variability of middle cerebral artery blood flow with hypercapnia in women. 34:730-740.

Yao GH, Zhang C, Sun FR, Zhang M, Zhao YX, Zhang PF, Zhong L, Ding SF, Chen WQ, Li XN, Zhang Y. Quantification of transmural gradient of blood flow in myocardial ischemia with real-time myocardial contrast echocardiography and dipyridamole stress test. 34:22-30.

Boskovski MT, Shmuylovich L, Kovács SJ. Transmittal Flow Velocity–Contour Variation After Premature Ventricular Contractions: A Novel Test of the Load-Independent Index of Diastolic Filling. 34:1901-1908.

Blood pressure

Synonyms: hypertension, hypotension, vascular pressure, arterial pressure

Search String: “Blood pressure” OR hypertension OR hypotension OR “vascular pressure” OR “arterial pressure”

See also: hypertension

Hartley CJ, Reddy AK, Madala S, Michael LH, Entman ML, Taffet GE. Doppler estimation of reduced coronary flow reserve in mice with pressure overload cardiac hypertrophy. 34:892-901.

Blood vessel

Synonyms: artery, vein, capillary, vascular

Search String: “blood vessel” OR artery OR vein OR capillary OR vascular

See also: artery

Blood-brain barrier

Synonyms: BBB

Search String: “blood-brain barrier” OR BBB OR “tight junctions” OR fenestrations

See also: thrombolysis, transcranial ultrasound

Jungehulsing GJ, Brunecker P, Nolte CH, Fiebach JB, Kunze C, Doepp F, Villringer A, Schreiber SJ. Diagnostic transcranial ultrasound perfusion-imaging at 2.5 MHz does not affect the blood-brain barrier. 34:147-150.

Liu HL, Wai YY, Chen WS, Chen JC, Hsu PH, Wu XY, Huang WC, Yen TC, Wang JJ. Hemorrhage detection during focused-ultrasound induced blood-brain-barrier opening by using susceptibility-weighted magnetic resonance imaging. 34:598-606.

McDannold N, Vykhodtseva N, Hynynen K. Blood-brain barrier disruption induced by focused ultrasound and circulating preformed microbubbles appears to be characterized by the mechanical index. 34:834-840.

McDannold N, Vykhodtseva N, Hynynen K. Effects of acoustic parameters and ultrasound contrast agent dose on focused-ultrasound induced blood-brain barrier disruption. 34:930-937.

Xie F, Boska MD, Lof J, Uberti MG, Tsutsui JM, Porter TR. Effects of Transcranial Ultrasound and Intravenous

Microbubbles on Blood Brain Barrier Permeability in a Large Animal Model. 34:2028-2034.

Bone

Synonyms: osteo-

Search String: bone OR trabecular OR cortical OR osteo*

Ammi A, Mast T, Huang I, Abruzzo T, Coussios C, Shaw G, Holland C. Characterization of Ultrasound Propagation Through *ex-vivo* Human Temporal Bone. 34:1578-1589.

Barkmann R, Laugier P, Moser U, Dencks S, Klausner M, Padilla F, Haiat G, Heller M, Glüer C. *in vivo* Measurements of Ultrasound Transmission Through the Human Proximal Femur. 34:1186-1190.

Dodd SP, Cunningham JL, Miles AW, Gheduzzi S, Humphrey VF. Ultrasound transmission loss across transverse and oblique bone fractures: An *in vitro* study. 34:454-462.

Floch V, McMahon D, Luo G, Cohen A, Kaufman J, Shane E, Siffert R. Ultrasound Simulation in the Distal Radius Using Clinical High-Resolution Peripheral-CT Images. 34:1317-1326.

Guerino M, Santi F, Silveira R, Luciano E. Influence of Ultrasound and Physical Activity on Bone Healing. 34:1408-1413.

Lorenz MW, Thoelen N, Loesel N, Lienerth C, Gonzalez M, Humpich M, Roelz W, Dvorak F, Sitzer M. Assessment of cerebral autoregulation with transcranial Doppler sonography in poor bone windows using constant infusion of an ultrasound contrast agent. 34:345-353.

Wijnhoud AD, Franckena M, Van Der Lugt A, Koudstaal PJ, Dippel EDWJ. Inadequate acoustical temporal bone window in patients with a transient ischemic attack or minor stroke: Role of skull thickness and bone density. 34:923-929.

Le Floch V, Luo G, Kaufman JJ, Siffert RS. Ultrasonic Assessment of the Radius *in vitro*. 34:1972-1979.

Tam KF, Cheung WH, Lee KM, Qin L, Leung KS. Osteogenic Effects of Low-Intensity Pulsed Ultrasound, Extracorporeal Shockwaves and Their Combination – An *in vitro* Comparative Study on Human Periosteal Cells. 34:1957-1965.

Bone density measurement

Synonyms: Calcaneal quantitative ultrasound, bone mineral density test, bone mass measurement

Search String: “bone density measurement” OR “Calcaneal quantitative ultrasound” OR “bone mineral density test” OR “bone mass measurement”

Kotha SP, DePaula CA, Mann AB, Guzelsu N. High frequency ultrasound prediction of mechanical properties of cortical bone with varying amount of mineral content. 34:630-637.

Riekkinen O, Hakulinen M, Töyräs J, Jurvelin J. Dual-Frequency Ultrasound—New Pulse–Echo Technique for Bone Densitometry. 34:1703-1708.

Wijnhoud AD, Franckena M, Van Der Lugt A, Koudstaal PJ, Dippel EDWJ. Inadequate acoustical temporal bone window in patients with a transient ischemic attack or minor stroke: Role of skull thickness and bone density. 34:923-929.

Book review

Kapusta L. Doppler Myocardial Imaging, a Textbook by George R. Sutherland, Liv Hatle, Piet Claus, Jan D'hooge and Bart H. Bijnens, BSWK, Hasselt, Belgium (2006). 34:167.

de Korte C. Fundamental Physics for Probing and Imaging by Wade Allison, Oxford University Press, Oxford, United Kingdom (2006). 34:513.

Hennerici MG. Clinical Doppler Ultrasound by Paul L. Allan, Paul A. Dubbins, Myron A. Pozniak and W. Norman McDicken, Churchill Livingstone, London (2006). 34:691.

Hui L, Sahn DJ. Atlas of Transesophageal Echocardiography (2nd Edition) by Navin C. Nanda and Michael J. Domanski, Lippincott Williams & Wilkins, Philadelphia, PA (2007). 34:853-854.

Nijhuis JG, Galjaard S. Ultrasound of Congenital Fetal Anomalies: Differential Diagnosis and Prognostic Indicators by Dario Paladino and Volpe Paola, Informa UK Ltd; London (2007). 34:1871.

Brain

Synonyms: cerebral, cerebrovascular, cerebrum

Search String: Brain OR cerebr*

Bonnin P, Debbabi H, Mariani J, Charriaut-Marlangue C, Renolleau S. Ultrasonic assessment of cerebral blood flow changes during ischemia-reperfusion in 7-day-old rats. 34:913-922.

Kucewicz J, Dunmire B, Giardino N, Leotta D, Paun M, Dager S, Beach K. Tissue Pulsatility Imaging of Cerebral Vasoreactivity During Hyperventilation. 34:1200-1208.

Lorenz MW, Thoelen N, Loesel N, Lienert C, Gonzalez M, Humpich M, Roelz W, Dvorak F, Sitzer M. Assessment of cerebral autoregulation with transcranial Doppler sonography in poor bone windows using constant infusion of an ultrasound contrast agent. 34:345-353.

Breast

Synonyms: mammary glands

Search String: Breast OR Mamm*

Booi RC, Carson PL, O'Donnell M, Roubidoux MA, Hall AL, Rubin JM. Characterization of cysts using differential correlation coefficient values from two dimensional breast elastography: Preliminary study. 34:12-21.

Forsberg F, Kuruvilla B, Pascua M, Chaudhari M, Merton D, Palazzo J, Goldberg B. Comparing Contrast-Enhanced Color Flow Imaging and Pathological Measures of Breast Lesion Vascularity. 34:1365-1372.

Hsiao YH, Kuo SJ, Liang WM, Huang YL, Chen DR. Intra-tumor flow index can predict the malignant potential of breast tumor: Dependent on age and volume. 34:88-95.

Kijima Y, Yoshinaka H, Koriyama C, Funasako Y, Natsugoe S, Aikou T. Ultrasound examination is useful for prediction of histologic type in invasive ductal carcinoma of the breast. 34:517-524.

Kuo WH, Chen CN, Hsieh FJ, Shyu MK, Chang LY, Lee PH, Liu LYD, Cheng CH, Wang J, Chang KJ. Vascularity change and tumor response to neoadjuvant chemotherapy for advanced breast cancer. 34:857-866.

Tanter M, Bercoff J, Athanasiou A, Deffieux T, Gennisson J, Montaldo G, Muller M, Tardivon A, Fink M. Quantitative Assessment of Breast Lesion Viscoelasticity: Initial Clinical Results Using Supersonic Shear Imaging. 34:1373-1386.

Zhu Q, Jiang Y, Liu J, Liu H, Sun Q, Dai Q, Chen X. Real-Time Ultrasound Elastography: Its Potential Role in Assessment of Breast Lesions. 34:1232-1238.

Bubble dynamics

Synonyms: bubble oscillation, bubble translation, bubble activity, bubble physics, cavitation

Search String: Bubbl* AND dynamics OR oscillation OR translation OR activity OR physics

See also: cavitation, contrast agents

Bevan PD, Karshafian R, Burns PN. The influence of fragmentation on the acoustic response from shrinking bubbles. 34:1152-1162.

Dollet B, van der Meer S, Garbin V, de Jong N, Lohse D, Versluis M. Nonspherical Oscillations of Ultrasound Contrast Agent Microbubbles. 34:1465-1473.

Vos HJ, Dollet B, Bosch JG, Versluis M, de Jong N. Nonspherical vibrations of microbubbles in contact with a wall - A pilot study at low mechanical index. 34:685-688.

Yeh C, Su S. Effects of Acoustic Insonation Parameters on Ultrasound Contrast Agent Destruction. 34:1281-1291.

Bubbles

Synonyms: gas bodies, cavitation, bubbly liquids

Search String: bubbl* OR gas bod*

See also: cavitation, contrast agents

C

Calibration

Synonyms: standards, metrology

Search String: calibration OR standard* OR metrology

See also: dosimetry, exposimetry, safety, instrumentation

Hsu PW, Prager RW, Gee AH, Treece GM. Real-time freehand 3D ultrasound calibration. 34:239-251.

- Hsu PW, Treece GM, Prager RW, Houghton N, Gee AH. Comparison of Freehand 3-D Ultrasound Calibration Techniques Using a Stylus. 34:1610-1621.
- Matte G, Borsboom J, van Neer P, de Jong N. Estimating Acoustic Peak Pressure Generated by Ultrasound Transducers from Harmonic Distortion Level Measurement. 34:1528-1532.
- Shaw A. A Buoyancy Method for the Measurement of Total Ultrasound Power Generated by HIFU Transducers. 34:1327-1342.
- Zeqiri B, Barrie J. Evaluation of a Novel Solid-State Method for Determining the Acoustic Power Generated by Physiotherapy Ultrasound Transducers. 34:1513-1527.

Cancer

- Synonyms:** tumor
- Search String:** cancer*
- See also:** tumor, prostate, liver, breast, liver
- Guerriero S, Alcazar J, Pascual M, Ajossa S, Gerada M, Bargellini R, Virgilio B, Melis G. Intraobserver and Interobserver Agreement of Grayscale Typical Ultrasonographic Patterns for the Diagnosis of Ovarian Cancer. 34:1711-1716.
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- Pichardo S, Gelet A, Curiel L, Chesnais S, Chapelon JY. New integrated imaging high intensity focused ultrasound probe for transrectal prostate cancer treatment. 34:1105-1116.
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- Zhai B, Shao Z, Zhao C, Hu K, Shen D, Wu F. Optimization of Ultrasound-Mediated *in vitro* Reversal of Multidrug Resistance in Human Hepatocarcinoma Cell Line HepG2. 34:1697-1702.
- Zhou Q, Zhu XQ, Zhang J, Xu ZL, Lu P, Wu F. Changes in circulating immunosuppressive cytokine levels of cancer patients after high intensity focused ultrasound treatment. 34:81-87.

Cardiology

- Synonyms:** heart, cardiography
- Search String:** Cardi* OR myocardi* OR heart OR ECG OR ventricular OR atrial
- See also:** echocardiography
- Crosby J, Amundsen B, Helle-Valle T, Steen P, Torp H. A New Tissue Doppler Method for Examination of Left Ventricular Rotation. 34:1741-1751.
- Khan Z, Boughner D, Lacefield J. Anisotropy of High-Frequency Integrated Backscatter from Aortic Valve Cusps. 34:1504-1512.
- Pfegari E, Di Salvo G, Castaldi B, Vitelli MR, Rodolico G, Golinet P, Calabro R, Rossi F, Berrino L. Myocardial strain analysis in a doxorubicin-induced cardiomyopathy model. 34:370-378.
- Sharma VK, Chan BPL. The prognostic value of early transcranial doppler ultrasound following cardiopulmonary resuscitation. 34:166-166.
- Su H, Lin T, Lee C, Lin C, Tang M, Chin T, Lai W, Sheu S, Voon W. Usefulness of the Ratio of Transmitral E Wave Velocity to Isovolumic Relaxation Flow Propagation Velocity for Predicting Left Ventricular End-Diastolic Pressure. 34:1752-1757.
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- Cardiovascular system**
- Synonyms:** circulatory system, circulation
- Search String:** Cardiovascular OR circulat*
- See also:** cardiology, atherosclerosis, blood flow, blood vessels
- Yu Q, Leatherbury L, Tian X, Lo CW. Cardiovascular assessment of fetal mice by in utero echocardiography. 34:741-752.
- Carotid**
- Synonyms:**
- Search String:** Carotid
- See also:** artery
- Egger M, Chiu B, Spence JD, Fenster A, Parraga G. Mapping spatial and temporal changes in carotid atherosclerosis from three-dimensional ultrasound images. 34:64-72.
- Parthenis DG, Kardoulas DG, Ioannou CV, Antoniadis PN, Kafetzakis A, Angelidou KI, Katsamouris AN. Total occlusion of the common carotid artery: A modified classification and its relation to clinical status. 34:867-873.

Cartilage**Synonyms:**

Search String: cartilage OR articular OR chondrogenesis OR chondrocyte OR fibrocartilage OR hyaline OR “elastic cartilage”

Kaleva E, Saarakkala S, Toyras J, Nieminen HJ, Jurvelin JS. *in vitro* comparison of time-domain, frequency-domain and wavelet ultrasound parameters in diagnostics of cartilage degeneration. 34:155-159.

Wang Q, Zheng YP, Qin L, Huang QH, Lam WL, Leung G, Guo X, Lu HB. Real-time ultrasonic assessment of progressive proteoglycan depletion in articular cartilage. 34:1085-1092.

Cavitation

Synonyms: bubble dynamics, acoustic cavitation, bubble collapse

Search String: cavitation OR inertial OR transient OR “bubble collapse”

See also: Bubble dynamics, bubble disruption, contrast agents

Datta S, Coussios C, Ammi A, Mast T, de Courten-Myers G, Holland C. Ultrasound-Enhanced Thrombolysis Using Definity® as a Cavitation Nucleation Agent. 34:1421-1433.

Forbes MM, Steinberg RL, O'Brien Jr. WD. Examination of Inertial Cavitation of Optison in Producing Sonoporation of Chinese Hamster Ovary Cells. 34:2009-2018.

Cavitation detection

Synonyms: Broadband Noise, ACD, PCD

Search String: “Cavitation detect*” OR “Passive Cavitation Detect*” OR “Active cavitation detect*” OR “Broadband Noise” OR PCD OR ACD

See also: instrumentation

Cell damage

Synonyms: apoptosis, necrosis, cytotoxicity, cytolysis, membrane disruption

Search String: “cell damage” OR apoptosis OR cytolysis OR “membrane disruption” OR viability OR necrosis OR cytotoxi*

See also: safety, toxicity, biological effects

Chao YH, Tsuang YH, Sun JS, Chen LT, Chiang YF, Wang CC, Chen MH. Effects of shock waves on tenocyte proliferation and extracellular matrix metabolism. 34:841-852.

Juffermans LJM, Kamp O, Dijkmans PA, Visser CA, Musters RJP. Low-intensity ultrasound-exposed microbubbles provoke local hyperpolarization of the cell membrane via activation of BKCa channels. 34:502-508.

Nurzynska D, Di Meglio F, Castaldo C, Arcucci A, Marlinghaus E, Russo S, Corrado B, De Santo L, Baldascino F, Cotrufo M, Montagnani S. Shock waves

activate *in vitro* cultured progenitors and precursors of cardiac cell lineages from the human heart. 34:334-342.

Chemotherapy

Synonyms: drug delivery, cancer therapy

Search String: Chemotherapy OR “drug delivery” OR paclitaxel OR doxorubicin OR “cancer therapy”

See also: drug delivery

Kuo WH, Chen CN, Hsieh FJ, Shyu MK, Chang LY, Lee PH, Liu LYD, Cheng CH, Wang J, Chang KJ. Vascularity change and tumor response to neoadjuvant chemotherapy for advanced breast cancer. 34:857-866.

Cirrhosis

Synonyms: liver disease

Search String: cirrho* OR “liver disease”

See also: liver

Clinical note

Jungehulsing GJ, Brunecker P, Nolte CH, Fiebach JB, Kunze C, Doepp F, Villringer A, Schreiber SJ. Diagnostic transcranial ultrasound perfusion-imaging at 2.5 MHz does not affect the blood-brain barrier. 34:147-150.

Andersen NH, Bojesen A, Christiansen JS, Gravholt CH. Glycemia, lipidemia and systolic left ventricular function evaluated by myocardial strain rate: A tissue doppler echocardiographic study. 34:151-154.

Jiang B, Liu B, McNeill KL, Chowienzyk PJ. Measurement of pulse wave velocity using pulse wave Doppler ultrasound: Comparison with arterial tonometry. 34:509-512.

Clinical Applications of Ultrasound

Synonyms: Clinical study, clinical trial

Search String: Clinical AND study OR trial

Lim D, Park WP, Lee YH, Lee QJ, Kim HS. Development and clinical testing of an ultrasonic diagnostic system for functional gastrointestinal disorders. 34:874-884.

Coded pulse excitation

Synonyms: pulse compression, coded excitation, chirped excitation, pulse coding, phase codes, compression codes, Barker codes, Golay codes, complementary sequences, m-sequences

Search String: “Coded pulse excitation” OR Barker OR Golay OR “pulse compression” OR “coded excitation” OR chirp* OR “phase codes” OR “compression codes” OR “m-sequences” OR “pulse coding”

Cowe J, Gittins J, Evans DH. Improving performance of pulse compression in a Doppler ultrasound system using amplitude modulated chirps and Wiener filtering. 34:326-333.

Color flow techniques

Synonyms: color velocity imaging, color Doppler

Search String: color OR colour AND velocity OR flow

See also: Doppler

Chatterjee R, Deng D, Pellerin D, Todd-Pokropek A, Neild GH, Lees WR, Rodeck CH. Feasibility of dynamic 3-D color Doppler ultrasound for imaging penile vascular change in renal transplant patients with erectile dysfunction responding to sildenafil. 34:885-891.

Needles A, Goertz DE, Karshafian R, Cherin E, Brown AS, Burns PN, Foster FS. High-frequency subharmonic pulsed-wave Doppler and color flow imaging of microbubble contrast agents. 34:1139-1151.

Yoo Y, Sikdar S, Karadayi K, Kolokythas O, Kim Y. Adaptive Clutter Rejection for 3D Color Doppler Imaging: Preliminary Clinical Study. 34:1221-1231.

Compliance

Synonyms: adherence, observance

Search String: Compliance OR Adherence OR Observance

See also: Drug delivery

Computed tomography

Synonyms: ultrasonic tomography, CT

Search String: tomography OR CT

Gulizia R, Vercelli A, Gervasoni C, Uglietti A, Ortu M, Ferraioli G, Galli M, Filice C. Comparability of echographic and tomographic assessments of body fat changes related to the hiv associated adipose redistribution syndrome (HARS) in antiretroviral treated patients. 34:1043-1048.

Computer aided diagnosis (CAD) system

Synonyms: CAD, automated analysis, automatic classification, automatic thresholding

Search String: "Computer-Aided Diagnosis" OR CAD OR "automa* analysis" OR "automa* classification" OR "automa* thresholding"

Filho ES, Saijo Y, Tanaka A, Yoshizawa M. Detection and quantification of calcifications in intravascular ultrasound images by automatic thresholding. 34:160-165.

Mauldin FW, Zhu HT, Behler RH, Nichols TC, Gallippi CM. Robust principal component analysis and clustering methods for automated classification of tissue response to ARFI excitation. 34:309-325.

Contrast enhanced ultrasound

Synonyms: contrast echocardiography, contrast ultrasound, contrast sonography, contrast-enhanced EUS

Search String: "contrast enhanc*"

See also: Doppler, contrast agents, harmonic imaging

Cherin E, Brown J, Masoy SE, Shariff H, Karshafian R, Williams R, Burns PN, Foster FS. Radial modulation imaging of microbubble contrast agents at high frequency. 34:949-962.

Lv F, Tang J, Li W, Zhang H, Wang W, Yang L. Hemostatic Agents Injected Directly Into Hepatic Injury Sites for Liver Trauma Hemorrhage Under the Guidance of Contrast-Enhanced Ultrasound: An Animal Experiment. 34:1604-1609.

Shen C, Hsieh Y. Optimal Transmit Phasing on Tissue Background Suppression in Contrast Harmonic Imaging. 34:1820-1831.

Yang J, Tang J, Li Y, Fei X, Shi H. Contrast-Enhanced Transrectal Ultrasound for Assessing Vascularization of Hypoechoic BPH Nodules in the Transition and Peripheral Zones: Comparison with Pathological Examination. 34:1758-1764.

Otani K, Ohnishi S, Obata H, Ishida O, Kitamura S, Nagaya N. Contrast Sonography Enables Noninvasive and Quantitative Assessment of Neovascularization After Stem Cell Transplantation. 34:1893-1900.

Contrast agents

Synonyms: Contrast media, microbubbles

Search String: Contrast AND agent* OR medi* OR microbubble* OR "micro-bubble*" OR Optison OR Sonovue OR Levovist OR Quantison OR Definity

See also: bubble dynamics, bubble disruption, bubbles, cavitation, contrast enhanced ultrasound

Aoi A, Watanabe Y, Mori S, Takahashi M, Vassaux G, Kodama T. Herpes simplex virus thymidine kinase-mediated suicide gene therapy using nano/microbubbles and ultrasound. 34:425-434.

Cherin E, Brown J, Masoy SE, Shariff H, Karshafian R, Williams R, Burns PN, Foster FS. Radial modulation imaging of microbubble contrast agents at high frequency. 34:949-962.

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Fatar M, Stroick M, Griebel M, Alonso A, Kreisel S, Kern R, Hennerici M, Meairs S. Effect of Combined Ultrasound and Microbubbles Treatment in an Experimental Model of Cerebral Ischemia. 34:1414-1420.

Juffermans LJM, Kamp O, Dijkmans PA, Visser CA, Musters RJP. Low-intensity ultrasound-exposed microbubbles provoke local hyperpolarization of the cell membrane via activation of BKCa channels. 34:502-508.

McDannold N, Vykhodtseva N, Hynynen K. Blood-brain barrier disruption induced by focused ultrasound and circulating preformed microbubbles appears to be characterized by the mechanical index. 34:834-840.

Miller D, Dou C, Wiggins R. Frequency Dependence of Kidney Injury Induced by Contrast-Aided Diagnostic Ultrasound in Rats. 34:1678-1687.

Mule S, De Cesare A, Lucidarme O, Frouin F, Herment A. Regularized estimation of contrast agent attenuation to

improve the imaging of microbubbles in small animal studies. 34:938-948.

Needles A, Goertz DE, Karshafian R, Cherin E, Brown AS, Burns PN, Foster FS. High-frequency subharmonic pulsed-wave Doppler and color flow imaging of microbubble contrast agents. 34:1139-1151.

Palanchon P, Birmele B, Tranquart F. Acoustical bubble trapper applied to hemodialysis. 34:681-684.

Qin SP, Kruse DE, Ferrara KW. Transmitted ultrasound pressure variation in micro blood vessel phantoms. 34:1014-1020.

Rubiera M, Ribo M, Delgado-Mederos R, Santamarina E, Maisterra O, Delgado P, Montaner J, Alvarez-Sabín J, Molina C. Do Bubble Characteristics Affect Recanalization in Stroke Patients Treated with Microbubble-Enhanced Sonothrombolysis? 34:1573-1577.

Sheikov N, McDannold N, Sharma S, Hynynen K. Effect of focused ultrasound applied with an ultrasound contrast agent on the tight junctional integrity of the brain microvascular endothelium. 34:1093-1104.

Sontum P. Physicochemical Characteristics of Sonazoid™, A New Contrast Agent for Ultrasound Imaging. 34:824-833.

Talu E, Powell RL, Longo ML, Dayton PA. Needle size and injection rate impact microbubble contrast agent population. 34:1182-1185.

Vos HJ, Dollet B, Bosch JG, Versluis M, de Jong N. Nonspherical vibrations of microbubbles in contact with a wall - A pilot study at low mechanical index. 34:685-688.

Yeh C, Su S. Effects of Acoustic Insonation Parameters on Ultrasound Contrast Agent Destruction. 34:1281-1291.

Yu T, Xu C. Hyperecho as the Indicator of Tissue Necrosis During Microbubble-Assisted High Intensity Focused Ultrasound: Sensitivity; Specificity and Predictive Value. 34:1343-1347.

Xie F, Boska MD, Lof J, Uberti MG, Tsutsui JM, Porter TR. Effects of Transcranial Ultrasound and Intravenous Microbubbles on Blood Brain Barrier Permeability in a Large Animal Model. 34:2028-2034.

Forbes MM, Steinberg RL, O'Brien Jr. WD. Examination of Inertial Cavitation of Optison in Producing Sonoporation of Chinese Hamster Ovary Cells. 34:2009-2018.

Coronary arteries

Synonyms:

Search String: coronary

See also: artery

Hartley CJ, Reddy AK, Madala S, Michael LH, Entman ML, Taffet GE. Doppler estimation of reduced coronary flow reserve in mice with pressure overload cardiac hypertrophy. 34:892-901.

Okubo M, Kawasaki M, Ishihara Y, Takeyama U, Kubota T, Yamaki T, Ojio S, Nishigaki K, Takemura G, Saio M, Takami T, Minatoguchi S, Fujiwara H. Development of

integrated backscatter intravascular ultrasound for tissue characterization of coronary plaques. 34:655-663.

Wikstrom J, Gronros J, Gan LM. Adenosine induces dilation of epicardial coronary arteries in mice - Relationship between coronary flow velocity reserve and coronary flow reserve *in vivo* using transthoracic echocardiography. 34:1053-1062.

Coupling agents

Synonyms:

Search String: "Coupling agent*" OR "Coupling Gel"

Crawling waves

Synonyms: Crawling wave sonoelastography

Search String: "Crawling wave"

See also: elastography

Critical angle reflectometry

Synonyms: UCR

Search String: "critical angle" OR UCR

Crohn's disease

Synonyms: regional enteritis

Search String: "Crohn's disease" OR "regional enteritis"

See also: gastroenterology

Kim K, Johnson LA, Jia CX, Joyce JC, Rangwalla S, Higgins PDR, Rubin JM. Noninvasive ultrasound elasticity imaging (UEI) of Crohn's disease: Animal model. 34:902-912.

Cyclic echogenicity variations

Synonyms: cyclic backscatter variation

Search String: "cycl* variation*"

Nguyen LC, Yu FTH, Cloutier G. Cyclic changes in blood echogenicity under pulsatile flow are frequency dependent. 34:664-673.

D

Dental

Synonyms: teeth

Search String: Dent* OR t*th OR enamel

Klein MO, Grötz KA, Manefeld B, Kann PH, Al-Nawas B. Ultrasound Transmission Velocity for Noninvasive Evaluation of Jaw Bone Quality *in vivo* Before Dental Implantation. 34:1966-1971.

Derated values

Synonyms: derating

Search String: derat*

See also: thermal effects

Diffusion

Synonyms: Acoustically driven diffusion

Search String: Diffusion

Dispersion

Synonyms: speed of sound dispersion

Search String: dispersion

See also: velocity

Doppler ultrasound

Synonyms:

Search String: Doppler

See also: Flow visualisation

Andersen NH, Bojesen A, Christiansen JS, Gravholt CH.

Glycemia, lipidemia and systolic left ventricular function evaluated by myocardial strain rate: A tissue doppler echocardiographic study. 34:151-154.

Blake J, Meagher S, Fraser K, Easson W, Hoskins P. A

Method to Estimate Wall Shear Rate with a Clinical Ultrasound Scanner. 34:760-774.

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Stefanov R, Olivieri C, Danesino C, Zambelli A. Interobserver agreement in diagnosing liver involvement in hereditary hemorrhagic telangiectasia by Doppler ultrasound. 34:718-725.

Chatterjee R, Deng D, Pellerin D, Todd-Pokropek A, Neild

GH, Lees WR, Rodeck CH. Feasibility of dynamic 3-D color Doppler ultrasound for imaging penile vascular change in renal transplant patients with erectile dysfunction responding to sildenafil. 34:885-891.

Cowe J, Gittins J, Evans DH. Improving performance of pulse compression in a Doppler ultrasound system using amplitude modulated chirps and Wiener filtering. 34:326-333.

Crosby J, Amundsen B, Helle-Valle T, Steen P, Torp H. A

New Tissue Doppler Method for Examination of Left Ventricular Rotation. 34:1741-1751.

Hartley CJ, Reddy AK, Madala S, Michael LH, Entman ML,

Taffet GE. Doppler estimation of reduced coronary flow reserve in mice with pressure overload cardiac hypertrophy. 34:892-901.

Jiang B, Liu B, McNeill KL, Chowienczyk PJ. Measurement

of pulse wave velocity using pulse wave Doppler ultrasound: Comparison with arterial tonometry. 34:509-512.

Lorenz MW, Thoelen N, Loesel N, Lienerth C, Gonzalez M,

Humpich M, Roelz W, Dvorak F, Sitzer M. Assessment of cerebral autoregulation with transcranial Doppler sonography in poor bone windows using constant infusion of an ultrasound contrast agent. 34:345-353.

Meyberg-Solomayer G, Soen M, Speer R, Poets C, Goelz R,

Wallwiener D, Solomayer E. Pathological Prenatal Doppler Sonography Findings and Their Association with Neonatal Cranial Ultrasound Abnormalities in a High Risk Collective. 34:1193-1199.

Needles A, Goertz DE, Karshafian R, Cherin E, Brown AS, Burns PN, Foster FS. High-frequency subharmonic pulsed-

wave Doppler and color flow imaging of microbubble contrast agents. 34:1139-1151.

Ren J, Wang Z, Zhang Y, Zheng Y, Li X, Zhang Q, Wang

Z, Xu C. Transfection Efficiency of TDL Compound in HUVEC Enhanced by Ultrasound-Targeted Microbubble Destruction. 34:1857-1867.

Sharma VK, Chan BPL. The prognostic value of early

transcranial doppler ultrasound following cardiopulmonary resuscitation. 34:166-166.

Thorne ML, Poepping TL, Rankin RN, Steinman DA,

Holdsworth DW. Use of an ultrasound blood-mimicking fluid for Doppler investigations of turbulence *in vitro*. 34:1163-1173.

Thrush AJ, Brewin MP, Birch MJ. Assessment of tissue

Doppler imaging measurements of arterial wall motion using a tissue mimicking test rig. 34:446-453.

Tsou J, Liu J, Barakat A, Insana M. Role of Ultrasonic Shear

Rate Estimation Errors in Assessing Inflammatory Response and Vascular Risk. 34:963-972.

Xu XC, Sun L, Cannata JM, Yen JT, Shung KK. High-

frequency ultrasound Doppler system for biomedical applications with a 30-MHZ linear array. 34:638-646.

Narayanasamy G, Fowlkes J, Kripfgans O, Jacobson J, De

Maeseneer M, Schmitt R, Carson P. Ultrasound of the Fingers for Human Identification Using Biometrics. 34:392-399.

Dosimetry

Synonyms: dose response, dosology

Search String: Dos*

See also: exposimetry, safety

Yu T, Xu C. Hyperecho as the Indicator of Tissue Necrosis

During Microbubble-Assisted High Intensity Focused Ultrasound: Sensitivity; Specificity and Predictive Value. 34:1343-1347.

Drug delivery

Synonyms: controlled release, targeted delivery, Site-Specific delivery

Search String: "controlled release" OR "drug delivery" OR "targeted delivery" OR "Site Specific delivery"

Huang S, McPherson D, MacDonald R. A Method to Co-

Encapsulate Gas and Drugs in Liposomes for Ultrasound-Controlled Drug Delivery. 34:1272-1280.

Larkin JO, Casey GD, Tangney M, Cashman J, Collins CG,

Soden DM, O'Sullivan GC. Effective tumor treatment using optimized ultrasound-mediated delivery of bleomycin. 34:406-413.

Zhai B, Shao Z, Zhao C, Hu K, Shen D, Wu F. Optimization

of Ultrasound-Mediated *in vitro* Reversal of Multidrug Resistance in Human Hepatocarcinoma Cell Line HepG2. 34:1697-1702.

E

Echocardiography

Synonyms: cardiac imaging, sonocardiography

Search String: echocard* OR "card* imaging" OR "card* ultraso*" OR sonocard*

See also: cardiology, contrast enhanced ultrasound

Andersen NH, Bojesen A, Christiansen JS, Gravholt CH.

Glycemia, lipidemia and systolic left ventricular function evaluated by myocardial strain rate: A tissue doppler echocardiographic study. 34:151-154.

Chen HM, Duan YY, Li J, Zhou N, Yuan LJ, Cao TS, Hou WH, Zhang HX, Cao W, Yang YH. A rabbit model with acute thrombo-embolic pulmonary hypertension created with echocardiography guidance. 34:221-227.

Droogmans S, Lauwers R, Cosyns B, Roosens B, Franken P, Weytjens C, Bossuyt A, Lahoutte T, Schoors D, Van Camp G. Impact of Anesthesia on Valvular Function in Normal Rats During Echocardiography. 34:1564-1572.

Ghanem A, Troatz C, Elhafi N, Dewald O, Heesch C, Nickenig G, Stypmann J, Tiemann K. Quantitation of myocardial borderzone using reconstructive 3-D echocardiography after chronic infarction in rats - Incremental value of low-dose dobutamine. 34:559-566.

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Li F, Wang Q, Yao GH, Zhang PF, Ge ZM, Zhang M, Zhang Y. Impact of the number of image planes of real-time three-dimensional echocardiography on the accuracy of left atrial and ventricular volume measurements. 34:40-46.

Li XC, Yao GH, Zhang C, Zhang M, Zhang PF, Zhang W, Hu YY, Ji XP, Zhang Y. Quantification of regional volume and systolic function of the left ventricle by real-time three-dimensional echocardiography. 34:379-384.

Li YB, Garson CD, Xu YQ, French BA, Hossack JA. High frequency ultrasound imaging detects cardiac dyssynchrony in noninfarcted regions of the murine left ventricle late after reperfused myocardial infarction. 34:1063-1075.

Migrino RQ, Aggarwal D, Konorev E, Brahmabhatt T, Bright M, Kalyanaraman B. Early detection of doxorubicin cardiomyopathy using two-dimensional strain echocardiography. 34:208-214.

Nillesen MM, Lopata RGP, Gerrits IH, Kapusta L, Thijssen JM, de Korte CL. Modeling envelope statistics of blood and myocardium for segmentation of echocardiographic images. 34:674-680.

Nurzynska D, Di Meglio F, Castaldo C, Arcucci A, Marlinghaus E, Russo S, Corrado B, De Santo L, Baldascino F, Cotrufo M, Montagnani S. Shock waves activate *in vitro* cultured progenitors and precursors of cardiac cell lineages from the human heart. 34:334-342.

Sun L, Lien CL, Xu XC, Shung KK. *in vivo* cardiac imaging of adult zebrafish using high frequency ultrasound (45-75 mhz). 34:31-39.

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Wasmeier GH, Zimmermann WH, Schineis N, Melnychenko I, Voigt JU, Eschenhagen T, Flachskampf FA, Daniel WG, Nixdorff U. Real-time myocardial contrast echocardiography for assessing perfusion and function in healthy and infarcted Wistar rats. 34:47-55.

Wasmeier G, Asmussen S, Voigt J, Flachskampf F, Daniel W, Nixdorff U. Real-Time Myocardial Contrast Stress Echocardiography Using Bolus Application. 34:1724-1731.

Wikstrom J, Gronros J, Gan LM. Adenosine induces dilation of epicardial coronary arteries in mice - Relationship between coronary flow velocity reserve and coronary flow reserve *in vivo* using transthoracic echocardiography. 34:1053-1062.

Wu XQ, Yang ZY, Qian DJ, Wang Q, Bo XP, Zhu JQ. Very early stage detection of acute myocardial infarction by harmonic ultrasonic integrated backscatter. 34:567-572.

Yao GH, Zhang C, Sun FR, Zhang M, Zhao YX, Zhang PF, Zhong L, Ding SF, Chen WQ, Li XN, Zhang Y. Quantification of transmural gradient of blood flow in myocardial ischemia with real-time myocardial contrast echocardiography and dipyridamole stress test. 34:22-30.

Yu Q, Leatherbury L, Tian X, Lo CW. Cardiovascular assessment of fetal mice by *in utero* echocardiography. 34:741-752.

Elastography

Synonyms: elasticity imaging, strain imaging, sonoelastography, vibro-acoustography

Search String: *elastography OR "elastic* imaging" OR "strain imaging" OR "vibro*acoustography" OR "Modulus Contrast"

See also: Tissue elasticity

Andersen NH, Bojesen A, Christiansen JS, Gravholt CH.

Glycemia, lipidemia and systolic left ventricular function evaluated by myocardial strain rate: A tissue doppler echocardiographic study. 34:151-154.

Berry GP, Bamber JC, Mortimer PS, Bush NL, Miller NR, Barbone PE. The spatio-temporal strain response of oedematous and nonoedematous tissue to sustained compression *in vivo*. 34:617-629.

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- Carstensen E, Parker K, Lerner R. Elastography in the Management of Liver Disease. 34:1535-1546.
- Fahey B, Nelson R, Hsu S, Bradway D, Dumont D, Trahey G. *in vivo* Guidance and Assessment of Liver Radio-Frequency Ablation with Acoustic Radiation Force Elastography. 34:1590-1603.
- Havre R, Elde E, Gilja O, Ödegaard S, Eide G, Matre K, Nesje L. Freehand Real-Time Elastography: Impact of Scanning Parameters on Image Quality and *in vitro* Intra- and Interobserver Validations. 34:1638-1650.
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- Hoyt K, Castaneda B, Parker KJ. Two-dimensional sonoelastographic shear velocity imaging. 34:276-288.
- Kamoi K, Okihara K, Ochiai A, Ukimura O, Mizutani Y, Kawauchi A, Miki T. The utility of transrectal real-time elastography in the diagnosis of prostate cancer. 34:1025-1032.
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- Tsuzuki K, Hasegawa H, Ichiki M, Tezuka F, Kanai H. Optimal region-of-interest settings for tissue characterization based on ultrasonic elasticity imaging. 34:573-585.
- Zhu Q, Jiang Y, Liu J, Liu H, Sun Q, Dai Q, Chen X. Real-Time Ultrasound Elastography: Its Potential Role in Assessment of Breast Lesions. 34:1232-1238.
- Lee WN, Qian Z, Tosti CL, Brown TR, Metaxas DN, Konofagou EE. Preliminary Validation of Angle-Independent Myocardial Elastography Using MR Tagging in a Clinical Setting. 34:1980-1997.
- Emboli detection**
Synonyms: embolic signal, microembolic signal, embolus, embolism
Search String: embol* OR occlusion OR clot
See also: bubbles, thrombolysis
- Chen HM, Duan YY, Li J, Zhou N, Yuan LJ, Cao TS, Hou WH, Zhang HX, Cao W, Yang YH. A rabbit model with acute thrombo-embolic pulmonary hypertension created with echocardiography guidance. 34:221-227.
- Endometriosis**
Synonyms:
Search String: endometr*
- Takac I. Saline infusion sonohysterography and the risk of malignant extrauterine spread in endometrial cancer. 34:7-11.
- Manetta LA, de Paula Martins W, Rosa e Silva JC, de Sá Rosa e Silva ACJ, Nogueira AA, Ferriani RA. Uterine Ultrasonographic Changes During Endometriosis Treatment: A Comparison Between Levonorgestrel-Releasing Intrauterine Devices and a Gonadotropin-Releasing Hormone Agonist. 34:1914-1918.
- Endorectal ultrasonography**
Synonyms: transrectal
Search String: *rectal
- Kamoi K, Okihara K, Ochiai A, Ukimura O, Mizutani Y, Kawauchi A, Miki T. The utility of transrectal real-time elastography in the diagnosis of prostate cancer. 34:1025-1032.
- Pichardo S, Gelet A, Curiel L, Chesnais S, Chapelon JY. New integrated imaging high intensity focused ultrasound probe for transrectal prostate cancer treatment. 34:1105-1116.

Endoscopic ultrasonography**Synonyms:** EUS**Search String:** "Endoscopic" OR "EUS"

Sakamoto H, Kitano M, Suetomi Y, Maekawa K, Takeyama Y, Kudo M. Utility of contrast-enhanced endoscopic ultrasonography for diagnosis of small pancreatic carcinomas. 34:525-532.

Entropy-Based Imaging**Synonyms:****Search String:** Entrop***Errata**

Pluskiewicz W, Zywiec J, Gumprecht J, Grzeszczak W. Quantitative ultrasound of phalanges of adults with end-stage renal disease or who have undergone renal transplantation (vol 33, pg 1353, 2007). 34:514-514.

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Meyberg-Solomayer GC, Soen M, Speer R, Poets C, Goelz R, Wallwiener D, Solomayer EF. Pathological Prenatal Doppler Sonography Findings and Their Association with Neonatal Cranial Ultrasound Abnormalities in a High Risk Collective (vol 34, pg 1193-1199, 2008). 34:1348-1349.

Wong EY, Thorne ML, Nikolov HN, Poepping TL, Holdsworth DW. Doppler Ultrasound Compatible Plastic Material for Use in Rigid Flow Models (vol 34, pg 1846-1856, 2008). 34: 1872.

Exposimetry**Synonyms:****Search String:** expos***See also:** dosimetry, mechanical index, safety, thermal effects

Stiles TA, Madsen EL, Frank GR. An exposimetry system using tissue-mimicking liquid. 34:123-136.

Sugita Y, Mizuno S, Nakayama N, Iwaki T, Murakami E, Wang Z, Endoh R, Furuhashi H. Nitric oxide generation directly responds to ultrasound exposure. 34:487-493.

Eyes**Synonyms:** ocular, retinal, cornea**Search String:** eye* OR ocular OR retina* OR cornea***See also:** ophthalmology**F****Feature detection****Synonyms:** Feature selection, Feature tracking, Feature Extraction, Feature selection, Edge detection, Contour detection, Boundary Delineation, Pattern recognition, Pattern classification, Automated tracking, virtual histology**Search String:** "Feature detection" OR "Feature selection" OR "Feature tracking" OR "Feature Extraction" OR "Feature selection" OR "Edge detection" OR "Contour detection" OR

"Boundary Delineation" OR "Pattern recognition" OR "Pattern classification" OR "automated tracking" OR "virtual histology"

See also: image processing, principle components analysis

Chen H, Tu C, Ling S, Chen W, Chiu K, Hsia T, Shih C, Hsu W. Sonographic Appearances in Transudative Pleural Effusions: Not Always an Anechoic Pattern. 34:362-369.

Papadogiorgaki M, Mezaris V, Chatzizisis Y, Giannoglou G, Kompatsiaris I. Image Analysis Techniques for Automated IVUS Contour Detection. 34:1482-1498.

Su HM, Lin TH, Lee CS, Yen HW, Huang CH, Cheng KH, Lee HC, Lai WT, Sheu SH, Voon WC. Differentiation of left ventricular diastolic function by mid-diastolic mitral annular motion patterns. 34:753-759.

Williamson E, Bronas U, Dengel D. Automated Edge Detection Versus Manual Edge Measurement in Analysis of Brachial Artery Reactivity: A Comparison Study. 34: 1499-1503.

Fetal ultrasound**Synonyms:** prenatal, fetus, foetal, FBM, FHR**Search String:** Fet* OR foet* OR pre*natal OR umbilic* OR FBM OR FHR

Chang CH, Tsai PY, Yu CH, Ko HC, Chang FM. Predicting fetal growth restriction with renal volume using 3-D ultrasound: Efficacy evaluation. 34:533-537.

Martins W, Ferriani R, Nastro C, Filho F. First Trimester Fetal Volume and Crown-Rump Length: Comparison Between Singletons and Twins Conceived by *in vitro* Fertilization. 34:1360-1364.

Meyberg-Solomayer G, Soen M, Speer R, Poets C, Goelz R, Wallwiener D, Solomayer E. Pathological Prenatal Doppler Sonography Findings and Their Association with Neonatal Cranial Ultrasound Abnormalities in a High Risk Collective. 34:1193-1199.

Yu JH, Wang YY, Chen P, Shen YZ. Fetal abdominal contour extraction and measurement in ultrasound images. 34:169-182.

Yu Q, Leatherbury L, Tian X, Lo CW. Cardiovascular assessment of fetal mice by in utero echocardiography. 34:741-752.

Finite element modeling**Synonyms:** finite element analysis, FEM, FEA, boundary element modeling**Search String:** "finite element" OR FEM OR FEA OR "boundary element"**Finite amplitude effects****Synonyms:****Search String:** "finite amplitude"**See also:** nonlinear effects, shock waves

Flow models/phantoms

Synonyms: flow cell, vessel phantoms

Search String: Flow AND models OR phantoms OR cell*

See also: phantoms

Qin SP, Kruse DE, Ferrara KW. Transmitted ultrasound pressure variation in micro blood vessel phantoms. 34:1014-1020.

Flow visualisation

Synonyms: flowmetry, particle image velocimetry, PIV

Search String: "flow visualisation" OR "flowmetry" OR "particle image velocimetry" OR PIV

See also: Doppler

Bonnin P, Debbabi H, Mariani J, Charriaut-Marlangue C, Renolleau S. Ultrasonic assessment of cerebral blood flow changes during ischemia-reperfusion in 7-day-old rats. 34:913-922.

Gemignani V, Bianchini E, Faita F, Giannarelli C, Plantinga Y, Ghiadoni L, Demi M. Ultrasound measurement of the brachial artery flow-mediated dilation without ECG gating. 34:385-391.

Hartley CJ, Reddy AK, Madala S, Michael LH, Entman ML, Taffet GE. Doppler estimation of reduced coronary flow reserve in mice with pressure overload cardiac hypertrophy. 34:892-901.

Hoskins PR. Simulation and validation of arterial ultrasound imaging and blood flow. 34:693-717.

Hsiao YH, Kuo SJ, Liang WM, Huang YL, Chen DR. Intratumor flow index can predict the malignant potential of breast tumor: Dependent on age and volume. 34:88-95.

Nam KH, Paeng DG, Choi MJ, Shung KK. Ultrasonic observation of blood disturbance in a stenosed tube: Effects of flow acceleration and turbulence downstream. 34:114-122.

Needles A, Goertz DE, Karshafian R, Cherin E, Brown AS, Burns PN, Foster FS. High-frequency subharmonic pulsed-wave Doppler and color flow imaging of microbubble contrast agents. 34:1139-1151.

Robertson JW, Debert CT, Frayne R, Poulin MJ. Variability of middle cerebral artery blood flow with hypercapnia in women. 34:730-740.

Yao GH, Zhang C, Sun FR, Zhang M, Zhao YX, Zhang PF, Zhong L, Ding SF, Chen WQ, Li XN, Zhang Y. Quantification of transmural gradient of blood flow in myocardial ischemia with real-time myocardial contrast echocardiography and dipyridamole stress test. 34:22-30.

Fluid dynamics

Synonyms: fluid mechanics

Search String: Fluid AND dynamics OR mechanics

Thorne ML, Poepping TL, Rankin RN, Steinman DA, Holdsworth DW. Use of an ultrasound blood-mimicking fluid for Doppler investigations of turbulence *in vitro*. 34:1163-1173.

Fracture healing

Synonyms: regeneration

Search String: Fracture AND healing OR regen*

See also: bone, healing

Matsuyama J, Ohnishi I, Sakai R, Bessho M, Matsumoto T, Miyasaka K, Harada A, Ohashi S, Nakamura K. A new method for evaluation of fracture healing by echo tracking. 34:775-783.

G**Gall bladder**

Synonyms: gallbladder, hepatobiliary, cholecyst

Search String: "Gall*bladder" OR hepatobiliary OR cholecyst

Gastroenterology

Synonyms: Gastrointestinal Tract, Gastric, digestive system

Search String: Gastr* AND digestive

See also: liver, pancreas

Lim D, Park WP, Lee YH, Lee QJ, Kim HS. Development and clinical testing of an ultrasonic diagnostic system for functional gastrointestinal disorders. 34:874-884.

Gene therapy

Synonyms: gene delivery, Gene transfection, Gene transfer

Search String: gene AND therapy OR transfection OR transfer

Aoi A, Watanabe Y, Mori S, Takahashi M, Vassaux G, Kodama T. Herpes simplex virus thymidine kinase-mediated suicide gene therapy using nano/microbubbles and ultrasound. 34:425-434.

Genitourinary

Synonyms: urinary tract, bladder, urodynamics, reproductive system, pelvis

Search String: Genitourinary OR urin* OR urodynamic* OR bladder OR reproduc* OR pelvi*

See also: prostate, testis, uterus

H**Hard tissues**

Synonyms:

Search String: "Hard tissue*"

See also: bone, cartilage, dental

Berry GP, Bamber JC, Mortimer PS, Bush NL, Miller NR, Barbone PE. The spatio-temporal strain response of oedematous and nonoedematous tissue to sustained compression *in vivo*. 34:617-629.

Dodd SP, Cunningham JL, Miles AW, Gheduzzi S, Humphrey VF. Ultrasound transmission loss across transverse and oblique bone fractures: An *in vitro* study. 34:454-462.

Kotha SP, DePaula CA, Mann AB, Guzelsu N. High frequency ultrasound prediction of mechanical properties

of cortical bone with varying amount of mineral content. 34:630-637.

Lorenz MW, Thoelen N, Loesel N, Lienerth C, Gonzalez M, Humpich M, Roelz W, Dvorak F, Sitzler M. Assessment of cerebral autoregulation with transcranial Doppler sonography in poor bone windows using constant infusion of an ultrasound contrast agent. 34:345-353.

Wijnhoud AD, Franckena M, Van Der Lugt A, Koudstaal PJ, Dippel EDWJ. Inadequate acoustical temporal bone window in patients with a transient ischemic attack or minor stroke: Role of skull thickness and bone density. 34:923-929.

Harmonic Imaging

Synonyms: Tissue harmonic imaging (TIH), phase inversion harmonic imaging (PIHI), second harmonic imaging, subharmonic imaging, pulse inversion, nonlinear imaging

Search String: "second Harmonic" OR "2nd Harmonic" OR "TIH" OR "PIHI" OR "phase inversion" OR "pulse inversion" OR "Harmonic Imaging" OR "Nonlinear imaging" OR "sub*harmonic"

See also: contrast enhanced imaging

Needles A, Goertz DE, Karshafian R, Cherin E, Brown AS, Burns PN, Foster FS. High-frequency subharmonic pulsed-wave Doppler and color flow imaging of microbubble contrast agents. 34:1139-1151.

Shen CC, Wang YC, Yeh CK. Imaging parameters on third harmonic transmit phasing for tissue harmonic generation. 34:1001-1013.

Shen C, Hsieh Y. Optimal Transmit Phasing on Tissue Background Suppression in Contrast Harmonic Imaging. 34:1820-1831.

Wu XQ, Yang ZY, Qian DJ, Wang Q, Bo XP, Zhu JQ. Very early stage detection of acute myocardial infarction by harmonic ultrasonic integrated backscatter. 34:567-572.

Healing

Synonyms: regeneration, regenerative

Search String: healing OR regener*

See also: therapeutic applications of ultrasound

Lu H, Qin L, Cheung W, Lee K, Wong W, Leung K. Low-Intensity Pulsed Ultrasound Accelerated Bone-Tendon Junction Healing Through Regulation of Vascular Endothelial Growth Factor Expression and Cartilage Formation. 34:1248-1260.

Guerino M, Santi F, Silveira R, Luciano E. Influence of Ultrasound and Physical Activity on Bone Healing. 34:1408-1413.

Matsuyama J, Ohnishi I, Sakai R, Bessho M, Matsumoto T, Miyasaka K, Harada A, Ohashi S, Nakamura K. A new method for evaluation of fracture healing by echo tracking. 34:775-783.

Hemodynamics

Synonyms:

Search String: H*emodynamic

See also: blood flow

Bonnin P, Debbabi H, Mariani J, Charriaut-Marlangue C, Renolleau S. Ultrasonic assessment of cerebral blood flow changes during ischemia-reperfusion in 7-day-old rats. 34:913-922.

Hoskins PR. Simulation and validation of arterial ultrasound imaging and blood flow. 34:693-717.

Nam KH, Paeng DG, Choi MJ, Shung KK. Ultrasonic observation of blood disturbance in a stenosed tube: Effects of flow acceleration and turbulence downstream. 34:114-122.

Nguyen LC, Yu FTH, Cloutier G. Cyclic changes in blood echogenicity under pulsatile flow are frequency dependent. 34:664-673.

Robertson JW, Debert CT, Frayne R, Poulin MJ. Variability of middle cerebral artery blood flow with hypercapnia in women. 34:730-740.

Yao GH, Zhang C, Sun FR, Zhang M, Zhao YX, Zhang PF, Zhong L, Ding SF, Chen WQ, Li XN, Zhang Y. Quantification of transmural gradient of blood flow in myocardial ischemia with real-time myocardial contrast echocardiography and dipyridamole stress test. 34:22-30.

Hemorrhage

Synonyms: bleeding, trauma

Search String: H*emorrhage OR Bleed* OR trauma

Buscarini E, Gebel M, Ocran K, Manfredi G, Blanco GDV, Stefanov R, Olivieri C, Danesino C, Zambelli A. Interobserver agreement in diagnosing liver involvement in hereditary hemorrhagic telangiectasia by Doppler ultrasound. 34:718-725.

Julkunen M, Parviainen T, Janas M, Tammela O. End-diastolic block in cerebral circulation may predict intraventricular hemorrhage in hypotensive extremely-low-birth-weight infants. 34:538-545.

Liu HL, Wai YY, Chen WS, Chen JC, Hsu PH, Wu XY, Huang WC, Yen TC, Wang JJ. Hemorrhage detection during focused-ultrasound induced blood-brain-barrier opening by using susceptibility-weighted magnetic resonance imaging. 34:598-606.

Hemostasis

Synonyms: stenosis, coagulation, clotting

Search String: H*emostasis OR h*emostatic OR Occlusion OR stenosis OR coagulation OR clot*

Libgot-Calle R, Ossant F, Gruel Y, Lermusiaux P, Patat F. High frequency ultrasound device to investigate the acoustic properties of whole blood during coagulation. 34:252-264.

Lv F, Tang J, Li W, Zhang H, Wang W, Yang L. Hemostatic Agents Injected Directly Into Hepatic Injury

Sites for Liver Trauma Hemorrhage Under the Guidance of Contrast-Enhanced Ultrasound: An Animal Experiment. 34:1604-1609.

Nam KH, Paeng DG, Choi MJ, Shung KK. Ultrasonic observation of blood disturbance in a stenosed tube: Effects of flow acceleration and turbulence downstream. 34:114-122.

Hepatobiliary system

Synonyms: liver, bile duct, pancreas, gall bladder

Search String: Hepatobiliary

See also: liver, pancreas, gall bladder

High frequency ultrasound

Synonyms: high resolution, acoustic microscopy

Search String: "high frequency" OR "high resolution"

See also: acoustic microscopy

Cherin E, Brown J, Masoy SE, Shariff H, Karshafian R, Williams R, Burns PN, Foster FS. Radial modulation imaging of microbubble contrast agents at high frequency. 34:949-962.

Kotha SP, DePaula CA, Mann AB, Guzelsu N. High frequency ultrasound prediction of mechanical properties of cortical bone with varying amount of mineral content. 34:630-637.

Li YB, Garson CD, Xu YQ, French BA, Hossack JA. High frequency ultrasound imaging detects cardiac dyssynchrony in noninfarcted regions of the murine left ventricle late after reperfused myocardial infarction. 34:1063-1075.

Libgot-Calle R, Ossant F, Gruel Y, Lermusiaux P, Patat F. High frequency ultrasound device to investigate the acoustic properties of whole blood during coagulation. 34:252-264.

Needles A, Goertz DE, Karshafian R, Cherin E, Brown AS, Burns PN, Foster FS. High-frequency subharmonic pulsed-wave Doppler and color flow imaging of microbubble contrast agents. 34:1139-1151.

Sun L, Lien CL, Xu XC, Shung KK. *in vivo* cardiac imaging of adult zebrafish using high frequency ultrasound (45-75 mhz). 34:31-39.

Xu XC, Sun L, Cannata JM, Yen JT, Shung KK. High-frequency ultrasound Doppler system for biomedical applications with a 30-MHZ linear array. 34:638-646.

High intensity focused ultrasound

Synonyms: Focused ultrasound surgery, HIFU, FUS, thermal ablation

Search String: "high intensity focused ultrasound" OR "Focused ultrasound surgery" OR HIFU OR FUS OR ablation

See also: therapeutic applications of ultrasound, hyperthermia, thermal effects

Abe Y, Otsuka R, Muratore R, Fujikura K, Okajima K, Suzuki K, Wang J, Marboe C, Kalisz A, Ketterling JA,

Lizzi FL, Homma S. *in vitro* mitral chordal cutting by high intensity focused ultrasound. 34:400-405.

McDannold N, Vykhodtseva N, Hynynen K. Blood-brain barrier disruption induced by focused ultrasound and circulating preformed microbubbles appears to be characterized by the mechanical index. 34:834-840.

McDannold N, Vykhodtseva N, Hynynen K. Effects of acoustic parameters and ultrasound contrast agent dose on focused-ultrasound induced blood-brain barrier disruption. 34:930-937.

Pichardo S, Gelet A, Curiel L, Chesnais S, Chapelon JY. New integrated imaging high intensity focused ultrasound probe for transrectal prostate cancer treatment. 34:1105-1116.

Shaw A. A Buoyancy Method for the Measurement of Total Ultrasound Power Generated by HIFU Transducers. 34:1327-1342.

Sheikov N, McDannold N, Sharma S, Hynynen K. Effect of focused ultrasound applied with an ultrasound contrast agent on the tight junctional integrity of the brain microvascular endothelium. 34:1093-1104.

Wu CC, Chen CN, Ho MC, Chen WS, Lee PH. Using the acoustic interference pattern to locate the focus of a high-intensity focused ultrasound (HIFU) transducer. 34:137-146.

Yu T, Xu C. Hyperecho as the Indicator of Tissue Necrosis During Microbubble-Assisted High Intensity Focused Ultrasound: Sensitivity; Specificity and Predictive Value. 34:1343-1347.

Zhou Q, Zhu XQ, Zhang J, Xu ZL, Lu P, Wu F. Changes in circulating immunosuppressive cytokine levels of cancer patients after high intensity focused ultrasound treatment. 34:81-87.

Muratore R, Akabas T, Muratore IB. High-Intensity Focused Ultrasound Ablation of *Ex vivo* Bovine Achilles Tendon. 34:2043-2050.

N'Djin WA, Melodelima D, Parmentier H, Chesnais S, Rivoire M, Chapelon JY. Utility of a Tumor-Mimic Model for the Evaluation of the Accuracy of HIFU Treatments. Results of *in vitro* Experiments in the Liver. 34:1934-1943.

Histology

Synonyms: Histopathology, Histological classification

Search String: Histo*

See also: Tissue characterization

Chrzanowski L, Drozd J, Strzelecki M, Krzeminska-Pakula M, Jedrzejewski KS, Kasprzak JD. Application of neural networks for the analysis of intravascular ultrasound and histological aortic wall appearance-an *in vitro* tissue characterization study. 34:103-113.

Kijima Y, Yoshinaka H, Koriyama C, Funasako Y, Natsugoe S, Aikou T. Ultrasound examination is useful for

prediction of histologic type in invasive ductal carcinoma of the breast. 34:517-524.

Zhang M, Nigwekar P, Castaneda B, Hoyt K, Joseph JV, Agnese AD, Messing EM, Strang JG, Rubens DJ, Parker KJ. Quantitative characterization of viscoelastic properties of human prostate correlated with histology. 34:1033-1042.

Historical review

History

Synonyms: case study

Search String: History OR "case study"

Hyperthermia

Synonyms: thermotherapy

Search String: Hyperthermia OR thermotherapy

See also: High intensity Focused Ultrasound, thermal effects

Aitkenhead A, Mills J, Wilson A. The Design and Characterization of an Ultrasound Phased Array Suitable for Deep Tissue Hyperthermia. 34:1793-1807.

Bouchoux G, Lafon C, Berriet R, Chapelon JY, Fleury G, Cathignol D. Dual-mode ultrasound transducer for image-guided interstitial thermal therapy. 34:607-616.

Deandrea M, Limone P, Basso E, Mormile A, Ragazzoni F, Gamarra E, Spiezia S, Faggiano A, Colao A, Molinari F, Garberoglio R. US-guided percutaneous radiofrequency thermal ablation for the treatment of solid benign hyperfunctioning or compressive thyroid nodules. 34:784-791.

I

Image artifacts

Synonyms: artefacts, shadowing, imaging errors, defocusing, aliasing, distortion, afterglow, duplication

Search String: art*facts OR shadow*

See also: speckle

Image processing

Synonyms: filtering, averaging, denoising, decluttering, image enhancement, attenuation correction

Search String: "image processing" OR Filter* OR averag* OR denois* OR *clutter OR "image enhance*" OR "attenuation correction"

See also: adaptive filtering, feature detection, principle components analysis, speckle

Cowe J, Gittins J, Evans DH. Improving performance of pulse compression in a Doppler ultrasound system using amplitude modulated chirps and Wiener filtering. 34:326-333.

Zhou Y, Zheng Y. Estimation of Muscle Fiber Orientation in Ultrasound Images Using Rotating Hough Transform (RVHT). 34:1474-1481.

Tang MX, Mari JM, Wells PNT, Eckersley RJ. Attenuation Correction in Ultrasound Contrast Agent Imaging:

Elementary Theory and Preliminary Experimental Evaluation. 34:1998-2008.

Image reconstruction

Synonyms: compound imaging, compounding, spatial compound sonography (SONOCT), mapping, surface reconstruction, volume reconstruction

Search String: reconstruction OR compound* OR SONOCT OR map*

Ghanem A, Troatz C, Elhafi N, Dewald O, Heeschen C, Nickenig G, Stypmann J, Tiemann K. Quantitation of myocardial borderzone using reconstructive 3-D echocardiography after chronic infarction in rats - Incremental value of low-dose dobutamine. 34:559-566.

Gooding MJ, Kennedy S, Noble JA. Volume segmentation and reconstruction from freehand three-dimensional ultrasound data with application to ovarian follicle measurement. 34:183-195.

Image segmentation

Synonyms: Partitioning Clustering

Search String: segmentation OR Partitioning OR Clustering

See also: Computer aided diagnosis

Gooding MJ, Kennedy S, Noble JA. Volume segmentation and reconstruction from freehand three-dimensional ultrasound data with application to ovarian follicle measurement. 34:183-195.

Nillesen MM, Lopata RGP, Gerrits IH, Kapusta L, Thijssen JM, de Korte CL. Modeling envelope statistics of blood and myocardium for segmentation of echocardiographic images. 34:674-680.

Image registration

Synonyms: correlation, recorelation

Search String: registration OR *correlation

Liang Y, Zhu H, Friedman M. Estimation of the Transverse Strain Tensor in the Arterial Wall Using IVUS Image Registration. 34:1832-1845.

Zhang M, Nigwekar P, Castaneda B, Hoyt K, Joseph JV, Agnese AD, Messing EM, Strang JG, Rubens DJ, Parker KJ. Quantitative characterization of viscoelastic properties of human prostate correlated with histology. 34:1033-1042.

In Memoriam

Instrumentation

Synonyms: scanning systems, imaging hardware

Search String: instrument* OR scann* OR hardware

See also: transducers

Leighton T, Fedele F, Coleman A, McCarthy C, Ryves S, Hurrell A, De Stefano A, White P. A Passive Acoustic Device for Real-Time Monitoring of the Efficacy of Shockwave Lithotripsy Treatment. 34:1651-1665.

Aitkenhead A, Mills J, Wilson A. The Design and Characterization of an Ultrasound Phased Array Suitable for Deep Tissue Hyperthermia. 34:1793-1807.

Killingback ALT, Newey VR, El-Brawany MA, Nassiri DK. Development of a Thermal Test Object for the Measurement of Ultrasound Intracavity Transducer Self-Heating. 34:2035-2042.

Intravascular

Synonyms: IVUS

Search String: intravascular OR IVUS

See also: blood vessels

Chrzanowski L, Drozd J, Strzelecki M, Krzeminska-Pakula M, Jedrzejewski KS, Kasprzak JD. Application of neural networks for the analysis of intravascular ultrasound and histological aortic wall appearance-an *in vitro* tissue characterization study. 34:103-113.

Filho ES, Saijo Y, Tanaka A, Yoshizawa M. Detection and quantification of calcifications in intravascular ultrasound images by automatic thresholding. 34:160-165.

Liang Y, Zhu H, Friedman M. Estimation of the Transverse Strain Tensor in the Arterial Wall Using IVUS Image Registration. 34:1832-1845.

Okubo M, Kawasaki M, Ishihara Y, Takeyama U, Kubota T, Yamaki T, Ojio S, Nishigaki K, Takemura G, Saio M, Takami T, Minatoguchi S, Fujiwara H. Development of integrated backscatter intravascular ultrasound for tissue characterization of coronary plaques. 34:655-663.

Papadogiorgaki M, Mezaris V, Chatzizisis Y, Giannoglou G, Kompatsiaris I. Image Analysis Techniques for Automated IVUS Contour Detection. 34:1482-1498.

Sethuraman S, Aglyamov SR, Smalling RW, Emelianov SY. Remote temperature estimation in intravascular photoacoustic imaging. 34:299-308.

Ischemia

Synonyms: ischaemia

Search String: isch*emia OR isch*emic

See also: thrombolysis, atherosclerosis, blood perfusion

Bonnin P, Debbabi H, Mariani J, Charriaut-Marlangue C, Renolleau S. Ultrasonic assessment of cerebral blood flow changes during ischemia-reperfusion in 7-day-old rats. 34:913-922.

Wijnhoud AD, Franckena M, Van Der Lugt A, Koudstaal PJ, Dippel EDWJ. Inadequate acoustical temporal bone window in patients with a transient ischemic attack or minor stroke: Role of skull thickness and bone density. 34:923-929.

Yao GH, Zhang C, Sun FR, Zhang M, Zhao YX, Zhang PF, Zhong L, Ding SF, Chen WQ, Li XN, Zhang Y. Quantification of transmural gradient of blood flow in myocardial ischemia with real-time myocardial contrast echocardiography and dipyridamole stress test. 34:22-30.

K

Kidney

Synonyms: nephrology, renal

Search String: kidney OR nephro* OR renal

Bonnin P, Sabaa N, Flamant M, Debbabi H, Tharaux PL. Ultrasound imaging of renal vaso-occlusive events in transgenic sickle mice exposed to hypoxic stress. 34:1076-1084.

Chang CH, Tsai PY, Yu CH, Ko HC, Chang FM. Predicting fetal growth restriction with renal volume using 3-D ultrasound: Efficacy evaluation. 34:533-537.

Chatterjee R, Deng D, Pellerin D, Todd-Pokropek A, Neild GH, Lees WR, Rodeck CH. Feasibility of dynamic 3-D color Doppler ultrasound for imaging penile vascular change in renal transplant patients with erectile dysfunction responding to sildenafil. 34:885-891.

John B, Rowland D, Ratnam L, Walkden M, Nayak S, Patel U, Anson K, Nassiri D. Percutaneous Renal Intervention: Comparison of 2-D and Time-Resolved 3-D (4-D) Ultrasound for Minimal Calyceal Dilation Using an Ultrasound Phantom and Fluoroscopic Control. 34:1765-1769.

Pluskiewicz W, Zywiec J, Gumprecht J, Grzeszczak W. Quantitative ultrasound of phalanges of adults with end-stage renal disease or who have undergone renal transplantation (vol 33, pg 1353, 2007). 34:514-514.

L

Letters to the editor

Sharma VK, Chan BPL. The prognostic value of early transcranial doppler ultrasound following cardiopulmonary resuscitation. 34:166-166.

Chao AC, Chung CP, Hsu HY, Hu HH. Reply. 34:689

Nedelmann M. Commentary to Letter. 34:690

Maier M, Schmitz C. Shock Wave Therapy: What Really Matters. 34:1868-1869

Cleveland RO, Chitnis PV, McClure SR. Reply. 34:1869-1870

Ligament

Synonyms: Connective tissue, Collagen

Search String: Ligament OR Collagen OR "Connective tissue"

See also: tendon

Ng GYF, Wong RYF. Ultrasound Phonophoresis of Panax Notoginseng Improves the Strength of Repairing Ligament: A Rat Model. 34:1919-1923.

Liposomes

Synonyms: vesicle, reverse micelle

Search String: Liposome* OR vesicle* OR micelle*

See also: drug delivery

Huang S, McPherson D, MacDonald R. A Method to Co-Encapsulate Gas and Drugs in Liposomes for Ultrasound-Controlled Drug Delivery. 34:1272-1280.

Lithotripsy

Synonyms: Extracorporeal lithotripsy, Shock-wave lithotripsy (SWL), gall stones, kidney stones, Calcification, choleliths, calculus/i

Search String: Lithotrip* OR ESWL OR SWL OR "gall stones" OR "kidney stones" OR calcification OR choleliths OR calcul*

See also: therapeutic applications of ultrasound

Leighton T, Fedele F, Coleman A, McCarthy C, Ryves S, Hurrell A, De Stefano A, White P. A Passive Acoustic Device for Real-Time Monitoring of the Efficacy of Shockwave Lithotripsy Treatment. 34:1651-1665.

Liver

Synonyms: hepatic

Search String: Liver OR hepat*

Buscarini E, Gebel M, Ocran K, Manfredi G, Blanco GDV, Stefanov R, Olivieri C, Danesino C, Zambelli A. Interobserver agreement in diagnosing liver involvement in hereditary hemorrhagic telangiectasia by Doppler ultrasound. 34:718-725.

Carstensen E, Parker K, Lerner R. Elastography in the Management of Liver Disease. 34:1535-1546.

Lv F, Tang J, Li W, Zhang H, Wang W, Yang L. Hemostatic Agents Injected Directly Into Hepatic Injury Sites for Liver Trauma Hemorrhage Under the Guidance of Contrast-Enhanced Ultrasound: An Animal Experiment. 34:1604-1609.

Palmeri ML, Wang MH, Dahl JJ, Frinkley KD, Nightingale KR. Quantifying hepatic shear modulus *in vivo* using acoustic radiation force. 34:546-558.

Low frequency ultrasound

Synonyms: LFUS

Search String: "Low frequency ultrasound" OR LFUS

See also: physiotherapy

Low intensity ultrasound

Synonyms: Low intensity pulsed ultrasound, LIPUS, LIFU

Search String: "low*intensity ultrasound" OR LIPUS OR LIFU

Juffermans LJM, Kamp O, Dijkmans PA, Visser CA, Musters RJP. Low-intensity ultrasound-exposed microbubbles provoke local hyperpolarization of the cell membrane via activation of BKCa channels. 34:502-508.

Lu H, Qin L, Cheung W, Lee K, Wong W, Leung K. Low-Intensity Pulsed Ultrasound Accelerated Bone-Tendon Junction Healing Through Regulation of Vascular Endothelial Growth Factor Expression and Cartilage Formation. 34:1248-1260.

Tien YC, Lin SD, Chen CH, Lu CC, Su SJ, Chih TT. Effects of pulsed low-intensity ultrasound on human chondrocytes. 34:1174-1181.

Tam KF, Cheung WH, Lee KM, Qin L, Leung KS. Osteogenic Effects of Low-Intensity Pulsed Ultrasound, Extracorporeal Shockwaves and Their Combination – An *in vitro* Comparative Study on Human Periosteal Cells. 34:1957-1965.

Lung

Synonyms: pulmonary, pneumonic, respiratory system, alveolar, bronchular, thoracic, pleural

Search String: Lung OR Pulmo* OR Pneum* OR bronch* OR Alveol* OR Thora* OR "respiratory system" OR pleural

Chen HM, Duan YY, Li J, Zhou N, Yuan LJ, Cao TS, Hou WH, Zhang HX, Cao W, Yang YH. A rabbit model with acute thrombo-embolic pulmonary hypertension created with echocardiography guidance. 34:221-227.

Landmark KE, Johansen PW, Johnson JA, Johansen B, Uran S, Skotland T. Pharmacokinetics of perflorobutane following intravenous bolus injection and continuous infusion of sonazoid (TM) in healthy volunteers and in patients with reduced pulmonary diffusing capacity. 34:494-501.

Sharma VK, Chan BPL. The prognostic value of early transcranial doppler ultrasound following cardiopulmonary resuscitation. 34:166-166.

Volpicelli G, Caramello V, Cardinale L, Cravino M. Diagnosis of Radio-Occult Pulmonary Conditions by Real-Time Chest Ultrasonography in Patients with Pleuritic Pain. 34:1717-1723.

Lymphatic system

Synonyms: lymph nodes

Search String: lymph*

M

Magnetic Resonance Imaging

Synonyms: MRI, nuclear imaging, MR imaging

Search String: "Magnetic Resonance Imaging" OR MR* OR "nuclear imaging"

Liu HL, Wai YY, Chen WS, Chen JC, Hsu PH, Wu XY, Huang WC, Yen TC, Wang JJ. Hemorrhage detection during focused-ultrasound induced blood-brain-barrier opening by using susceptibility-weighted magnetic resonance imaging. 34:598-606.

Mammography

Synonyms: breast imaging, breast screening, mammogram

Search String: Mammogra* OR "breast imaging" OR "breast screening"

See also: breast

Booi RC, Carson PL, O'Donnell M, Roubidoux MA, Hall AL, Rubin JM. Characterization of cysts using differential

correlation coefficient values from two dimensional breast elastography: Preliminary study. 34:12-21.

Hsiao YH, Kuo SJ, Liang WM, Huang YL, Chen DR. Intra-tumor flow index can predict the malignant potential of breast tumor: Dependent on age and volume. 34:88-95.

Kijima Y, Yoshinaka H, Koriyama C, Funasako Y, Natsugoe S, Aikou T. Ultrasound examination is useful for prediction of histologic type in invasive ductal carcinoma of the breast. 34:517-524.

Kuo WH, Chen CN, Hsieh FJ, Shyu MK, Chang LY, Lee PH, Liu LYD, Cheng CH, Wang J, Chang KJ. Vascularity change and tumor response to neoadjuvant chemotherapy for advanced breast cancer. 34:857-866.

Mechanical effects

Synonyms:

Search String: “mechanical effects”

See also: cavitation, cell damage, radiation force, safety

Mechanical index

Synonyms: MI, cavitation threshold

Search String: “mechanical index” OR MI* OR “cavitation threshold”

See also: cavitation, exposimetry, safety

MEMS

Synonyms: Micro-electromechanical systems, microsystems technology

Search String: MEMS OR “Micro*electromechanical systems” OR “micro*systems technology”

See also: instrumentation, transducers

Modelling

Synonyms: simulations, theory, mathematical, in silico

Search String: Modelling OR simulation* OR theor* OR mathemat* OR “in silico”

Floch V, McMahon D, Luo G, Cohen A, Kaufman J, Shane E, Siffert R. Ultrasound Simulation in the Distal Radius Using Clinical High-Resolution Peripheral-CT Images. 34:1317-1326.

Nillesen MM, Lopata RGP, Gerrits IH, Kapusta L, Thijssen JM, de Korte CL. Modeling envelope statistics of blood and myocardium for segmentation of echocardiographic images. 34:674-680.

Trobaugh JW, Arthur RM, Straube WL, Moros EG. A simulation model for ultrasonic temperature imaging using change in backscattered energy. 34:289-298.

Vanhille C, Campos-Pozuelo C. Nonlinear ultrasonic propagation in bubbly liquids: A numerical model. 34:792-808.

Molecular imaging

Synonyms: molecular tagging, targeted imaging, biomarkers

Search String: “molecular imaging” OR “molecular tagging” OR “targeted imaging” OR bio*markers

Motion analysis

Synonyms: motion tracking, motion compensation, M mode, phased tracking method

Search String: Motion OR “phased tracking” OR M*mode

Musculoskeletal

Synonyms: Sonomyography

Search String: Musc* OR Sonomyography

Arts IMP, van Rooij FG, Overeem S, Pillen S, Janssen HMHA, Schelhaas HJ, Zwarts MJ. Quantitative muscle ultrasonography in amyotrophic lateral sclerosis. 34:354-361.

Zhou Y, Zheng Y. Estimation of Muscle Fiber Orientation in Ultrasound Images Using Revoting Hough Transform (RVHT). 34:1474-1481.

Serra MD, Gavião MBD, dos Santos Uchôa MN. The Use of Ultrasound in the Investigation of the Muscles of Mastication. 34:1875-1884.

N

Neurosonology

Synonyms: brain imaging, transcranial, nervous system

Search String: Neurosonology OR “brain imaging” OR transcranial OR nerv*

See also: brain

Nonlinear effects

Synonyms: nonlinear propagation, acoustic nonlinearity, harmonic distortion

Search String: nonlinear* OR non-linear* OR “non linear*” OR harmonic

See also: finite amplitude effects, harmonic imaging, shock waves

Liu X, Gong X, Yin C, Li J, Zhang D. Noninvasive estimation of temperature elevations in biological tissues using acoustic nonlinearity parameter imaging. 34:414-424.

Shen CC, Wang YC, Yeh CK. Imaging parameters on third harmonic transmit phasing for tissue harmonic generation. 34:1001-1013.

Vanhille C, Campos-Pozuelo C. Nonlinear ultrasonic propagation in bubbly liquids: A numerical model. 34:792-808.

Wu XQ, Yang ZY, Qian DJ, Wang Q, Bo XP, Zhu JQ. Very early stage detection of acute myocardial infarction by harmonic ultrasonic integrated backscatter. 34:567-572.

O

Obstetrics

Synonyms: prenatal, fetal, gynaecology

Search String: obstetric* OR gynaecolog* OR gynecolog* OR pre*natal

See also: fetal ultrasound, uterus

Chang CH, Tsai PY, Yu CH, Ko HC, Chang FM. Predicting fetal growth restriction with renal volume using 3-D ultrasound: Efficacy evaluation. 34:533-537.

Yu JH, Wang YY, Chen P, Shen YZ. Fetal abdominal contour extraction and measurement in ultrasound images. 34:169-182.

Yu Q, Leatherbury L, Tian X, Lo CW. Cardiovascular assessment of fetal mice by in utero echocardiography. 34:741-752.

Ophthalmology

Synonyms:

Search String: Ophthalmolog*

See also: eyes

Optoacoustic

Synonyms: photoacoustic, ultrasound light modulation, laser ultrasonic

Search String: Optoacoustic OR photoacoustic OR "ultrasound light modulation" OR "laser ultraso*"

Sethuraman S, Aglyamov SR, Smalling RW, Emelianov SY. Remote temperature estimation in intravascular photoacoustic imaging. 34:299-308.

Osteoarthritis

Synonyms: arthritis

Search String: *arthritis

See also: bone, bone density measurement

Osteoporosis

Synonyms: loss of bone density, bone fragility

Search String: Osteoporosis OR "bone mineral density"

See also: bone, bone density measurement

Ovary

Synonyms: reproductive system, ovarian

Search String: Ovar* OR "reproductive system"

See also: genitourinary

Gooding MJ, Kennedy S, Noble JA. Volume segmentation and reconstruction from freehand three-dimensional ultrasound data with application to ovarian follicle measurement. 34:183-195.

P

Pancreas

Synonyms: Pancreatic, gastrointestinal

Search String: Pancrea* OR gastrointestinal

See also: Gastroenterology

Sakamoto H, Kitano M, Suetomi Y, Maekawa K, Takeyama Y, Kudo M. Utility of contrast-enhanced endoscopic ultrasonography for diagnosis of small pancreatic carcinomas. 34:525-532.

Pathophysiology

Synonyms: pathology

Search String: Pathophysiology OR pathology

Pediatrics

Synonyms: children, infants

Search String: Pediatrics OR child* or infant*

Julkunen M, Parviainen T, Janas M, Tammela O. End-diastolic block in cerebral circulation may predict intraventricular hemorrhage in hypotensive extremely-low-birth-weight infants. 34:538-545.

Porta F, Spada M, Lala R, Mussa A. Phalangeal quantitative ultrasound in children with phenylketonuria: A pilot study. 34:1049-1052.

Tien YC, Lin SD, Chen CH, Lu CC, Su SJ, Chih TT. Effects of pulsed low-intensity ultrasound on human child chondrocytes. 34:1174-1181.

Phantoms

Synonyms: mimics, tissue-mimicking, gel phantom, gelatine, agarose, tofu, polyacrylamide, urethane foam, flow model, flow cell

Search String: phantom* OR mimic* OR tissue-mimic* OR Gel* OR agar* OR polyacrylamide OR urethane OR "flow cell*" OR "flow model*"

See also: Flow models/phantoms

Brewin M, Pike L, Rowland D, Birch M. The Acoustic Properties; Centered on 20 MHZ; of an IEC Agar-Based Tissue-Mimicking Material and its Temperature; Frequency and Age Dependence. 34:1292-1306.

Hobson M, Madsen E, Frank G, Jiang J, Shi H, Hall T, Varghese T. Anthropomorphic Phantoms for Assessment of Strain Imaging Methods Involving Saline-Infused Sonohysterography. 34:1622-1637.

Little SH, Igo SR, McCulloch M, Hartley CJ, Nose Y, Zoghbi WA. Three-dimensional ultrasound imaging model of mitral valve regurgitation: Design and evaluation. 34: 647-654.

Qin SP, Kruse DE, Ferrara KW. Transmitted ultrasound pressure variation in micro blood vessel phantoms. 34: 1014-1020.

Stiles TA, Madsen EL, Frank GR. An exosimetry system using tissue-mimicking liquid. 34:123-136.

Thorne ML, Poepping TL, Rankin RN, Steinman DA, Holdsworth DW. Use of an ultrasound blood-mimicking fluid for Doppler investigations of turbulence *in vitro*. 34: 1163-1173.

Thrush AJ, Brewin MP, Birch MJ. Assessment of tissue Doppler imaging measurements of arterial wall motion using a tissue mimicking test rig. 34:446-453.

Wong E, Thorne M, Nikolov H, Poepping T, Holdsworth D. Doppler Ultrasound Compatible Plastic Material for Use in Rigid Flow Models. 34:1846-1856.

Killingback ALT, Newey VR, El-Brawany MA, Nassiri DK. Development of a Thermal Test Object for the Measurement of Ultrasound Intracavity Transducer Self-Heating. 34:2035-2042.

N'Djin WA, Melodelima D, Parmentier H, Chesnais S, Rivoire M, Chapelon JY. Utility of a Tumor-Mimic Model for the Evaluation of the Accuracy of HIFU Treatments. Results of *in vitro* Experiments in the Liver. 34:1934-1943.

Physiotherapy

Synonyms: Physical therapy

Search String: Physiotherapy OR "Physical therapy"

See also: healing, hyperthermia, therapeutic applications of ultrasound

Principal components analysis

Synonyms: PCA, Decomposition, Dimensionality reduction, Karhunen-Loève transform, Hotelling transform, proper orthogonal decomposition (POD)

Search String: "principal components analysis" OR PCA OR Decomposition OR "Karhunen-Loève transform" OR "Hotelling transform" OR "proper orthogonal decomposition" OR POD OR "Dimensionality reduction"

See also: feature detection, image processing

Mauldin FW, Zhu HT, Behler RH, Nichols TC, Gallippi CM. Robust principal component analysis and clustering methods for automated classification of tissue response to ARFI excitation. 34:309-325.

Prostate

Synonyms: prostate gland

Search String: prostate OR transrectal OR endorectal OR TRUS

See also: genitourinary

Kamoi K, Okihara K, Ochiai A, Ukimura O, Mizutani Y, Kawauchi A, Miki T. The utility of transrectal real-time elastography in the diagnosis of prostate cancer. 34:1025-1032.

Pichardo S, Gelet A, Curiel L, Chesnais S, Chapelon JY. New integrated imaging high intensity focused ultrasound probe for transrectal prostate cancer treatment. 34:1105-1116.

Yang J, Tang J, Li Y, Fei X, Shi H. Contrast-Enhanced Transrectal Ultrasound for Assessing Vascularization of Hypoechoic BPH Nodules in the Transition and Peripheral Zones: Comparison with Pathological Examination. 34:1758-1764.

Zhang M, Nigwekar P, Castaneda B, Hoyt K, Joseph JV, Agnese AD, Messing EM, Strang JG, Rubens DJ, Parker KJ. Quantitative characterization of viscoelastic properties of human prostate correlated with histology. 34:1033-1042.

Pulsatility index

Synonyms: tissue pulsatility imaging

Search String: Pulsatil*

Nguyen LC, Yu FTH, Cloutier G. Cyclic changes in blood echogenicity under pulsatile flow are frequency dependent. 34:664-673.

Pulse wave velocity

Synonyms: pulsed-wave Doppler, Pulse-Wave Imaging (PWI), Pulse-Wave Velocity (PWV)

Search String: "Pulse* wave" OR PWI OR PWV

Jiang B, Liu B, McNeill KL, Chowienczyk PJ. Measurement of pulse wave velocity using pulse wave Doppler ultrasound: Comparison with arterial tonometry. 34:509-512.

Needles A, Goertz DE, Karshafian R, Cherin E, Brown AS, Burns PN, Foster FS. High-frequency subharmonic pulsed-wave Doppler and color flow imaging of microbubble contrast agents. 34:1139-1151.

Q

Quantitative ultrasound

Synonyms: QUS, quantification, quantitation

Search String: Quantit* OR QUS

Arts IMP, van Rooij FG, Overeem S, Pillen S, Janssen HMHA, Schelhaas HJ, Zwarts MJ. Quantitative muscle ultrasonography in amyotrophic lateral sclerosis. 34:354-361.

Halaba Z. Quantitative Ultrasound Measurements at Hand Phalanges in Children and Adolescents: A Longitudinal Study. 34:1547-1553.

Pluskiewicz W, Zywiec J, Gumprecht J, Grzeszczak W. Quantitative ultrasound of phalanges of adults with end-stage renal disease or who have undergone renal transplantation (vol 33, pg 1353, 2007). 34:514-514.

Porta F, Spada M, Lala R, Mussa A. Phalangeal quantitative ultrasound in children with phenylketonuria: A pilot study. 34:1049-1052.

Su H, Lin T, Lee C, Lin C, Tang M, Chin T, Lai W, Sheu S, Voon W. Usefulness of the Ratio of Transmitral E Wave Velocity to Isovolumic Relaxation Flow Propagation Velocity for Predicting Left Ventricular End-Diastolic Pressure. 34:1752-1757.

Zhang M, Nigwekar P, Castaneda B, Hoyt K, Joseph JV, Agnese AD, Messing EM, Strang JG, Rubens DJ, Parker KJ. Quantitative characterization of viscoelastic properties of human prostate correlated with histology. 34:1033-1042.

Otani K, Ohnishi S, Obata H, Ishida O, Kitamura S, Nagaya N. Contrast Sonography Enables Noninvasive and Quantitative Assessment of Neovascularization After Stem Cell Transplantation. 34:1893-1900.

R

Radiation force

Synonyms: Bjerknes force, Acoustic Radiation Force Impulse Ultrasound (ARFI), acoustic tweezers, ultrasound tweezers

Search String: “radiation force” OR ARFI OR Bjerknes OR “acoustic tweezers” OR “ultrason* tweezers”

Fahey B, Nelson R, Hsu S, Bradway D, Dumont D, Trahey G. *in vivo* Guidance and Assessment of Liver Radio-Frequency Ablation with Acoustic Radiation Force Elastography. 34:1590-1603.

Palmeri ML, Wang MH, Dahl JJ, Frinkley KD, Nightingale KR. Quantifying hepatic shear modulus *in vivo* using acoustic radiation force. 34:546-558.

Radio-Frequency

Synonyms: RF

Search String: “radio*frequency” OR RF

Deandrea M, Limone P, Basso E, Mormile A, Ragazzoni F, Gamarra E, Spiezia S, Faggiano A, Colao A, Molinari F, Garberoglio R. US-guided percutaneous radiofrequency thermal ablation for the treatment of solid benign hyperfunctioning or compressive thyroid nodules. 34:784-791.

Gaitini D, Zivari M, Abadi S, Goldberg SN, Adam D. Evaluating tissue changes with ultrasound during radiofrequency ablation. 34:586-597.

Real-time imaging

Synonyms:

Search String: real*time

Hsu PW, Prager RW, Gee AH, Treece GM. Real-time freehand 3D ultrasound calibration. 34:239-251.

Kamoi K, Okihara K, Ochiai A, Ukimura O, Mizutani Y, Kawauchi A, Miki T. The utility of transrectal real-time elastography in the diagnosis of prostate cancer. 34:1025-1032.

Li F, Wang Q, Yao GH, Zhang PF, Ge ZM, Zhang M, Zhang Y. Impact of the number of image planes of real-time three-dimensional echocardiography on the accuracy of left atrial and ventricular volume measurements. 34:40-46.

Li XC, Yao GH, Zhang C, Zhang M, Zhang PF, Zhang W, Hu YY, Ji XP, Zhang Y. Quantification of regional volume and systolic function of the left ventricle by real-time three-dimensional echocardiography. 34:379-384.

Wang Q, Zheng YP, Qin L, Huang QH, Lam WL, Leung G, Guo X, Lu HB. Real-time ultrasonic assessment of progressive proteoglycan depletion in articular cartilage. 34:1085-1092.

Wasmeier GH, Zimmermann WH, Schineis N, Melnychenko I, Voigt JU, Eschenhagen T, Flachskampf FA, Daniel WG, Nixdorff U. Real-time myocardial contrast echocardiography for assessing perfusion and function in healthy and infarcted Wistar rats. 34:47-55.

Yao GH, Zhang C, Sun FR, Zhang M, Zhao YX, Zhang PF, Zhong L, Ding SF, Chen WQ, Li XN, Zhang Y. Quantification of transmural gradient of blood flow in

myocardial ischemia with real-time myocardial contrast echocardiography and dipyridamole stress test. 34:22-30.

Review

Hoskins PR. Simulation and validation of arterial ultrasound imaging and blood flow. 34:693-717.

Carstensen E, Parker K, Lerner R. Elastography in the Management of Liver Disease. 34:1535-1546.

Serra MD, Gavião MBD, dos Santos Uchôa MN. The Use of Ultrasound in the Investigation of the Muscles of Mastication. 34:1875-1884.

Robotics-assisted surgery

Synonyms: robotic surgery, remote surgery, unmanned surgery

Search String: “robot* surgery” OR “remote surgery” OR “unmanned surgery”

S

Safety

Synonyms:

Search String: safety

See also: cell damage, dosimetry, exposimetry, mechanical index, sonochemistry, thermal effects

Shear waves

Synonyms:

Search String: “Shear Wave*”

See also: elastography

Klinkosz T, Lewa CJ, Paczkowski J. Propagation velocity and attenuation of a shear wave pulse measured by ultrasound detection in agarose and polyacrylamide gels. 34:265-275.

Shock waves

Synonyms: shock-wave, shockwave, extracorporeal shock-wave (ESW) therapy, shock-wave lithotripsy

Search String: shock*wave OR ESW

See also: finite amplitude effects, lithotripsy, nonlinear effects

Chao YH, Tsuang YH, Sun JS, Chen LT, Chiang YF, Wang CC, Chen MH. Effects of shock waves on tenocyte proliferation and extracellular matrix metabolism. 34:841-852.

Leighton T, Fedele F, Coleman A, McCarthy C, Ryves S, Hurrell A, De Stefano A, White P. A Passive Acoustic Device for Real-Time Monitoring of the Efficacy of Shockwave Lithotripsy Treatment. 34:1651-1665.

Nurzynska D, Di Meglio F, Castaldo C, Arcucci A, Marlinghaus E, Russo S, Corrado B, De Santo L, Baldascino F, Cotrufo M, Montagnani S. Shock waves activate *in vitro* cultured progenitors and precursors of cardiac cell lineages from the human heart. 34:334-342.

Saggini R, Figus A, Troccola A, Cocco V, Saggini A, Scuderi N. Extracorporeal Shock Wave Therapy for Management of Chronic Ulcers in the Lower Extremities. 34:1261-1271.

Wu Y, Liang H, Chen W, Lai J, Luh J, Chong F. Electrophysiological and Functional Effects of Shock Waves on the Sciatic Nerve of Rats. 34:1688-1696.

Tam KF, Cheung WH, Lee KM, Qin L, Leung KS. Osteogenic Effects of Low-Intensity Pulsed Ultrasound, Extracorporeal Shockwaves and Their Combination – An *in vitro* Comparative Study on Human Periosteal Cells. 34:1957-1965.

Signal processing

Synonyms:

Search String: “signal processing”

See also: image processing, wave form analysis

Skin

Synonyms: dermal, transdermal, cutaneous, transcutaneous, subcutaneous

Search String: skin OR dermal OR transdermal OR cutaneous OR transcutaneous OR subcutaneous

Deandrea M, Limone P, Basso E, Mormile A, Ragazzoni F, Gamarra E, Spiezia S, Faggiano A, Colao A, Molinari F, Garberoglio R. US-guided percutaneous radiofrequency thermal ablation for the treatment of solid benign hyperfunctioning or compressive thyroid nodules. 34:784-791.

Leigheb G, Cammarota T, Zavattaro E, Sarno A, Carriero A, Gambaro A, Dossou A, Poggio F, Clemente C, Johnson R, Sopoh G, Leigheb F. Ultrasonography for the Monitoring of Subcutaneous Damage in Mycobacterium Ulcerans Infection (Buruli Ulcer). 34:1554-1563.

Tedstone J, Richards S, Garman R, Ruzek M. Ultrasound Imaging Accurately Detects Skin Thickening in a Mouse Scleroderma Model. 34:1239-1247.

Sonochemistry

Synonyms: sonochemical

Search String: sonochemi*

Sonoporation

Synonyms: sonophoresis, phonophoresis, cell membrane permeabilisation, permeability enhancement, molecular delivery, poration, enhanced uptake

Search String: Sonoporation OR Sonophoresis OR Phonophoresis OR permeabilisation OR “enhance* permeability” OR “molecular delivery” OR poration OR “enhance* uptake”

See also: cavitation, cell damage, drug delivery, streaming

Juffermans LJM, Kamp O, Dijkmans PA, Visser CA, Musters RJP. Low-intensity ultrasound-exposed microbubbles provoke local hyperpolarization of the cell membrane via activation of BKCa channels. 34:502-508.

Ren J, Wang Z, Zhang Y, Zheng Y, Li X, Zhang Q, Wang Z, Xu C. Transfection Efficiency of TDL Compound in HUVEC Enhanced by Ultrasound-Targeted Microbubble Destruction. 34:1857-1867.

Forbes MM, Steinberg RL, O'Brien Jr. WD. Examination of Inertial Cavitation of Optison in Producing Sonoporation of Chinese Hamster Ovary Cells. 34:2009-2018.

Yamagata K, Kawasaki E, Kawarai H, Iino M. Encapsulation of Concentrated Protein Into Erythrocyte Porated by Continuous-Wave Ultrasound. 34:1924-1933.

Ng GYF, Wong RYF. Ultrasound Phonophoresis of Panax Notoginseng Improves the Strength of Repairing Ligament: A Rat Model. 34:1919-1923.

Speckle

Synonyms: interference pattern, noise

Search String: speckle OR noise OR interference

See also: adaptive filtering, image artifacts, image processing, textural analysis

Erez Y, Schechner YY, Adam D. Space variant ultrasound frequency compounding based on noise characteristics. 34:981-1000.

Wu CC, Chen CN, Ho MC, Chen WS, Lee PH. Using the acoustic interference pattern to locate the focus of a high-intensity focused ultrasound (HIFU) transducer. 34:137-146.

Spectral analysis

Synonyms: spectrum analysis, Fourier analysis, Fourier transform, wavelet transform

Search String: “Spectr* analysis” OR Fourier OR wavelet

See also: waveform analysis

Kaleva E, Saarakkala S, Toyras J, Nieminen HJ, Jurvelin JS. *in-vitro* comparison of time-domain, frequency-domain and wavelet ultrasound parameters in diagnostics of cartilage degeneration. 34:155-159.

Standing wave

Synonyms: stationary wave, acoustic trapping, ultrasound trapping, acoustic tweezers

Search String: “Standing wave” OR “stationary wave” OR trap* OR USWT

See also: imaging artefacts

Palanchon P, Birmele B, Tranquart F. Acoustical bubble trapper applied to hemodialysis. 34:681-684.

Streaming

Synonyms: Acoustic streaming, microstreaming

Search String: *streaming

See also: bubble dynamics, cell damage, fluid dynamics, radiation force, sonoporation

Jonsson P, Sahlstrand-Johnson P, Holmer NG, Persson HW, Jannert M, Jansson T. Feasibility of measuring acoustic streaming for improved diagnosis of rhinosinusitis. 34:228-238.

Stroke

Synonyms: cerebrovascular accident (CVA), thrombus, thrombosis, clot

Search String: Stroke OR “cerebrovascular accident” OR CVA OR thromb*

See also: atherosclerosis, cardiovascular, embolism detection, ischemia, thrombolysis

Chen HM, Duan YY, Li J, Zhou N, Yuan LJ, Cao TS, Hou WH, Zhang HX, Cao W, Yang YH. A rabbit model with acute thrombo-embolic pulmonary hypertension created with echocardiography guidance. 34:221-227.

Wang Z, Moehring MA, Vom AH, Furuhashi H. *in vitro* evaluation of dual mode ultrasonic thrombolysis method for transcranial application with an occlusive thrombosis model. 34:96-102.

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Muratore R, Akabas T, Muratore IB. High-Intensity Focused Ultrasound Ablation of *Ex vivo* Bovine Achilles Tendon. 34:2043-2050.

Temperature Imaging

Synonyms: Temperature mapping, Temperature monitoring, Ultrasonic thermometry, Temperature estimation

Search String: Temperature OR thermometry

See also: high intensity focused ultrasound, hyperthermia, thermoacoustic imaging

Liu X, Gong X, Yin C, Li J, Zhang D. Noninvasive estimation of temperature elevations in biological tissues using acoustic nonlinearity parameter imaging. 34:414-424.

Sethuraman S, Aglyamov SR, Smalling RW, Emelianov SY. Remote temperature estimation in intravascular photoacoustic imaging. 34:299-308.

Trobaugh JW, Arthur RM, Straube WL, Moros EG. A simulation model for ultrasonic temperature imaging using change in backscattered energy. 34:289-298.

Tendon

Synonyms: Collagen, Connective tissue

Search String: tendon OR “connective tissue” OR collagen

Lu H, Qin L, Cheung W, Lee K, Wong W, Leung K. Low-Intensity Pulsed Ultrasound Accelerated Bone-Tendon Junction Healing Through Regulation of Vascular Endothelial Growth Factor Expression and Cartilage Formation. 34:1248-1260.

Muratore R, Akabas T, Muratore IB. High-Intensity Focused Ultrasound Ablation of *Ex vivo* Bovine Achilles Tendon. 34:2043-2050.

Testis

Synonyms: Testicular, Paratesticular, Testes, Scrotum

Search String: Test* OR Scrot*

Textural analysis

Synonyms:

Search String: Textur*

See also: Image analysis, speckle

Therapeutic Applications of Ultrasound

Synonyms: ultrasound therapy, sonotherapy

Search String: Therap* OR Sonotherap*

See also: healing, high intensity focused ultrasound, hyperthermia, physiotherapy

Chen J, Zhou D, Liu Y, Peng J, Li C, Chen W, Wang Z. A Comparison Between Ultrasound Therapy and Laser Therapy for Symptomatic Cervical Ectopy. 34:1770-1774.

Hsieh YL. Peripheral therapeutic ultrasound stimulation alters the distribution of spinal c-Fos immunoreactivity induced by early or late phase of inflammation. 34:475-486.

Mast T, Salgaonkar V, Karunakaran C, Besse J, Datta S, Holland C. Acoustic Emissions During 3.1 MHz Ultrasound Bulk Ablation *in vitro*. 34:1434-1448.

Thermal effects

Synonyms: ultrasound heating, tissue heating

Search String: "Thermal effects" OR heating

See also: high intensity focused ultrasound, hyperthermia, therapeutic effects

Bouchoux G, Lafon C, Berriet R, Chapelon JY, Fleury G, Cathignol D. Dual-mode ultrasound transducer for image-guided interstitial thermal therapy. 34:607-616.

Deandrea M, Limone P, Basso E, Mormile A, Ragazzoni F, Gamarra E, Spiezia S, Faggiano A, Colao A, Molinari F, Garberoglio R. US-guided percutaneous radiofrequency thermal ablation for the treatment of solid benign hyperfunctioning or compressive thyroid nodules. 34:784-791.

Thermoacoustic imaging

Synonyms: Acousto-thermal imaging

Search String: thermo*acoustic OR Acousto*thermal

See also: temperature imaging

Liu X, Gong X, Yin C, Li J, Zhang D. Noninvasive estimation of temperature elevations in biological tissues using acoustic nonlinearity parameter imaging. 34:414-424.

Sethuraman S, Aglyamov SR, Smalling RW, Emelianov SY. Remote temperature estimation in intravascular photoacoustic imaging. 34:299-308.

Trobaugh JW, Arthur RM, Straube WL, Moros EG. A simulation model for ultrasonic temperature imaging using change in backscattered energy. 34:289-298.

Thrombolysis

Synonyms: sonothrombolysis, recanalisation, clot busting

Search String: Thromb* OR sonothrombolysis OR stroke OR clot OR stenosis OR recanalisation

See also: ischemia

Bonnin P, Debbabi H, Mariani J, Charriaut-Marlangue C, Renolleau S. Ultrasonic assessment of cerebral blood flow changes during ischemia-reperfusion in 7-day-old rats. 34:913-922.

Chen HM, Duan YY, Li J, Zhou N, Yuan LJ, Cao TS, Hou WH, Zhang HX, Cao W, Yang YH. A rabbit model with acute thrombo-embolic pulmonary hypertension created with echocardiography guidance. 34:221-227.

Datta S, Coussios C, Ammi A, Mast T, de Courten-Myers G, Holland C. Ultrasound-Enhanced Thrombolysis Using Definity® as a Cavitation Nucleation Agent. 34:1421-1433.

Fatar M, Stroick M, Griebel M, Alonso A, Kreisel S, Kern R, Hennerici M, Meairs S. Effect of Combined Ultrasound and Microbubbles Treatment in an Experimental Model of Cerebral Ischemia. 34:1414-1420.

Rubiera M, Ribo M, Delgado-Mederos R, Santamarina E, Maisterra O, Delgado P, Montaner J, Alvarez-Sabin J, Molina C. Do Bubble Characteristics Affect Recanalization in Stroke Patients Treated with Microbubble-Enhanced Sonothrombolysis? 34:1573-1577.

Shaw G, Meunier J, Lindsell C, Holland C. Tissue Plasminogen Activator Concentration Dependence of 120 kHz Ultrasound-Enhanced Thrombolysis. 34:1783-1792.

Wang Z, Moehring MA, Vom AH, Furuhashi H. *in vitro* evaluation of dual mode ultrasonic thrombolysis method for transcranial application with an occlusive thrombosis model. 34:96-102.

Wijnhoud AD, Franckena M, Van Der Lugt A, Koudstaal PJ, Dippel EDWJ. Inadequate acoustical temporal bone window in patients with a transient ischemic attack or minor stroke: Role of skull thickness and bone density. 34:923-929.

Yao GH, Zhang C, Sun FR, Zhang M, Zhao YX, Zhang PF, Zhong L, Ding SF, Chen WQ, Li XN, Zhang Y. Quantification of transmural gradient of blood flow in myocardial ischemia with real-time myocardial contrast echocardiography and dipyridamole stress test. 34:22-30.

Nedelmann M, Reuter P, Walberer M, Sommer C, Alessandri B, Schiel D, Ritschel N, Kempfski O, Kaps M, Mueller C, Bachmann G, Gerriets T. Detrimental Effects of 60 kHz Sonothrombolysis in Rats with Middle Cerebral Artery Occlusion. 34: 2019- 2027.

Thyroid

Synonyms: Thyroid gland

Search String: Thyroid* OR goitre

Deandrea M, Limone P, Basso E, Mormile A, Ragazzoni F, Gamarra E, Spiezia S, Faggiano A, Colao A, Molinari F,

Garberoglio R. US-guided percutaneous radiofrequency thermal ablation for the treatment of solid benign hyperfunctioning or compressive thyroid nodules. 34:784-791.

Ying M, Yung DMC, Ho KKL. Two-dimensional ultrasound measurement of thyroid gland volume: A new equation with higher correlation with 3-D ultrasound measurement. 34:56-63.

Time-of-flight

Synonyms: TOF, transmit time

Search String: "Time of flight" OR TOF OR "transmi* time"

See also: velocity

Time-reversal Acoustics

Synonyms: Time-reversal, Time-reversed acoustics, phase conjugation, adaptive focusing

Search String: "Time-revers*" OR "Time revers*" OR "phase conjugation" OR "adaptive focus*ing"

Tissue characterization

Synonyms: tissue identification, tissue differentiation, histoscanning

Search String: tissue AND characteri*ation OR identification OR differentiation OR histoscanning

See also: acoustic properties of tissues, speckle

Anand A, Kaczkowski P. Noninvasive Measurement of Local Thermal Diffusivity Using Backscattered Ultrasound and Focused Ultrasound Heating. 34:1449-1464.

Brand S, Weiss E, Lemor R, Kolios M. High Frequency Ultrasound Tissue Characterization and Acoustic Microscopy of Intracellular Changes. 34:1396-1407.

Chranowski L, Drozd J, Strzelecki M, Krzeminska-Pakula M, Jedrzejewski KS, Kasprzak JD. Application of neural networks for the analysis of intravascular ultrasound and histological aortic wall appearance-an *in vitro* tissue characterization study. 34:103-113.

Kim H, Varghese T. Hybrid Spectral Domain Method for Attenuation Slope Estimation. 34:1808-1819.

Okubo M, Kawasaki M, Ishihara Y, Takeyama U, Kubota T, Yamaki T, Ojio S, Nishigaki K, Takemura G, Saio M, Takami T, Minatoguchi S, Fujiwara H. Development of integrated backscatter intravascular ultrasound for tissue characterization of coronary plaques. 34:655-663.

Tsuzuki K, Hasegawa H, Ichiki M, Tezuka F, Kanai H. Optimal region-of-interest settings for tissue characterization based on ultrasonic elasticity imaging. 34:573-585.

Le Floch V, Luo G, Kaufman JJ, Siffert RS. Ultrasonic Assessment of the Radius *in vitro*. 34:1972-1979.

Klein MO, Grötz KA, Manefeld B, Kann PH, Al-Nawas B. Ultrasound Transmission Velocity for Noninvasive Evaluation of Jaw Bone Quality *in vivo* Before Dental Implantation. 34:1966-1971.

Tissue Elasticity

Synonyms: Young's modulus, elastic modulus, stiffness

Search String: Tissue AND Elasticity OR "Young's modulus" OR "elastic modulus" OR elasticity OR compliance OR stiffness

See also: tissue characterization, elastography, acoustic properties of tissues

Kim K, Johnson LA, Jia CX, Joyce JC, Rangwalla S, Higgins PDR, Rubin JM. Noninvasive ultrasound elasticity imaging (UEI) of Crohn's disease: Animal model. 34:902-912.

Tsuzuki K, Hasegawa H, Ichiki M, Tezuka F, Kanai H. Optimal region-of-interest settings for tissue characterization based on ultrasonic elasticity imaging. 34:573-585.

Toxicity

Synonyms:

Search String: Toxicity AND ultraso*

See also: cell damage, safety, sonochemistry

Transcranial ultrasound

Synonyms: TCD

Search String: Transcranial OR TCD OR skull

See also: Doppler

Haworth KJ, Fowlkes JB, Carson PL, Kripfgans OD. Towards aberration correction of transcranial ultrasound using acoustic droplet vaporization. 34:435-445.

Holscher T, Wilkening WG, Molkenstruck S, Voit H, Koch C. Transcranial sound field characterization. 34:973-980.

Ivancevich N, Pinton G, Nicoletto H, Bennett E, Laskowitz D, Smith S. Real-Time 3-D Contrast-Enhanced Transcranial Ultrasound and Aberration Correction. 34:1387-1395.

Jungehulsing GJ, Brunecker P, Nolte CH, Fiebach JB, Kunze C, Doepp F, Villringer A, Schreiber SJ. Diagnostic transcranial ultrasound perfusion-imaging at 2.5 MHz does not affect the blood-brain barrier. 34:147-150.

Lorenz MW, Thoelen N, Loesel N, Lienert C, Gonzalez M, Humpich M, Roelz W, Dvorak F, Sitzer M. Assessment of cerebral autoregulation with transcranial Doppler sonography in poor bone windows using constant infusion of an ultrasound contrast agent. 34:345-353.

Sharma VK, Chan BPL. The prognostic value of early transcranial doppler ultrasound following cardiopulmonary resuscitation. 34:166-166.

Wang Z, Moehring MA, Vom AH, Furuhashi H. *in vitro* evaluation of dual mode ultrasonic thrombolysis method for transcranial application with an occlusive thrombosis model. 34:96-102.

Transducers

Synonyms: probe, scanning head

Search String: Transducer* OR probe* OR "scan* head"

OR “piezoelectric effect” OR *MUT OR PZT OR “PMN-PT” OR “polyvinylidene fluoride”

See also: arrays

Bouchoux G, Lafon C, Berriet R, Chapelon JY, Fleury G, Cathignol D. Dual-mode ultrasound transducer for image-guided interstitial thermal therapy. 34:607-616.

Pichardo S, Gelet A, Curiel L, Chesnais S, Chapelon JY. New integrated imaging high intensity focused ultrasound probe for transrectal prostate cancer treatment. 34:1105-1116.

Wu CC, Chen CN, Ho MC, Chen WS, Lee PH. Using the acoustic interference pattern to locate the focus of a high-intensity focused ultrasound (HIFU) transducer. 34:137-146.

Trauma

Synonyms: injury, bleeding, vascular injury, wound

Search String: trauma OR “vascular injur*” OR bleeding OR wound

See also: hemorrhage

Tumor

Synonyms: tumor, mass, carcinoma, metastasis, melanoma, neoplasm, sarcoma, lymphoma

Search String: Tumour OR Tumor OR Mass OR Carcinoma OR Metastasis OR Melanoma OR Neoplasm OR Sarcoma OR Lymphoma

See also: cancer

Hsiao YH, Kuo SJ, Liang WM, Huang YL, Chen DR. Intratumor flow index can predict the malignant potential of breast tumor: Dependent on age and volume. 34:88-95.

Kijima Y, Yoshinaka H, Koriyama C, Funasako Y, Natsugoe S, Aikou T. Ultrasound examination is useful for prediction of histologic type in invasive ductal carcinoma of the breast. 34:517-524.

Kuo WH, Chen CN, Hsieh FJ, Shyu MK, Chang LY, Lee PH, Liu LYD, Cheng CH, Wang J, Chang KJ. Vascularity change and tumor response to neoadjuvant chemotherapy for advanced breast cancer. 34:857-866.

Larkin JO, Casey GD, Tangney M, Cashman J, Collins CG, Soden DM, O’Sullivan GC. Effective tumor treatment using optimized ultrasound-mediated delivery of bleomycin. 34:406-413.

Sakamoto H, Kitano M, Suetomi Y, Maekawa K, Takeyama Y, Kudo M. Utility of contrast-enhanced endoscopic ultrasonography for diagnosis of small pancreatic carcinomas. 34:525-532.

U

Ultrasonic vibration cutting

Synonyms: Ultrasonic scalpel

Search String: “ultrasonic vibration cutting” OR “ultrasonic scalpel”

Abe Y, Otsuka R, Muratore R, Fujikura K, Okajima K, Suzuki K, Wang J, Marboe C, Kalisz A, Ketterling JA, Lizzi FL, Homma S. *in vitro* mitral chordal cutting by high intensity focused ultrasound. 34:400-405.

Ultrasound guided surgery

Synonyms: intraoperative imaging, ultrasonic guidance, image guided surgery

Search String: “Ultraso* guid* surgery” OR “ultraso* treatment monitoring” OR “intraoperative imaging” OR “image*guid*” OR “intraoperative guid*”

Bouchoux G, Lafon C, Berriet R, Chapelon JY, Fleury G, Cathignol D. Dual-mode ultrasound transducer for image-guided interstitial thermal therapy. 34:607-616.

Deandrea M, Limone P, Basso E, Mormile A, Ragazzoni F, Gamarra E, Spiezia S, Faggiano A, Colao A, Molinari F, Garberoglio R. US-guided percutaneous radiofrequency thermal ablation for the treatment of solid benign hyperfunctioning or compressive thyroid nodules. 34:784-791.

Ellis R, Hing W, Dilley A, McNair P. Reliability of Measuring Sciatic and Tibial Nerve Movement with Diagnostic Ultrasound During a Neural Mobilisation Technique. 34:1209-1216.

Fahey B, Nelson R, Hsu S, Bradway D, Dumont D, Trahey G. *in vivo* Guidance and Assessment of Liver Radio-Frequency Ablation with Acoustic Radiation Force Elastography. 34:1590-1603.

Lv F, Tang J, Li W, Zhang H, Wang W, Yang L. Hemostatic Agents Injected Directly Into Hepatic Injury Sites for Liver Trauma Hemorrhage Under the Guidance of Contrast-Enhanced Ultrasound: An Animal Experiment. 34:1604-1609.

Wang M, Rohling R, Duzenli C, Clark B, Archip N. Evaluation of Targeting Errors in Ultrasound-Assisted Radiotherapy. 34:1944-1956.

Uterus

Synonyms: Womb

Search String: Uter* OR Cervi* OR Womb

See also: Fetal ultrasound, Abdominal imaging

Hobson M, Madsen E, Frank G, Jiang J, Shi H, Hall T, Varghese T. Anthropomorphic Phantoms for Assessment of Strain Imaging Methods Involving Saline-Infused Sonohysterography. 34:1622-1637.

Takac I. Saline infusion sonohysterography and the risk of malignant extrauterine spread in endometrial cancer. 34:7-11.

Yu Q, Leatherbury L, Tian X, Lo CW. Cardiovascular assessment of fetal mice by in utero echocardiography. 34:741-752.

V

Velocity

Synonyms: speed of sound, acoustic velocity

Search String: velocity OR speed OR "phase velocity" OR "group velocity" OR "transmission measurements"

See also: acoustic properties of tissues, tissue characterisation

Fraser KH, Meagher S, Blake JR, Easson WJ, Hoskins PR. Characterization of an abdominal aortic velocity waveform in patients with abdominal aortic aneurysm. 34:73-80.

Hoyt K, Castaneda B, Parker KJ. Two-dimensional sonoelastographic shear velocity imaging. 34:276-288.

Jiang B, Liu B, McNeill KL, Chowienczyk PJ. Measurement of pulse wave velocity using pulse wave Doppler ultrasound: Comparison with arterial tonometry. 34:509-512.

Klinkosz T, Lewa CJ, Paczkowski J. Propagation velocity and attenuation of a shear wave pulse measured by ultrasound detection in agarose and polyacrylamide gels. 34:265-275.

Mosso M, Schmid-Priscoveanu A, Straumann D, Baumgartner RW. Absence of gravity-dependent modulation of straight sinus flow velocity in healthy humans. 34:726-729.

Wikstrom J, Gronros J, Gan LM. Adenosine induces dilation of epicardial coronary arteries in mice - Relationship between coronary flow velocity reserve and coronary flow reserve *in vivo* using transthoracic echocardiography. 34:1053-1062.

Volume measurement

Synonyms: volumetric measurement

Search String: "volume* measurement" OR "volume rendering"

Chang CH, Tsai PY, Yu CH, Ko HC, Chang FM. Predicting fetal growth restriction with renal volume using 3-D ultrasound: Efficacy evaluation. 34:533-537.

Gooding MJ, Kennedy S, Noble JA. Volume segmentation and reconstruction from freehand three-dimensional ultrasound data with application to ovarian follicle measurement. 34:183-195.

Hsiao YH, Kuo SJ, Liang WM, Huang YL, Chen DR. Intra-tumor flow index can predict the malignant potential of breast tumor: Dependent on age and volume. 34:88-95.

Li F, Wang Q, Yao GH, Zhang PF, Ge ZM, Zhang M, Zhang Y. Impact of the number of image planes of real-time three-dimensional echocardiography on the accuracy of left atrial and ventricular volume measurements. 34:40-46.

Li XC, Yao GH, Zhang C, Zhang M, Zhang PF, Zhang W, Hu YY, Ji XP, Zhang Y. Quantification of regional volume and systolic function of the left ventricle by real-time three-dimensional echocardiography. 34:379-384.

Ying M, Yung DMC, Ho KKL. Two-dimensional ultrasound measurement of thyroid gland volume: A new equation with higher correlation with 3-D ultrasound measurement. 34:56-63.

W

Waveform analysis

Synonyms:

Search String: "waveform analysis"

See also: image processing, cardiology, spectral analysis

Fraser KH, Meagher S, Blake JR, Easson WJ, Hoskins PR. Characterization of an abdominal aortic velocity waveform in patients with abdominal aortic aneurysm. 34:73-80.