



ELSEVIER

doi:10.1016/S0301-5629(07)00573-X

● Subject Index to Volume 33

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

Ribbers H, Lopata RGP, Holewijn S, Pasterkamp G, Blankensteijn JD, deKorte CL. Noninvasive two-dimensional strain imaging of arteries: Validation in phantoms and preliminary experience in carotid arteries *in vivo*. 33:530-540.

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

Booi RC, Krücker JF, Goodsitt MM, O’Donnell M, Kapur A, LeCarpentier GL, Roubidoux MA, Fowlkes JB, Carson PL. Evaluating thin compression paddles for mammographically compatible ultrasound. 33:472-482.

Brekke S, Rabben SI, Støylen A, Haugen A, Haugen GU, Steen EN, Torp H. Volume stitching in three-dimensional echocardiography: Distortion analysis and extension to real time. 33:782-796.

Chang C, Tsai P, Yu C, Ko H, Chang F. Prenatal detection of fetal growth restriction by fetal femur volume: Efficacy assessment using three-dimensional ultrasound. 33:335-341.

Chen NG, Fowlkes JB, Carson PL, LeCarpentier GL. Rapid 3D imaging of contrast flow: Demonstration of a dual beam technique. 33:915-923.

Egger M, Spence JD, Fenster A, Parraga G. Validation of 3D ultrasound vessel wall volume: An imaging phenotype of carotid atherosclerosis. 33:905-914.

Garcia D, Fenech M, Qin Z, Soulez G, Cloutier G. Signal losses with real-time three-dimensional power doppler imaging. 33:1632-1639.

Goldberg A, Pakkiri P, Dai E, Lucas A, Fenster A. Measurements of aneurysm morphology determined by 3-D micro-ultrasound imaging as potential quantitative biomarkers in a mouse aneurysm model. 33:1552-1560.

Housden RJ, Gee AH, Treece GM, Prager RW. Sensorless reconstruction of unconstrained freehand 3D ultrasound data. 33:408-419.

Light ED, Mukundan S, Wolf PD, Smith SW. Real-time 3-D intracranial ultrasound with an endoscopic matrix array transducer. 33:1277-1284.

Lind BL, Fagertun J, Wilhjelm JE, Jensen MS, Sillesen H. 3D reconstruction of carotid atherosclerotic plaque: Comparison between spatial compound ultrasound models and anatomical models. 33:1064-1074.

Linguraru MG, Vasilyev NV, Del Nido PJ, Howe RD. Statistical segmentation of surgical instruments in 3-D ultrasound images. 33:1428-1437.

Nillesen MM, Lopata RGP, Gerrits IH, Kapusta L, Huisman HJ, Thijssen JM, de Korte CL. Segmentation of the heart muscle in 3-D pediatric echocardiographic images. 33:1453-1462.

Poon TC, Rohling RN. Tracking a 3-D ultrasound probe with constantly visible fiducials. 33:152-157.

Rebol J. The vascularisation of oral cavity tumours and tumour shell tissue determined by three-dimensional power doppler sonography. 33:493-499.

Solberg OV, Lindseth F, Torp H, Blake RE, Nagelhus Hernes TA. Freehand 3D ultrasound reconstruction algorithms - A review. 33:991-1009.

Stormark TA, Strømme K, Iversen BM, Matre K. Three-dimensional ultrasonography can detect the modulation of kidney volume in two-kidney, one-clip hypertensive rats. 33:1882-1888.

Weller R, Pfau T, Ferrari M, Griffith R, Bradford T, Wilson A. The determination of muscle volume with a freehand 3D ultrasonography system. 33:402-407.

Yao G, Li F, Zhang C, Zhang P, Zhang M, Zhao Y, Li X, Ding S, Zhong L, Zhang Y. How many planes are required to get an accurate and timesaving measurement of left ventricular volume and function by real-time three-dimensional echocardiography in acute myocardial infarction? 33:1572-1578.

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

A

Abdominal ultrasound

Synonyms: Abdominal imaging, Abdomen

Search String: “Abdominal ultrasound” OR “Abdominal imaging” OR Abdomen

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

Fahey BJ, Palmeri ML, Trahey GE. The impact of physiological motion on tissue tracking during radiation force imaging. 33:1149-1166.

Zagrodsky V, Phelan M, Shekhar R. Automated detection of a blood pool in ultrasound images of abdominal trauma. 33:1720-1726.

Zderic V, O'Keefe GE, Foley JL, Vaezy S. Resection of abdominal solid organs using high-intensity focused ultrasound. 33:1251-1258.

Acoustic emission

Synonyms: AE, passive detection

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

See also: cavitation

Acoustic microscopy

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

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

See also: high frequency ultrasound

Cheung AMY, Brown AS, Cucevic V, Roy M, Needles A, Yang V, Hicklin DJ, Kerbel RS, Foster FS. Detecting vascular changes in tumour xenografts using micro-ultrasound and micro-CT following treatment with VEGFR-2 blocking antibodies. 33:1259-1268.

Weiss EC, Lemor RM, Pilarczyk G, Anastasiadis P, Zinin PV. Imaging of focal contacts of chicken heart muscle cells by high-frequency acoustic microscopy. 33:1320-1326.

Zhou Y, Bishay R, Feintuch A, Tao K, Golding F, Zhu W, West LJ, Henkelman RM. Morphological and functional evaluation of murine heterotopic cardiac grafts using ultrasound biomicroscopy. 33:870-879.

Acoustic properties of tissues

Synonyms: ultrasound/ultrasonic properties

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

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

Strowitzki M, Brand S, Jenderka K. Ultrasonic radio-frequency spectrum analysis of normal brain tissue. 33:522-529.

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

Aneurysm

Synonyms: aneurism

Search String: Aneur*sm OR AAA

See also: atherosclerosis, hypertension

Goldberg A, Pakkiri P, Dai E, Lucas A, Fenster A. Measurements of aneurysm morphology determined by 3-D micro-ultrasound imaging as potential quantitative biomarkers in a mouse aneurysm model. 33:1552-1560.

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

Bonnin P, Villemain A, Vincent F, Debbabi H, Silvestre JS, Contreres JO, Levy BI, Tobelem G, Dupuy E. Ultrasonic assessment of hepatic blood flow as a marker of mouse hepatocarcinoma. 33:561-570.

Chen NG, Fowlkes JB, Carson PL, LeCarpentier GL. Rapid 3D imaging of contrast flow: Demonstration of a dual beam technique. 33:915-923.

Cheung AMY, Brown AS, Cucevic V, Roy M, Needles A, Yang V, Hicklin DJ, Kerbel RS, Foster FS. Detecting vascular changes in tumour xenografts using micro-ultrasound and micro-CT following treatment with VEGFR-2 blocking antibodies. 33:1259-1268.

Da Costa Gonçalves A, Barbieri CH, Mazzer N, Garcia SB, Thomazini JA. Can therapeutic ultrasound influence the integration of skin grafts? 33:1406-1412.

Miyake Y, Ohmori K, Yoshida J, Ishizawa M, Mizukawa M, Yukiiri K, Kohno M. Granulocyte colony-stimulating factor facilitates the angiogenesis induced by ultrasonic microbubble destruction. 33:1796-1804.

Mizrahi N, Seliktar D, Kimmel E. Ultrasound-induced angiogenic response in endothelial cells. 33:1819-1829.

Pollard RE, Broumas AR, Wisner ER, Vekich SV, Ferrara KW. Quantitative contrast enhanced ultrasound and ct assessment of tumor response to antiangiogenic therapy in rats. 33:235-245.

Wood AKW, Bunte RM, Cohen JD, Tsai JH, Lee WMF, Sehgal CM. The antivasular action of physiotherapy ultrasound on a murine tumor: role of a microbubble contrast agent. 33:1901-1910.

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

Bigelow TA, Miller RJ, Blue JP, Jr, O'Brien WD, Jr. Hemorrhage near fetal rat bone exposed to pulsed ultrasound. 33:311-317.

Choi JJ, Pernet M, Small SA, Konofagou EE. Noninvasive, transcranial and localized opening of the blood-brain barrier using focused ultrasound in mice. 33:95-104.

Gibson AA, Singh GK, Kulikowska A, Wallace KD, Hoffman JJ, Ludomirsky A, Holland MR. Regional variation in the measured apparent ultrasonic backscatter of mid-gestational fetal pig hearts. 33:1955-1962.

Goldberg A, Pakkiri P, Dai E, Lucas A, Fenster A. Measurements of aneurysm morphology determined by 3-D micro-ultrasound imaging as potential quantitative biomarkers in a mouse aneurysm model. 33:1552-1560.

Hartley CJ, Reddy AK, Madala S, Michael LH, Entman ML, Taffet GE. Effects of isoflurane on coronary blood flow velocity in young, old and ApoE^{-/-} mice measured by doppler ultrasound. 33:512-521.

Li Y, Garson CD, Xu Y, Beyers RJ, Epstein FH, French BA, Hossack JA. Quantification and MRI validation of regional contractile dysfunction in mice post myocardial infarction using high resolution ultrasound. 33:894-904.

Miller DL, Dou C, Wiggins RC, Wharram BL, Goyal M, Williams AR. An *in vivo* rat model simulating imaging of human kidney by diagnostic ultrasound with gas-body contrast agent. 33:129-135.

Rabald S, Hagendorff A, Pfeiffer D, Zimmer H, Deten A. Contrast enhanced echocardiographic follow-up of cardiac remodeling and function after myocardial infarction in rats. 33:1561-1571.

Schellpfeffer MA, Bolender DL, Kolesari GL. High frequency ultrasound imaging of the growth and development of the normal chick embryo. 33:751-761.

Stormark TA, Strømme K, Iversen BM, Matre K. Three-dimensional ultrasonography can detect the modulation of kidney volume in two-kidney, one-clip hypertensive rats. 33:1882-1888.

Wetterholm R, Caidahl K, Volkmann R, Brandt-Eliasson U, Fritsche-Danielson R, Gan L-. Imaging of atherosclerosis in WHHL rabbits using high-resolution ultrasound. 33:720-726.

Wood AKW, Bunte RM, Cohen JD, Tsai JH, Lee WMF, Sehgal CM. The antivascular action of physiotherapy ultrasound on a murine tumor: role of a microbubble contrast agent. 33:1901-1910.

Zhou Y, Bishay R, Feintuch A, Tao K, Golding F, Zhu W, West LJ, Henkelman RM. Morphological and functional evaluation of murine heterotopic cardiac grafts using ultrasound biomicroscopy. 33:870-879.

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

Chang C, Huang S, Yang H, Chou Y, Li P. Reconstruction of ultrasonic sound velocity and attenuation coefficient using linear arrays: clinical assessment. 33:1681-1687.

Light ED, Mukundan S, Wolf PD, Smith SW. Real-time 3-D intracranial ultrasound with an endoscopic matrix array transducer. 33:1277-1284.

Pedersen MH, Gammelmark KL, Jensen JA. In-vivo evaluation of convex array synthetic aperture imaging. 33:37-47.

Rao M, Chen Q, Shi H, Varghese T, Madsen EL, Zagzebski JA, Wilson TA. Normal and shear strain estimation using beam steering on linear-array transducers. 33:57-66.

Artefacts

See image artifacts

Artery

Synonyms: Arterial vessel

Search String: Arter* OR aorta OR carotid

See also: blood vessels, carotid

Kiviniemi TO, Toikka JO, Koskenvuo JW, Saraste A, Saraste M, Pärkkä JP, Raitakari OT, Hartiala JJ. Vasodilation of epicardial coronary artery can be measured with transthoracic echocardiography. 33:362-370.

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, Spence JD, Fenster A, Parraga G. Validation of 3D ultrasound vessel wall volume: An imaging phenotype of carotid atherosclerosis. 33:905-914.

Ellis SM, Naoumova RP, Neuwirth CK, Eckersley R, Cosgrove DO, Thompson GR, Sidhu PS. Measurement of the reflectivity of the intima-medial layer of the common carotid artery improves the discriminatory value of intima-medial thickness measurement as a predictor of risk of atherosclerotic disease. 33:1029-1038.

Goertz DE, Frijlink ME, Tempel D, Bhagwandas V, Gisolf A, Krams R, deJong N, vanderSteen AFW. Subharmonic contrast intravascular ultrasound for vasa vasorum imaging. 33:1859-1872.

Lind BL, Fagertun J, Wilhjelm JE, Jensen MS, Sillesen H. 3D reconstruction of carotid atherosclerotic plaque: Comparison between spatial compound ultrasound models and anatomical models. 33:1064-1074.

Maurice RL, Fromageau J, Brusseau É, Finet G, Rioufol G, Cloutier G. On the potential of the lagrangian estimator for endovascular ultrasound elastography: *in vivo* human coronary artery study. 33:1199-1205.

Mougiakakou SG, Golemati S, Gousias I, Nicolaidis AN, Nikita KS. Computer-aided diagnosis of carotid

atherosclerosis based on ultrasound image statistics, laws' texture and neural networks. 33:26-36.

Schmitt C, Soulez G, Maurice RL, Giroux M, Cloutier G. Noninvasive vascular elastography: toward a complementary characterization tool of atherosclerosis in carotid arteries. 33:1841-1858.

Wetterholm R, Caidahl K, Volkmann R, Brandt-Eliasson U, Fritsche-Danielson R, Gan L-. Imaging of atherosclerosis in WHHL rabbits using high-resolution ultrasound. 33: 720-726.

Attenuation

Synonyms: BUA

Search String: attenuat* OR BUA

See also: Acoustic properties of tissues

Chang C, Huang S, Yang H, Chou Y, Li P. Reconstruction of ultrasonic sound velocity and attenuation coefficient using linear arrays: clinical assessment. 33:1681-1687.

Huang YP, Zheng YP, Leung SF, Choi APC. High frequency ultrasound assessment of skin fibrosis: Clinical results. 33:1191-1198.

Poltawski L, Watson T. Relative transmissivity of ultrasound coupling agents commonly used by therapists in the UK. 33:120-128.

Sasso M, Haïat G, Yamato Y, Naili S, Matsukawa M. Frequency dependence of ultrasonic attenuation in bovine cortical bone: An *in vitro* study. 33:1933-1942.

Strowitzki M, Brand S, Jenderka K. Ultrasonic radio-frequency spectrum analysis of normal brain tissue. 33: 522-529.

Tang M, Eckersley RJ. Frequency and pressure dependent attenuation and scattering by microbubbles. 33:164-168.

Zhong H, Wan M, Jiang Y, Wang S. Monitoring imaging of lesions induced by high intensity focused ultrasound based on differential ultrasonic attenuation and integrated backscatter estimation. 33:82-94.

B

Backscatter

Synonyms: back scatter, backscattering

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

See also: Acoustic properties of tissues

Boudinet M, Berges O, Le Huerou J, Lumbroso-LeRouic L, Desjardins L, Laugier P. Quantitative echography in the follow-up of patients treated with proton-beam irradiation for primary choroidal melanomas. 33:1046-1056.

Gibson AA, Singh GK, Kulikowska A, Wallace KD, Hoffman JJ, Ludomirsky A, Holland MR. Regional variation in the measured apparent ultrasonic backscatter of mid-gestational fetal pig hearts. 33:1955-1962.

Huang YP, Zheng YP, Leung SF, Choi APC. High frequency ultrasound assessment of skin fibrosis: Clinical results. 33:1191-1198.

Huang C, Wang S. Statistical variations of ultrasound signals backscattered from flowing blood. 33:1943-1954.

Strowitzki M, Brand S, Jenderka K. Ultrasonic radio-frequency spectrum analysis of normal brain tissue. 33: 522-529.

Tang M, Eckersley RJ. Frequency and pressure dependent attenuation and scattering by microbubbles. 33:164-168.

Tsui P, Chang C. Imaging local scatterer concentrations by the nakagami statistical model. 33:608-619.

Zhong H, Wan M, Jiang Y, Wang S. Monitoring imaging of lesions induced by high intensity focused ultrasound based on differential ultrasonic attenuation and integrated backscatter estimation. 33:82-94.

Beam focusing

Synonyms: beam forming, dynamic focusing

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

See also: arrays

Rao M, Chen Q, Shi H, Varghese T, Madsen EL, Zagzebski JA, Wilson TA. Normal and shear strain estimation using beam steering on linear-array transducers. 33:57-66.

Biological effects

Synonyms: Bioeffects, Biochemical effect,

Search String: "bio*effect*"

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

Bigelow TA, Miller RJ, Blue Jr. JP, O'Brien Jr. WD. Hemorrhage near fetal rat bone exposed to pulsed ultrasound. 33:311-317.

Miller DL, Dou C, Wiggins RC, Wharram BL, Goyal M, Williams AR. An *in vivo* rat model simulating imaging of human kidney by diagnostic ultrasound with gas-body contrast agent. 33:129-135.

Miller DL, Li P, Dou C, Armstrong WF, Gordon D. Evans blue staining of cardiomyocytes induced by myocardial contrast echocardiography in rats: evidence for necrosis instead of apoptosis. 33:1988-1996.

Williams AR, Wiggins RC, Wharram BL, Goyal M, Dou C, Johnson KJ, Miller DL. Nephron injury induced by diagnostic ultrasound imaging at high mechanical index with gas body contrast agent. 33:1336-1344.

Wood AKW, Bunte RM, Cohen JD, Tsai JH, Lee WMF, Sehgal CM. The antivasular action of physiotherapy ultrasound on a murine tumor: role of a microbubble contrast agent. 33:1901-1910.

Blood**Synonyms:**

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

Blood perfusion**Synonyms:** tissue perfusion

Search String: Blood OR tissue AND perfusion OR “flash replenishment”

Bertuglia S. Mechanisms by which low-intensity ultrasound improve tolerance to ischemia-reperfusion injury. 33:663-671.

Elie N, Kaliski A, Peironneau P, Opolon P, Roche A, Lassau N. Methodology for quantifying interactions between perfusion evaluated by DCE-US and hypoxia throughout tumor growth. 33:549-560.

Ichihara M, Sasaki K, Umemura S, Kushima M, Okai T. Blood flow occlusion via ultrasound image-guided high-intensity focused ultrasound and its effect on tissue perfusion. 33:452-459.

Meyer-Wiethe K, Cangür H, Schindler A, Koch C, Seidel G. Ultrasound perfusion imaging: Determination of thresholds for the identification of critically disturbed perfusion in acute ischemic stroke - A pilot study. 33:851-856.

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, Villemain A, Vincent F, Debbabi H, Silvestre JS, Contreres JO, Levy BI, Tobelem G, Dupuy E. Ultrasonic assessment of hepatic blood flow as a marker of mouse hepatocarcinoma. 33:561-570.

Chen NG, Fowlkes JB, Carson PL, LeCarpentier GL. Rapid 3D imaging of contrast flow: Demonstration of a dual beam technique. 33:915-923.

Chung C, Hsu H, Chao A, Sheng W, Soong B, Hu H. Transient global amnesia: cerebral venous outflow impairment—insight from the abnormal flow patterns of the internal jugular vein. 33:1727-1735.

Harris RA, Padilla J, Hanlon KP, Rink LD, Wallace JP. Reproducibility of the flow-mediated dilation response to acute exercise in overweight men. 33:1579-1585.

Hartley CJ, Reddy AK, Madala S, Michael LH, Entman ML, Taffet GE. Effects of isoflurane on coronary blood flow velocity in young, old and ApoE^{-/-} mice measured by doppler ultrasound. 33:512-521.

Hoskins PR. Physical properties of tissues relevant to arterial ultrasound imaging and blood velocity measurement. 33:1527-1539.

Huang C, Wang S. Statistical variations of ultrasound signals backscattered from flowing blood. 33:1943-1954.

Kiviniemi TO, Toikka JO, Koskenvuo JW, Saraste A, Saraste M, Pärkkä JP, Raitakari OT, Hartiala JJ. Vasodilation of epicardial coronary artery can be measured with transthoracic echocardiography. 33:362-370.

Nedelmann M, Teschner D, Dieterich M. Analysis of internal jugular vein insufficiency—a comparison of two ultrasound methods. 33:857-862.

Noble JG, Lee V, Griffith-Noble F. Therapeutic ultrasound: The effects upon cutaneous blood flow in humans. 33:279-285.

Satoh S, Fujita Y, Yumoto Y, Kinukawa N, Nakano H. Changes in aortic distension waveforms in acute hypoxemia and acidosis: Fetal lamb study. 33:708-713.

Shemesh D, Goldin I, Berelowitz D, Zaghal I, Zigelman C, Olsha O. Blood flow volume changes in the maturing arteriovenous access for Hemodialysis: Presented at the 4th International Congress of the Vascular Access Society (VAS), Berlin, Germany, May 25th-27th, 2005. 33:727-733.

Shen C, Chou C, Wang Y. Improved transverse flow estimation using differential maximum doppler frequency. 33:420-429.

Udesen J, Nielsen MB, Nielsen KR, Jensen JA. Examples of *in vivo* blood vector velocity estimation. 33:541-548.

Watts DM, Sutcliffe CJ, Morgan RH, Meagher S, Wardlaw J, Connell M, Bastin ME, Marshall I, Ramnarine KV, Hoskins PR, Black RA. Anatomical flow phantoms of the nonplanar carotid bifurcation, part I: Computer-aided design and fabrication. 33:296-302.

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**Blood vessel****Synonyms:** artery, vein, capillary, vascular

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

See also: artery

Pretnar-Oblak J, Sabovic M, Vidmar G, Zaletel M. Evaluation of L-arginine reactivity in comparison with flow-mediated dilatation and intima-media thickness. 33:1546-1551.

Blood-brain barrier**Synonyms:** BBB

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

See also: thrombolysis, transcranial ultrasound

Choi JJ, Pernet M, Small SA, Konofagou EE. Noninvasive, transcranial and localized opening of the blood-brain barrier using focused ultrasound in mice. 33:95-104.

McDannold N, Vykhodtseva N, Hynynen K. Use of ultrasound pulses combined with definity for targeted blood-brain barrier disruption: A feasibility study. 33:584-590.

Yang F, Fu W, Yang R, Liou H, Kang K, Lin W. Quantitative evaluation of focused ultrasound with a contrast agent on blood-brain barrier disruption. 33:1421-1427.

Bone

Synonyms: osteo-

Search String: bone OR trabecular OR cortical OR osteo*

Moilanen P, Nicholson PHF, Kilappa V, Cheng S, Timonen J. Assessment of the cortical bone thickness using ultrasonic guided waves: Modelling and *in vitro* study. 33:254-262.

Riekkinen O, Hakulinen MA, Lammi MJ, Jurvelin JS, Kallioniemi A, Töyräs J. Acoustic properties of trabecular bone-relationships to tissue composition. 33:1438-1444.

Sasso M, Haïat G, Yamato Y, Naili S, Matsukawa M. Frequency dependence of ultrasonic attenuation in bovine cortical bone: An *in vitro* study. 33:1933-1942.

Scheven BA, Millard JL, Cooper PR, Lea SC, Walmsley AD, Smith AJ. Short-term *in vitro* effects of low frequency ultrasound on odontoblast-like cells. 33:1475-1482.

Unsworth J, Kaneez S, Harris S, Ridgway J, Fenwick S, Chenery D, Harrison A. Pulsed low intensity ultrasound enhances mineralisation in preosteoblast cells. 33:1468-1474.

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"

Turk N, Kastelan D, Cukovic-Cavka S, Kraljevic I, Korsic M, Vucelic B. Discriminatory ability of calcaneal quantitative ultrasound in the assessment of bone status in patients with inflammatory bowel disease. 33:863-869.

Camozzi V, DeTerlizzi F, Zangari M, Luisetto G. Quantitative bone ultrasound at phalanges and calcaneus in osteoporotic postmenopausal women: Influence of age and measurement site. 33:1039-1045.

Kaufman JJ, Luo G, Siffert RS. A portable real-time ultrasonic bone densitometer. 33:1445-1452.

Book review

Allan PL. *Ultrasound Teaching Manual* by H. Matthias, pp.132, Thieme Medical Publishers (2005). 33:658.

Chammas MC. *Manual of Diagnostic Ultrasound Infectious Tropical Diseases* by H.T. Lutz and H.A. Gharbi, pp. 180,

Springer-Verlag, Berlin Heidelberg, Germany (2006). 33: 658-659.

Pistorius L. *The Ultrasound of Life: An interactive Fetal Ultrasound Teaching Program* by Ian Suchet and Wing Tam (Fifth Edition), DVD, Suchet Technologies, Saskatchewan, Canada (2006). 33:1167.

Brain

Synonyms: cerebral, cerebrovascular, cerebrum

Search String: Brain OR cerebr*

Chung C, Hsu H, Chao A, Sheng W, Soong B, Hu H. Transient global amnesia: cerebral venous outflow impairment - insight from the abnormal flow patterns of the internal jugular vein. 33:1727-1735.

Engelhardt M, Hansen C, Eyding J, Wilkening W, Brenke C, Krogias C, Scholz M, Harders A, Ermer H, Schmieder K. Feasibility of contrast-enhanced sonography during resection of cerebral tumours: Initial results of a prospective study. 33:571-575.

Eyding J, Nolte-Martin A, Krogias C, Postert T. Changes of contrast-specific ultrasonic cerebral perfusion patterns in the course of stroke; reliability of region-wise and parametric imaging analysis. 33:329-334.

Kucewicz JC, Dunmire B, Leotta DF, Panagiotides H, Paun M, Beach KW. Functional tissue pulsatility imaging of the brain during visual stimulation. 33:681-690.

Meyer-Wiethe K, Cangür H, Schindler A, Koch C, Seidel G. Ultrasound perfusion imaging: Determination of thresholds for the identification of critically disturbed perfusion in acute ischemic stroke - A pilot study. 33:851-856.

Breast

Synonyms: mammary glands

Search String: Breast OR Mamm*

Booi RC, Krücker JF, Goodsitt MM, O'Donnell M, Kapur A, LeCarpentier GL, Roubidoux MA, Fowlkes JB, Carson PL. Evaluating thin compression paddles for mammographically compatible ultrasound. 33:472-482.

Jiang Y, Liu H, Liu J, Zhu Q, Sun Q, Chang X. Breast tumor size assessment: comparison of conventional ultrasound and contrast-enhanced ultrasound. 33:1873-1881.

Shen W, Chang R, Moon W. Computer aided classification system for breast ultrasound based on breast imaging reporting and data system (BI-RADS). 33:1688-1698.

Bubble disruption

Synonyms: Bubble destruction, bubble fragmentation, bubble collapse

Search String: Bubbl* AND disruption OR destruction OR fragmentation OR collapse

See also: Bubble dynamics, cavitation, contrast agents

Bekeredjian R, Kroll RD, Fein E, Tinkov S, Coester C, Winter G, Katus HA, Kulaksiz H. Ultrasound targeted

microbubble destruction increases capillary permeability in hepatomas. 33:1592-1598.

Bevan PD, Karshafian R, Tickner EG, Burns PN. Quantitative measurement of ultrasound disruption of polymer-shelled microbubbles. 33:1777-1786.

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

de Jong N, Emmer M, Chin CT, Bouakaz A, Mastik F, Lohse D, Versluis M. "Compression-only" behavior of phospholipid-coated contrast bubbles. 33:653-656.

Emmer M, van Wamel A, Goertz DE, de Jong N. The onset of microbubble vibration. 33:941-949.

Qin S, Ferrara KW. The natural frequency of nonlinear oscillation of ultrasound contrast agents in microvessels. 33:1140-1148.

Zheng H, Dayton PA, Caskey C, Zhao S, Qin S, Ferrara KW. Ultrasound-driven microbubble oscillation and translation within small phantom vessels. 33:1978-1987.

Bubbles

Synonyms: gas bodies, cavitation, bubbly liquids

Search String: bubbl* OR gas bod*

See also: cavitation, contrast agents

Bekeredjian R, Bohris C, Hansen A, Katus HA, Kuecherer HF, Hardt SE. Impact of microbubbles on shock wave-mediated DNA uptake in cells *in vitro*. 33:743-750.

Erpelding TN, Hollman KW, O'Donnell M. Bubble-based acoustic radiation force using chirp insonation to reduce standing wave effects. 33:263-269.

Lynch JE, Pouch A, Sanders R, Hinders M, Rudd K, Sevick J. Gaseous microemboli sizing in extracorporeal circuits using ultrasound backscatter. 33:1661-1675.

Pan H, Huang J, Yang T, Liang H. Hepatic portal venous gas in ultrasonogram-benign or noxious. 33:1179-1183.

C

Calibration

Synonyms: standards, metrology

Search String: calibration OR standard* OR metrology

See also: dosimetry, exposimetry, safety, instrumentation

Poon TC, Rohling RN. Tracking a 3-D ultrasound probe with constantly visible fiducials. 33:152-157.

Cancer

Synonyms: tumor

Search String: cancer*

See also: tumor, prostate, liver, breast, liver

Bonnin P, Villemain A, Vincent F, Debbabi H, Silvestre JS, Contreres JO, Levy BI, Tobelem G, Dupuy E. Ultrasonic assessment of hepatic blood flow as a marker of mouse hepatocarcinoma. 33:561-570.

Hsu W, Yu Y, Tu C, Hsu J, Chen C, Chen C, Kwan P. Color doppler US pulmonary artery vessel signal: A sign for predicting the benign lesions. 33:379-388.

Lu M, Yu X, Li A, Jiang T, Chen M, Zhao B, Zhou X, Want J. Comparison of contrast enhanced ultrasound and contrast enhanced ct or mri in monitoring percutaneous thermal ablation procedure in patients with hepatocellular carcinoma: a multi-center study in china. 33:1736-1749.

Cardiology

Synonyms: heart, cardiography

Search String: Cardi* OR myocardi* OR heart OR ECG OR ventricular OR atrial

See also: echocardiography

Luo J, Fujikura K, Homma S, Konofagou EE. Myocardial elastography at both high temporal and spatial resolution for the detection of infarcts. 33:1206-1223.

Nestaas E, Stoylen A, Sandvik L, Brunvand L, Fugelseth D. Feasibility and reliability of strain and strain rate measurement in neonates by optimizing the analysis parameters settings. 33:270-278.

Van Houwelingen MJ, Barenbrug PJ, Hoeberigs MC, Reneman RS, Hoeks APG. The onset of ventricular isovolumic contraction as reflected in the carotid artery distension waveform. 33:371-378.

Cardiovascular system

Synonyms: circulatory system, circulation

Search String: Cardiovascular OR circulat*

See also: cardiology, atherosclerosis, blood flow, blood vessels

Hartley CJ, Reddy AK, Madala S, Michael LH, Entman ML, Taffet GE. Effects of isoflurane on coronary blood flow velocity in young, old and ApoE^{-/-} mice measured by doppler ultrasound. 33:512-521.

Mischi M, Jansen AHM, Korsten HHM. Identification of cardiovascular dilution systems by contrast ultrasound. 33:439-451.

Mizrahi N, Seliktar D, Kimmel E. Ultrasound-induced angiogenic response in endothelial cells. 33:1819-1829.

Pernot M, Fujikura K, Fung-Kee-Fung SD, Konofagou EE. ECG-gated, mechanical and electromechanical wave imaging of cardiovascular tissues *in vivo*. 33:1075-1085.

Watts DM, Sutcliffe CJ, Morgan RH, Meagher S, Wardlaw J, Connell M, Bastin ME, Marshall I, Ramnarine KV, Hoskins PR, Black RA. Anatomical flow phantoms of the nonplanar carotid bifurcation, part I: Computer-aided design and fabrication. 33:296-302.

Carotid**Synonyms:****Search String:** Carotid**See also:** artery

Egger M, Spence JD, Fenster A, Parraga G. Validation of 3D ultrasound vessel wall volume: An imaging phenotype of carotid atherosclerosis. 33:905-914.

Ellis SM, Naoumova RP, Neuwirth CK, Eckersley R, Cosgrove DO, Thompson GR, Sidhu PS. Measurement of the reflectivity of the intima-medial layer of the common carotid artery improves the discriminatory value of intima-medial thickness measurement as a predictor of risk of atherosclerotic disease. 33:1029-1038.

Golemati S, Stoitsis J, Sifakis EG, Balkizas T, Nikita KS. Using the Hough transform to segment ultrasound images of longitudinal and transverse sections of the carotid artery. 33:1918-1932.

Magyar MT, Szikszai Z, Kertész Z, Molnár S, Uzonyi I, Szíki GÁ, Csiba L. Calcium distribution in the vessel wall and intima-media thickness of the human carotid arteries. 33:1171-1178.

Ribbers H, Lopata RGP, Holewijn S, Pasterkamp G, Blankensteijn JD, de Korte CL. Noninvasive two-dimensional strain imaging of arteries: Validation in phantoms and preliminary experience in carotid arteries *in vivo*. 33:530-540.

Schmitt C, Soulez G, Maurice RL, Giroux M, Cloutier G. Noninvasive vascular elastography: toward a complementary characterization tool of atherosclerosis in carotid arteries. 33:1841-1858.

van Houwelingen MJ, Barenbrug PJ, Hoeberigs MC, Reneman RS, Hoeks APG. The onset of ventricular isovolumic contraction as reflected in the carotid artery distension waveform. 33:371-378.

Watts DM, Sutcliffe CJ, Morgan RH, Meagher S, Wardlaw J, Connell M, Bastin ME, Marshall I, Ramnarine KV, Hoskins PR, Black RA. Anatomical flow phantoms of the nonplanar carotid bifurcation, part I: Computer-aided design and fabrication. 33:296-302.

Cartilage**Synonyms:****Search String:** cartilage OR articular OR chondrogenesis OR chondrocyte OR fibrocartilage OR hyaline OR "elastic cartilage"

Ling HY, Zheng YP, Patil SG. Strain dependence of ultrasound speed in bovine articular cartilage under compression *in vitro*. 33:1599-1608.

Nieminen HJ, Julkunen P, Töyräs J, Jurvelin JS. Ultrasound speed in articular cartilage under mechanical compression. 33:1755-1766.

Park K, Hoffmeister B, Han DK, Hasty K. Therapeutic ultrasound effects on interleukin-1 β stimulated cartilage construct *in vitro*. 33:286-295.

White D, Evans JA, Truscott JG, Chivers RA. Can ultrasound propagate in the joint space of a human knee? 33:1104-1111.

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

Azencott HR, Peter GF, Prausnitz MR. Influence of the cell wall on intracellular delivery to algal cells by electroporation and sonication. 33:1805-1817.

Miller DL, Li P, Dou C, Armstrong WF, Gordon D. Evans blue staining of cardiomyocytes induced by myocardial contrast echocardiography in rats: evidence for necrosis instead of apoptosis. 33:1988-1996.

Prokop AF, Soltani A, Roy RA. Cavitation mechanisms in ultrasound-accelerated fibrinolysis. 33:924-933.

Sassaroli E, Hynynen K. Cavitation threshold of microbubbles in gel tunnels by focused ultrasound. 33:1651-1660.

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

Freund JB, Colonius T, Evan AP. A cumulative shear mechanism for tissue damage initiation in shock-wave lithotripsy. 33:1495-1503.

Miller DL, Dou C, Wiggins RC, Wharram BL, Goyal M, Williams AR. An *in vivo* rat model simulating imaging of human kidney by diagnostic ultrasound with gas-body contrast agent. 33:129-135.

Miller DL, Li P, Dou C, Armstrong WF, Gordon D. Evans blue staining of cardiomyocytes induced by myocardial contrast echocardiography in rats: evidence for necrosis instead of apoptosis. 33:1988-1996.

Chemotherapy**Synonyms:** drug delivery, cancer therapy**Search String:** Chemotherapy OR "drug delivery" OR paclitaxel OR doxorubicin OR "cancer therapy"**See also:** drug delivery

Cirrhosis

Synonyms: liver disease

Search String: cirrho* OR "liver disease"

See also: liver

Zardi EM, Uwechie V, Vespasiani G, Dobrina A, Petitti T, Laghi V, Picardi A, Afeltra A. Portal diameter in the diagnosis of esophageal varices in 266 cirrhotic patients: Which role? 33:506-511.

Clinical note

Wang YJ, Betton G, Floettmann E, Fantham E, Ridgwell G. Imaging kidney in conscious rats with high-frequency ultrasound and detection of two cases of unilateral congenital hydronephrosis. 33:483-486.

Clinical applications of ultrasound

Synonyms: Clinical study, clinical trial

Search String: Clinical AND study OR trial

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. Coded excitation in TCD ultrasound systems to improve axial resolution. 33:1296-1308.

Eckersley RJ, Tang M, Chetty K, Hajnal JV. Microbubble contrast agent detection using binary coded pulses. 33: 1787-1795.

Erpelding TN, Hollman KW, O'Donnell M. Bubble-based acoustic radiation force using chirp insonation to reduce standing wave effects. 33:263-269.

Levy Y, Azhari H. Velocity measurements using a single transmitted linear frequency-modulated chirp. 33:768-773.

Litniewski J, Nowicki A, Klimonda Z, Lewandowski M. Sound fields for coded excitations in water and tissue: Experimental approach. 33:601-607.

Nowicki A, Wójcik J, Secomski W. Harmonic imaging using multitone nonlinear coding. 33:1112-1122.

Color flow techniques

Synonyms: color velocity imaging, color Doppler

Search String: color OR colour AND velocity OR flow

See also: Doppler

Claessens TE, De Sutter J, Vanhercke D, Segers P, Verdonck PR. New echocardiographic applications for assessing global left ventricular diastolic function. 33:823-841.

Nestaas E, Stoylen A, Sandvik L, Brunvand L, Fugelseth D. Feasibility and reliability of strain and strain rate

measurement in neonates by optimizing the analysis parameters settings. 33:270-278.

Compliance

Synonyms: Adherence, inverse stiffness

Search String: Compliance OR Adherence OR Stiffness

See also: Tissue elasticity

Computed tomography

Synonyms: ultrasonic tomography, CT

Search String: tomography OR CT

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"

Moradi M, Mousavi P, Abolmaesumi P. Computer-aided diagnosis of prostate cancer with emphasis on ultrasound-based approaches: A review. 33:1010-1028.

Mougiakakou SG, Golemati S, Gousias I, Nicolaidis AN, Nikita KS. Computer-aided diagnosis of carotid atherosclerosis based on ultrasound image statistics, laws' texture and neural networks. 33:26-36.

Shen W, Chang R, Moon W. Computer aided classification system for breast ultrasound based on breast imaging reporting and data system (BI-RADS). 33:1688-1698.

Zenk J, Bozzato A, Hornung J, Gottwald F, Rabe C, Gill S, Iro H. Neck lymph nodes: Prediction by computer-assisted contrast medium analysis? 33:246-253.

Contrast enhanced ultrasound

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

Search String: "contrast enhanc*"

See also: Doppler, contrast agents, harmonic imaging

Eckersley RJ, Tang M, Chetty K, Hajnal JV. Microbubble contrast agent detection using binary coded pulses. 33: 1787-1795.

Elie N, Kaliski A, Peironneau P, Opolon P, Roche A, Lassau N. Methodology for quantifying interactions between perfusion evaluated by DCE-US and hypoxia throughout tumor growth. 33:549-560.

Engelhardt M, Hansen C, Eyding J, Wilkening W, Brenke C, Krogias C, Scholz M, Harders A, Ermer H, Schmieder K. Feasibility of contrast-enhanced sonography during resection of cerebral tumours: Initial results of a prospective study. 33:571-575.

Eyding J, Nolte-Martin A, Krogias C, Postert T. Changes of contrast-specific ultrasonic cerebral perfusion patterns in the course of stroke; reliability of region-wise and parametric imaging analysis. 33:329-334.

- Inoue T, Kitano M, Kudo M, Sakamoto H, Kawasaki T, Yasuda C, Maekawa K. Diagnosis of gallbladder diseases by contrast-enhanced phase-inversion harmonic ultrasonography. 33:353-361.
- Jiang Y, Liu H, Liu J, Zhu Q, Sun Q, Chang X. Breast tumor size assessment: comparison of conventional ultrasound and contrast-enhanced ultrasound. 33:1873-1881.
- Konopke R, Bunk A, Kersting S. The role of contrast-enhanced ultrasound for focal liver lesion detection: An overview. 33:1515-1526.
- Lu M, Yu X, Li A, Jiang T, Chen M, Zhao B, Zhou X, Want J. Comparison of contrast enhanced ultrasound and contrast enhanced ct or mri in monitoring percutaneous thermal ablation procedure in patients with hepatocellular carcinoma: a multi-center study in china. 33:1736-1749.
- Meyer-Wiethe K, Cangür H, Schindler A, Koch C, Seidel G. Ultrasound perfusion imaging: Determination of thresholds for the identification of critically disturbed perfusion in acute ischemic stroke - A pilot study. 33:851-856.
- Rabald S, Hagendorff A, Pfeiffer D, Zimmer H, Deten A. Contrast enhanced echocardiographic follow-up of cardiac remodeling and function after myocardial infarction in rats. 33:1561-1571.
- Thijssen JM, Weijers G, de Korte CL. Objective performance testing and quality assurance of medical ultrasound equipment. 33:460-471.
- Zenk J, Bozzato A, Hornung J, Gottwald F, Rabe C, Gill S, Iro H. Neck lymph nodes: Prediction by computer-assisted contrast medium analysis? 33:246-253.
- 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
- Barnett SB. Safe use of ultrasound contrast agents. 33:171-172.
- Barnett SB, Duck F, Ziskin M. Recommendations on the safe use of ultrasound contrast agents. 33:173-174.
- Barnett SB, Duck F, Ziskin M. WFUMB safety symposium on ultrasound contrast agents: Executive summary. 33:175-177.
- Barnett SB, Duck F, Ziskin M. WFUMB symposium on safety of ultrasound in medicine: Conclusions and recommendations on biological effects and safety of ultrasound contrast agents, 2006. 33:233-234.
- Bevan PD, Karshafian R, Tickner EG, Burns PN. Quantitative measurement of ultrasound disruption of polymer-shelled microbubbles. 33:1777-1786.
- Blomley M, Claudon M, Cosgrove D. WFUMB safety symposium on ultrasound contrast agents: Clinical applications and safety concerns. 33:180-186.
- Bouakaz B, deJong N. WFUMB safety symposium on echo-contrast agents: Nature and types of ultrasound contrast agents. 33:187-196.
- Dalecki D. WFUMB safety symposium on echo-contrast agents: Bioeffects of ultrasound contrast agents *in vivo*. 33:205-213.
- de Jong N, Emmer M, Chin CT, Bouakaz A, Mastik F, Lohse D, Versluis M. "Compression-only" behavior of phospholipid-coated contrast bubbles. 33:653-656.
- Duck F. WFUMB safety symposium on ultrasound contrast agents: Lexicon of terms. 33:178-179.
- Emmer M, van Wamel A, Goertz DE, de Jong N. The onset of microbubble vibration. 33:941-949.
- Goertz DE, de Jong N, van der Steen AFW. Attenuation and size distribution measurements of Definity™ and manipulated Definity™ populations. 33:1376-1388.
- Ichihara M, Sasaki K, Umemura S, Kushima M, Okai T. Blood flow occlusion via ultrasound image-guided high-intensity focused ultrasound and its effect on tissue perfusion. 33:452-459.
- Kimmel E, Krasovitski B, Hoogi A, Razansky D, Adam D. Subharmonic response of encapsulated microbubbles: conditions for existence and amplification. 33:1767-1776.
- Marsh JN, Partlow KC, Abendschein DR, Scott MJ, Lanza GM, Wickline SA. Molecular imaging with targeted perfluorocarbon nanoparticles: Quantification of the concentration dependence of contrast enhancement for binding to sparse cellular epitopes. 33:950-958.
- McDannold N, Vykhodtseva N, Hynynen K. Use of ultrasound pulses combined with definity for targeted blood-brain barrier disruption: A feasibility study. 33:584-590.
- Miller DL, Dou C, Wiggins RC, Wharram BL, Goyal M, Williams AR. An *in vivo* rat model simulating imaging of human kidney by diagnostic ultrasound with gas-body contrast agent. 33:129-135.
- Miller DL. WFUMB safety symposium on echo-contrast agents: *in vitro* bioeffects. 33:197-204.
- Miyake Y, Ohmori K, Yoshida J, Ishizawa M, Mizukawa M, Yukiiri K, Kohno M. Granulocyte colony-stimulating factor facilitates the angiogenesis induced by ultrasonic microbubble destruction. 33:1796-1804.
- Nyborg W. WFUMB safety symposium on echo-contrast agents: Mechanisms for the interaction of ultrasound. 33:224-232.
- Pollard RE, Broumas AR, Wisner ER, Vekich SV, Ferrara KW. Quantitative contrast enhanced ultrasound and ct assessment of tumor response to antiangiogenic therapy in rats. 33:235-245.

Prokop AF, Soltani A, Roy RA. Cavitation mechanisms in ultrasound-accelerated fibrinolysis. 33:924-933.

Qin S, Ferrara KW. The natural frequency of nonlinear oscillation of ultrasound contrast agents in microvessels. 33:1140-1148.

Rychak JJ, Klibanov AL, Ley KF, Hossack JA. Enhanced targeting of ultrasound contrast agents using acoustic radiation force. 33:1132-1139.

Sassaroli E, Hynynen K. Cavitation threshold of microbubbles in gel tunnels by focused ultrasound. 33:1651-1660.

Smith DAB, Porter TM, Martinez J, Huang S, MacDonald RC, McPherson DD, Holland CK. Destruction thresholds of echogenic liposomes with clinical diagnostic ultrasound. 33:797-809.

Tang M, Eckersley RJ. Frequency and pressure dependent attenuation and scattering by microbubbles. 33:164-168.

Tran TA, Roger S, LeGuennec JY, Tranquart F, Bouakaz A. Effect of ultrasound-activated microbubbles on the cell electrophysiological properties. 33:158-163.

Williams AR, Wiggins RC, Wharram BL, Goyal M, Dou C, Johnson KJ, Miller DL. Nephron injury induced by diagnostic ultrasound imaging at high mechanical index with gas body contrast agent. 33:1336-1344.

Wittingham TA. WFUMB safety symposium on echo-contrast agents: Exposure from diagnostic ultrasound equipment relating to cavitation risk. 33:214-223.

Wood AKW, Bunte RM, Cohen JD, Tsai JH, Lee WMF, Sehgal CM. The antivasular action of physiotherapy ultrasound on a murine tumor: role of a microbubble contrast agent. 33:1901-1910.

Xie F, Tsutsui JM, Gao L, Zucker IH, Porter TR. Interaction of transthoracic ultrasound and intravenous microbubbles with cardiac mechanoreceptors. 33:136-144.

Yanagisawa K, Moriyasu F, Miyahara T, Yuki M, Iijima H. Phagocytosis of ultrasound contrast agent microbubbles by kupffer cells. 33:318-325.

Yang F, Fu W, Yang R, Liou H, Kang K, Lin W. Quantitative evaluation of focused ultrasound with a contrast agent on blood-brain barrier disruption. 33:1421-1427.

Coronary arteries

Synonyms:

Search String: coronary

See also: artery

Coupling agents

Synonyms:

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

Poltawski L, Watson T. Relative transmissivity of ultrasound coupling agents commonly used by therapists in the UK. 33:120-128.

Crawling waves

Synonyms: Crawling wave sonoelastography

Search String: "Crawling wave*"

See also: elastography

Hoyt K, Parker KJ, Rubens DJ. Real-time shear velocity imaging using sonoelastographic techniques. 33:1086-1097.

Zhang M, Castaneda B, Wu Z, Nigwekar P, Joseph JV, Rubens DJ, Parker KJ. Congruence of imaging estimators and mechanical measurements of viscoelastic properties of soft tissues. 33:1617-1631.

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

Cyclic echogenicity variations

Synonyms: cyclic backscatter variation

Search String: "cycl*" variation*"

D

Dental

Synonyms: teeth

Search String: Dent* OR t*th OR enamel

Scheven BA, Millard JL, Cooper PR, Lea SC, Walmsley AD, Smith AJ. Short-term *in vitro* effects of low frequency ultrasound on odontoblast-like cells. 33:1475-1482.

Derated values

Synonyms: derating

Search String: derat*

See also: thermal effects

Diffusion

Synonyms: Acoustically driven diffusion

Search String: Diffusion

Smith DAB, Porter TM, Martinez J, Huang S, MacDonald RC, McPherson DD, Holland CK. Destruction thresholds of echogenic liposomes with clinical diagnostic ultrasound. 33:797-809.

Dispersion

Synonyms: speed of sound dispersion

Search String: dispersion

See also: velocity

Levy Y, Agnon Y, Azhari H. Ultrasonic speed of sound dispersion imaging. 33:762-767.

Doppler ultrasound**Synonyms:****Search String:** Doppler**See also:** Flow visualisation

Balbis S, Gaglioti P, Todros T, Guiot C. Doppler indices in The Umbilical Arteries: influence of Vessel Curvature induced By Bladder Filling. 33:1895-1900.

Bennett MJ, McLaughlin S, Anderson T, McDicken WN. Error analysis of ultrasonic tissue doppler velocity estimation techniques for quantification of velocity and strain. 33:74-81.

Claessens TE, De Sutter J, Vanhercke D, Segers P, Verdonck PR. New echocardiographic applications for assessing global left ventricular diastolic function. 33:823-841.

Dineley JA, McDicken WN, Hoskins PR. Factors affecting the arterial distension waveform derived from tissue doppler imaging (TDD): An *in vitro* study on precision. 33:1123-1131.

Garcia D, Fenech M, Qin Z, Soulez G, Cloutier G. Signal losses with real-time three-dimensional power doppler imaging. 33:1632-1639.

Hartley CJ, Reddy AK, Madala S, Michael LH, Entman ML, Taffet GE. Effects of isoflurane on coronary blood flow velocity in young, old and ApoE^{-/-} mice measured by doppler ultrasound. 33:512-521.

Hsu W, Yu Y, Tu C, Hsu J, Chen C, Chen C, Kwan P. Color doppler US pulmonary artery vessel signal: A sign for predicting the benign lesions. 33:379-388.

Kribèche A, Tranquart F, Kouame D, Pourcelot L. The actifetus system: A multidoppler sensor system for monitoring fetal movements. 33:430-438.

Meyberg-Solomayer GC, Wallwiener D, Solomayer E. Maternal breath-holding and the Valsalva maneuver: Methods to overcome fetal breathing movements during doppler sonography. 33:1586-1591.

Nedelmann M, Teschner D, Dieterich M. Analysis of internal jugular vein insufficiency - A comparison of two ultrasound methods. 33:857-862.

Needles A, Goertz DE, Cheung AM, Foster FS. Interframe clutter filtering for high frequency flow imaging. 33:591-600.

Noble JG, Lee V, Griffith-Noble F. Therapeutic ultrasound: The effects upon cutaneous blood flow in humans. 33:279-285.

Poerner TC, Goebel B, Kravlev S, Kaden JJ, Süselbeck T, Haase KK, Borggreffe Martin, Haghi D. Impact of mitral E/A ratio on the accuracy of different echocardiographic indices to estimate left ventricular end-diastolic pressure. 33:699-707.

Shemesh D, Goldin I, Berelowitz D, Zagher I, Zigelman C, Olsha O. Blood flow volume changes in the maturing arteriovenous access for Hemodialysis. Presented at the 4th International Congress of the Vascular Access Society

(VAS), Berlin, Germany, May 25th-27th, 2005. 33:727-733.

Shen C, Chou C, Wang Y. Improved transverse flow estimation using differential maximum doppler frequency. 33:420-429.

Voon W, Su H, Yen H, Lin T, Lai W, Sheu S. Validation of isovolumic relaxation flow propagation velocity as an index of ventricular relaxation. 33:1098-1103.

Ying M, Wu VWC, Kwong DLW. Comparison of sonographic appearance of normal and postradiotherapy parotid glands: A preliminary study. 33:1244-1250.

Zenk J, Bozzato A, Hornung J, Gottwald F, Rabe C, Gill S, Iro H. Neck lymph nodes: Prediction by computer-assisted contrast medium analysis? 33:246-253.

Zhang W, Chung CS, Riordan MM, Wu Y, Shmuylovich L, Kovaics SJ. The kinematic filling efficiency index of the left ventricle: Contrasting normal vs. diabetic physiology. 33:842-850.

Dosimetry**Synonyms:** dose response, dosology**Search String:** Dos***See also:** exposimetry, safety

Church CC. A proposal to clarify the relationship between the thermal index and the corresponding risk to the patient. 33:1489-1494.

Drug delivery**Synonyms:** controlled release, targeted delivery, Site-Specific delivery**Search String:** "controlled release" OR "drug delivery" OR "targeted delivery" OR "Site Specific delivery"

Bekeredjian R, Kroll RD, Fein E, Tinkov S, Coester C, Winter G, Katus HA, Kulaksiz H. Ultrasound targeted microbubble destruction increases capillary permeability in hepatomas. 33:1592-1598.

McDannold N, Vykhodtseva N, Hynynen K. Use of ultrasound pulses combined with definity for targeted blood-brain barrier disruption: A feasibility study. 33:584-590.

Smith DAB, Porter TM, Martinez J, Huang S, MacDonald RC, McPherson DD, Holland CK. Destruction thresholds of echogenic liposomes with clinical diagnostic ultrasound. 33:797-809.

E**Echocardiography****Synonyms:** cardiac imaging, sonocardiography**Search String:** echocard* OR "card* imaging" OR "card* ultraso*" OR sonocard***See also:** cardiology, contrast enhanced ultrasound

Brekke S, Rabben SI, Støylen A, Haugen A, Haugen GU, Steen EN, Torp H. Volume stitching in three-dimensional

- echocardiography: Distortion analysis and extension to real time. 33:782-796.
- Claessens TE, De Sutter J, Vanhercke D, Segers P, Verdonck PR. New echocardiographic applications for assessing global left ventricular diastolic function. 33:823-841.
- Gibson AA, Singh GK, Kulikowska A, Wallace KD, Hoffman JJ, Ludomirsky A, Holland MR. Regional variation in the measured apparent ultrasonic backscatter of mid-gestational fetal pig hearts. 33:1955-1962.
- Hsu SJ, Bouchard RR, Dumont DM, Wolf PD, Trahey GE. *in vivo* assessment of myocardial stiffness with acoustic radiation force impulse imaging. 33:1706-1719.
- Linguraru MG, Vasilyev NV, Del Nido PJ, Howe RD. Statistical segmentation of surgical instruments in 3-D ultrasound images. 33:1428-1437.
- Mahia P, Ledesma-Carbayo MJ, Verdugo V, David EP, Santos A, Moreno M, Menéndez MD, Fernández MAG. Radial versus longitudinal myocardial deformation from gray-scale echocardiography. 33:1699-1705.
- Nevo ST, van Stralen M, Vossepoel AM, Reiber JHC, de Jong N, van der Steen AFW, Bosch JG. Automated tracking of the mitral valve annulus motion in apical echocardiographic images using multidimensional dynamic programming. 33:1389-1399.
- Nillesen MM, Lopata RGP, Gerrits IH, Kapusta L, Huisman HJ, Thijssen JM, de Korte CL. Segmentation of the heart muscle in 3-D pediatric echocardiographic images. 33:1453-1462.
- Poerner TC, Goebel B, Krlev S, Kaden JJ, Süselbeck T, Haase KK, Borggrete Martin, Haghi D. Impact of mitral e/a ratio on the accuracy of different echocardiographic indices to estimate left ventricular end-diastolic pressure. 33:699-707.
- Rabald S, Hagendorff A, Pfeiffer D, Zimmer H, Deten A. Contrast enhanced echocardiographic follow-up of cardiac remodeling and function after myocardial infarction in rats. 33:1561-1571.
- Rappaport D, Konyukhov E, Shulman L, Friedman Z, Lysyansky P, Landesberg A, Adam D. Detection of the cardiac activation sequence by novel echocardiographic tissue tracking method. 33:880-893.
- Vitarelli A, Morichetti MC, Conde Y, Cimino E, D'Orazio S, Stellato S, Padella V, Caranci F, Battaglia D. Assessment of severity in aortic stenosis-incremental value of endocardial function parameters compared with standard indexes. 33:1224-1235.
- Yao G, Li F, Zhang C, Zhang P, Zhang M, Zhao Y, Li X, Ding S, Zhong L, Zhang Y. How many planes are required to get an accurate and timesaving measurement of left ventricular volume and function by real-time three-dimensional echocardiography in acute myocardial infarction? 33:1572-1578.
- Zhang W, Chung CS, Riordan MM, Wu Y, Shmuylovich L, Kovaics SJ. The kinematic filling efficiency index of the left ventricle: Contrasting normal vs. diabetic physiology. 33:842-850.
- Editorial**
- Holland CK. Online review facilitates rapid publishing. 33:1-2.
- 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
- Bennett MJ, McLaughlin S, Anderson T, McDicken WN. Error analysis of ultrasonic tissue doppler velocity estimation techniques for quantification of velocity and strain. 33:74-81.
- Chen H, Shi H, Varghese T. Improvement of elastographic displacement estimation using a two-step cross-correlation method. 33:48-56.
- Fahey BJ, Palmeri ML, Trahey GE. The impact of physiological motion on tissue tracking during radiation force imaging. 33:1149-1166.
- Hoyt K, Parker KJ, Rubens DJ. Real-time shear velocity imaging using sonoelastographic techniques. 33:1086-1097.
- Jiang J, Hall TJ, Sommer AM. A novel image formation method for ultrasonic strain imaging. 33:643-652.
- Ling HY, Zheng YP, Patil SG. Strain dependence of ultrasound speed in bovine articular cartilage under compression *in vitro*. 33:1599-1608.
- Luo J, Fujikura K, Homma S, Konofagou EE. Myocardial elastography at both high temporal and spatial resolution for the detection of infarcts. 33:1206-1223.
- Melodelima D, Bamber JC, Duck FA, Shipley JA. Transient elastography using impulsive ultrasound radiation force: A preliminary comparison with surface palpation elastography. 33:959-969.
- Nieminen HJ, Julkunen P, Töyräs J, Jurvelin JS. Ultrasound speed in articular cartilage under mechanical compression. 33:1755-1766.
- Rao M, Chen Q, Shi H, Varghese T, Madsen EL, Zagzebski JA, Wilson TA. Normal and shear strain estimation using beam steering on linear-array transducers. 33:57-66.
- Ribbers H, Lopata RGP, Holeyijn S, Pasterkamp G, Blankensteijn JD, deKorte CL. Noninvasive two-dimensional strain imaging of arteries: Validation in phantoms and preliminary experience in carotid arteries *in vivo*. 33:530-540.
- Rappaport D, Konyukhov E, Shulman L, Friedman Z, Lysyansky P, Landesberg A, Adam D. Detection of the cardiac activation sequence by novel echocardiographic tissue tracking method. 33:880-893.

Schmitt C, Soulez G, Maurice RL, Giroux M, Cloutier G. Noninvasive vascular elastography: toward a complementary characterization tool of atherosclerosis in carotid arteries. 33:1841-1858.

Sumi C. Ultrasonic axial strain measurement for lateral tissue deformation. 33:1830-1837.

Thitaikumar A, Ophir J. Effect of lesion boundary conditions on axial strain elastograms: A parametric study. 33:1463-1467.

Vitarelli A, Morichetti MC, Conde Y, Cimino E, D'Orazio S, Stellato S, Padella V, Caranci F, Battaglia D. Assessment of severity in aortic stenosis-incremental value of endocardial function parameters compared with standard indexes. 33:1224-1235.

Emboli detection

Synonyms: embolic signal, microembolic signal, embolus, embolism

Search String: embol* OR occlusion OR clot

See also: bubbles, thrombolysis

Lynch JE, Pouch A, Sanders R, Hinders M, Rudd K, Sevick J. Gaseous microemboli sizing in extracorporeal circuits using ultrasound backscatter. 33:1661-1675.

Endometriosis

Synonyms:

Search String: endometr*

Endorectal ultrasonography

Synonyms: transrectal

Search String: *rectal

Endoscopic ultrasonography

Synonyms: EUS

Search String: "Endoscopic" OR "EUS"

Light ED, Mukundan S, Wolf PD, Smith SW. Real-time 3-D intracranial ultrasound with an endoscopic matrix array transducer. 33:1277-1284.

Entropy-Based Imaging

Synonyms:

Search String: Entrop*

Hughes MS, Marsh JN, Wallace KD, Donahue TA, Connolly AM, Lanza GM, Wickline SA. Sensitive ultrasonic detection of dystrophic skeletal muscle in patients with duchenne muscular dystrophy using an entropy-based signal receiver. 33:1236-1243.

Errata

Page 819

Exposimetry

Synonyms:

Search String: expos*

See also: dosimetry, mechanical index, safety, thermal effects

Eyes

Synonyms: ocular, retinal, cornea

Search String: eye* OR ocular OR retina* OR cornea*

See also: ophthalmology

Huang C, Ameri H, De Boer C, Rowley AP, Xu X, Sun L, Wang S, Humayun MS, Shung KK. Evaluation of lens hardness in cataract surgery using high-frequency ultrasonic parameters *in vitro*. 33:1609-1616.

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

Cheng J, Chen C, Chou Y, Chen CSK, Tiu C, Chen K. Cell-based two-region competition algorithm with a map framework for boundary delineation of a series of 2D ultrasound images. 33:1640-1650.

Zagrodsky V, Phelan M, Shekhar R. Automated detection of a blood pool in ultrasound images of abdominal trauma. 33:1720-1726.

Fetal ultrasound

Synonyms: prenatal, fetus, foetal, FBM, FHR

Search String: Fet* OR foet* OR pre*natal OR umbilic* OR FBM OR FHR

Balbis S, Gaglioti P, Todros T, Guiot C. Doppler indices in the umbilical arteries: influence of vessel curvature induced by bladder filling. 33:1895-1900.

Chang C, Tsai P, Yu C, Ko H, Chang F. Prenatal detection of fetal growth restriction by fetal femur volume: Efficacy assessment using three-dimensional ultrasound. 33:335-341.

Kribèche A, Tranquart F, Kouame D, Pourcelot L. The actifetus system: A multidoppler sensor system for monitoring fetal movements. 33:430-438.

Lim JE, Kim T, Lee N, Oh M, Seol H, Jung N, Park S, Jung S, Park I, Kim H. Ultrasonographic endometrial features in tubal pregnancy: Are they predictive factors of successful medical treatment? 33:714-719.

Meyberg-Solomayer GC, Wallwiener D, Solomayer E. Maternal breath-holding and the valsalva maneuver: Methods to overcome fetal breathing movements during doppler sonography. 33:1586-1591.

Santolaya-Forgas J, DeLeon-Luis J, Friel LA, Wolf R. Application of carnegie stages of development to unify human and baboon ultrasound findings early in pregnancy. 33:1400-1405.

Struijk PC, Fernando KL, Mathews VJ, Steegers EAP, Wladimiroff JW, Clark EB, Varner MW. Application of the magnitude-squared coherence function between uterine and umbilical flow velocity waveforms for predicting placental dysfunction: A preliminary study. 33:1057-1063.

Finite element modeling

Synonyms: finite element analysis, FEM, FEA, boundary element modeling

Search String: "finite element" OR FEM OR FEA OR "boundary element"

Garcia D, Fenech M, Qin Z, Soulez G, Cloutier G. Signal losses with real-time three-dimensional power doppler imaging. 33:1632-1639.

Finite amplitude effects

Synonyms:

Search String: "finite amplitude"

See also: nonlinear effects, shock waves

Wallace KD, Lloyd CW, Holland MR, Miller JG. Finite amplitude measurements of the nonlinear parameter B/A for liquid mixtures spanning a range relevant to tissue harmonic mode. 33:620-629.

Flow models/phantoms

Synonyms: flow cell, vessel phantoms

Search String: Flow AND models OR phantoms OR cell*

See also: phantoms

Greaby R, Zderic V, Vaezy S. Pulsatile flow phantom for ultrasound image-guided HIFU treatment of vascular injuries. 33:1269-1276.

Watts DM, Sutcliffe CJ, Morgan RH, Meagher S, Wardlaw J, Connell M, Bastin ME, Marshall I, Ramnarine KV, Hoskins PR, Black RA. Anatomical flow phantoms of the nonplanar carotid bifurcation, part I: Computer-aided design and fabrication. 33:296-302.

Flow visualisation

Synonyms: flowmetry, particle image velocimetry, PIV

Search String: "flow visualisation" OR "flowmetry" OR

"particle image velocimetry" OR PIV

See also: Doppler

Fluid dynamics

Synonyms: fluid mechanics

Search String: Fluid AND dynamics OR mechanics

Fracture healing

Synonyms: regeneration

Search String: Fracture AND healing OR regen*

See also: bone, healing

Unsworth J, Kaneez S, Harris S, Ridgway J, Fenwick S, Chenery D, Harrison A. Pulsed low intensity ultrasound enhances mineralisation in preosteoblast cells. 33:1468-1474.

Scheven BA, Millard JL, Cooper PR, Lea SC, Walmsley AD, Smith AJ. Short-term *in vitro* effects of low frequency ultrasound on odontoblast-like cells. 33:1475-1482.

G

Gall bladder

Synonyms: gallbladder, hepatobilliary, cholecyst

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

Inoue T, Kitano M, Kudo M, Sakamoto H, Kawasaki T, Yasuda C, Maekawa K. Diagnosis of gallbladder diseases by contrast-enhanced phase-inversion harmonic ultrasonography. 33:353-361.

Gastroenterology

Synonyms: Gastrointestinal Tract, Gastric, digestive system

Search String: Gastr* AND digestive

See also: liver, pancreas

Gene therapy

Synonyms: gene delivery, Gene transfection, Gene transfer

Search String: gene AND therapy OR transfection OR transfer

Bekeredjian R, Bohris C, Hansen A, Katus HA, Kuecherer HF, Hardt SE. Impact of microbubbles on shock wave-mediated DNA uptake in cells *in vitro*. 33:743-750.

Lee Y, Peng C. Nonviral transfection of suspension cells in ultrasound standing wave fields. 33:734-742.

Santolaya-Forgas J, DeLeon-Luis J, Friel LA, Wolf R. Application of carnegie stages of development to unify human and baboon ultrasound findings early in pregnancy. 33:1400-1405.

Bekeredjian R, Kroll RD, Fein E, Tinkov S, Coester C, Winter G, Katus HA, Kulaksiz H. Ultrasound targeted microbubble destruction increases capillary permeability in hepatomas. 33:1592-1598.

Genitourinary

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

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

See also: prostate, testis, uterus

Peng Q, Jones R, Shishido K, Constantinou CE. Ultrasound evaluation of dynamic responses of female pelvic floor muscles. 33:342-352.

H

Hard tissues

Synonyms:

Search String: "Hard tissue*"

See also: bone, cartilage, dental

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

Engelhardt M, Hansen C, Eyding J, Wilkening W, Brenke C, Krogias C, Scholz M, Harders A, Ermert H, Schmieder K. Feasibility of contrast-enhanced sonography during resection of cerebral tumours: Initial results of a prospective study. 33:571-575.

Goertz DE, Frijlink ME, Tempel D, Bhagwandas V, Gisolf A, Krams R, deJong N, vanderSteen AFW. Subharmonic contrast intravascular ultrasound for vasa vasorum imaging. 33:1859-1872.

Inoue T, Kitano M, Kudo M, Sakamoto H, Kawasaki T, Yasuda C, Maekawa K. Diagnosis of gallbladder diseases by contrast-enhanced phase-inversion harmonic ultrasonography. 33:353-361.

Kimmel E, Krasovitski B, Hoogi A, Razansky D, Adam D. Subharmonic response of encapsulated microbubbles: conditions for existence and amplification. 33:1767-1776.

Meyer-Wiethe K, Cangür H, Schindler A, Koch C, Seidel G. Ultrasound perfusion imaging: Determination of thresholds for the identification of critically disturbed perfusion in acute ischemic stroke - A pilot study. 33:851-856.

Nowicki A, Wojcik J, Secomski W. Harmonic imaging using multitone nonlinear coding. 33:1112-1122.

Healing

Synonyms: regeneration, regenerative

Search String: healing OR regener*

See also: therapeutic applications of ultrasound

Ng GYF, Fung DTC. The effect of therapeutic ultrasound intensity on the ultrastructural morphology of tendon repair. 33:1750-1754.

Hemodynamics

Synonyms:

Search String: H*emodynamic

See also: blood flow

Chung C, Hsu H, Chao A, Wong W, Sheng W, Hu H. Flow volume in the jugular vein and related hemodynamics in the branches of the jugular vein. 33:500-505.

Hemorrhage

Synonyms: bleeding, trauma

Search String: H*emorrhage OR Bleed* OR trauma

Bigelow TA, Miller RJ, BlueJr. JP, O'BrienJr. WD. Hemorrhage near fetal rat bone exposed to pulsed ultrasound. 33:311-317.

Burgess S, Zderic V, Vaezy S. Image-guided acoustic hemostasis for hemorrhage in the posterior liver. 33:113-119.

Church CC, O'Brien Jr. WD. Evaluation of the threshold for lung hemorrhage by diagnostic ultrasound and a proposed new safety index. 33:810-818.

Zderic V, O'Keefe GE, Foley JL, Vaezy S. Resection of abdominal solid organs using high-intensity focused ultrasound. 33:1251-1258.

Hemostasis

Synonyms: stenosis, coagulation, clotting

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

Ichihara M, Sasaki K, Umemura S, Kushima M, Okai T. Blood flow occlusion via ultrasound image-guided high-intensity focused ultrasound and its effect on tissue perfusion. 33:452-459.

Lafon C, Bouchoux G, Murat FJ, Birer A, Theillere Y, Chapelon JY, Cathignol D. High intensity ultrasound clamp for bloodless partial nephrectomy: *in vitro* and *in vivo* experiments. 33:105-112.

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

Huang C, Ameri H, DeBoer C, Rowley AP, Xu X, Sun L, Wang S, Humayun MS, Shung KK. Evaluation of lens hardness in cataract surgery using high-frequency ultrasonic parameters *in vitro*. 33:1609-1616.

Huang C, Zhou Q, Ameri H, Wu DW, Sun L, Want S, Humayun MS, Shung KK. Determining the acoustic properties of the lens using a high-frequency ultrasonic needle transducer. 33:1971-1977.

Huang YP, Zheng YP, Leung SF, Choi APC. High frequency ultrasound assessment of skin fibrosis: Clinical results. 33:1191-1198.

Li Y, Garson CD, Xu Y, Beyers RJ, Epstein FH, French BA, Hossack JA. Quantification and MRI validation of regional contractile dysfunction in mice post myocardial infarction using high resolution ultrasound. 33:894-904.

Luo J, Fujikura K, Homma S, Konofagou EE. Myocardial elastography at both high temporal and spatial resolution for the detection of infarcts. 33:1206-1223.

Needles A, Goertz DE, Cheung AM, Foster FS. Interframe clutter filtering for high frequency flow imaging. 33:591-600.

Pernot M, Fujikura K, Fung-Kee-Fung SD, Konofagou EE. ECG-gated, mechanical and electromechanical wave imaging of cardiovascular tissues *in vivo*. 33:1075-1085.

Schellpfeffer MA, Bolender DL, Kolesari GL. High frequency ultrasound imaging of the growth and development of the normal chick embryo. 33:751-761.

Taggart LR, Baddour RE, Giles A, Czarnota GJ, Kolios MC. Ultrasonic characterization of whole cells and isolated nuclei. 33:389-401.

Wang YJ, Betton G, Floettmann E, Fantham E, Ridgwell G. Imaging kidney in conscious rats with high-frequency ultrasound and detection of two cases of unilateral congenital hydronephrosis. 33:483-486.

Zhou Y, Bishay R, Feintuch A, Tao K, Golding F, Zhu W, West LJ, Henkelman RM. Morphological and functional evaluation of murine heterotopic cardiac grafts using ultrasound biomicroscopy. 33:870-879.

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

Burgess S, Zderic V, Vaezy S. Image-guided acoustic hemostasis for hemorrhage in the posterior liver. 33:113-119.

Choi JJ, Pernot M, Small SA, Konofagou EE. Noninvasive, transcranial and localized opening of the blood-brain barrier using focused ultrasound in mice. 33:95-104.

Divkovic GW, Liebler M, Braun K, Dreyer T, Huber PE, Jenne JW. Thermal properties and changes of acoustic parameters in an egg white phantom during heating and coagulation by high intensity focused ultrasound. 33:981-986.

Greaby R, Zderic V, Vaezy S. Pulsatile flow phantom for ultrasound image-guided HIFU treatment of vascular injuries. 33:1269-1276.

Ichihara M, Sasaki K, Umemura S, Kushima M, Okai T. Blood flow occlusion via ultrasound image-guided high-intensity focused ultrasound and its effect on tissue perfusion. 33:452-459.

Lafon C, Bouchoux G, Murat FJ, Birer A, Theillere Y, Chapelon JY, Cathignol D. High intensity ultrasound clamp for bloodless partial nephrectomy: *in vitro* and *in vivo* experiments. 33:105-112.

Li J, Liu X, Zhang D, Gong X. Influence of ribs on the nonlinear sound field of therapeutic ultrasound. 33:1413-1420.

Lu M, Yu X, Li A, Jiang T, Chen M, Zhao B, Zhou X, Want J. Comparison of contrast enhanced ultrasound and contrast enhanced ct or mri in monitoring percutaneous

thermal ablation procedure in patients with hepatocellular carcinoma: a multi-center study in china. 33:1736-1749.

Sassaroli E, Hynynen K. Cavitation threshold of microbubbles in gel tunnels by focused ultrasound. 33:1651-1660.

Yang F, Fu W, Yang R, Liou H, Kang K, Lin W. Quantitative evaluation of focused ultrasound with a contrast agent on blood-brain barrier disruption. 33:1421-1427.

Zderic V, O'Keefe GE, Foley JL, Vaezy S. Resection of abdominal solid organs using high-intensity focused ultrasound. 33:1251-1258.

Zhong H, Wan M, Jiang Y, Wang S. Monitoring imaging of lesions induced by high intensity focused ultrasound based on differential ultrasonic attenuation and integrated backscatter estimation. 33:82-94.

Histology

Synonyms: Histopathology, Histological classification

Search String: Histo*

See also: Tissue characterization

Historical review

Arshadi R, Cobbold RSC. A pioneer in the development of modern ultrasound: Robert William Boyle (1883–1955). 33:3-14.

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

Nahirnyak V, Mast TD, Holland CK. Ultrasound-induced thermal elevation in clotted blood and cranial bone. 33:1285-1295.

Johns LD, Demchak TJ, Straub SJ, Howard SM. The role of quantitative schlieren assessment of physiotherapy ultrasound fields in describing variations between tissue heating rates of different transducers. 33:1911-1917.

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

Needles A, Goertz DE, Cheung AM, Foster FS. Interframe clutter filtering for high frequency flow imaging. 33:591-600.

Image reconstruction

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

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

Housden RJ, Gee AH, Treece GM, Prager RW. Sensorless reconstruction of unconstrained freehand 3D ultrasound data. 33:408-419.

Jiang J, Hall TJ, Sommer AM. A novel image formation method for ultrasonic strain imaging. 33:643-652.

Solberg OV, Lindseth F, Torp H, Blake RE, Nagelhus Hernes TA. Freehand 3D ultrasound reconstruction algorithms - A review. 33:991-1009.

Treece GM, Gee AH, Prager RW. Ultrasound compounding with automatic attenuation compensation using paired angle scans. 33:630-642.

Yang Z, Tuthill TA, Raunig DL, Fox MD, Analoui M. Pixel compounding: Resolution-enhanced ultrasound imaging for quantitative analysis. 33:1309-1319.

Image segmentation

Synonyms: Partitioning Clustering

Search String: segmentation OR Partitioning OR Clustering

See also: Computer aided diagnosis

Golemati S, Stoitsis J, Sifakis EG, Balkizas T, Nikita KS. Using the Hough transform to segment ultrasound images of longitudinal and transverse sections of the carotid artery. 33:1918-1932.

Image registration

Synonyms: correlation, recorrelation

Search String: registration OR *correlation

In memoriam

Instrumentation

Synonyms: scanning systems, imaging hardware

Search String: instrument* OR scann* OR hardware

See also: transducers

Kaufman JJ, Luo G, Siffert RS. A portable real-time ultrasonic bone densitometer. 33:1445-1452.

Thijssen JM, Weijers G, de Korte CL. Objective performance testing and quality assurance of medical ultrasound equipment. 33:460-471.

Intravascular

Synonyms: IVUS

Search String: intravascular OR IVUS

See also: blood vessels

Goertz DE, Frijlink ME, Tempel D, Bhagwandas V, Gisolf A, Krams R, de Jong N, van der Steen AFW.

Subharmonic contrast intravascular ultrasound for vasa vasorum imaging. 33:1859-1872.

Kawase Y, Suzuki Y, Ikeno F, Yoneyama R, Hoshino K, Ly HQ, Lau GT, Hayase M, Yeung AC, Hajjar RJ, Jang I. Comparison of nonuniform rotational distortion between mechanical IVUS and OCT using a phantom model. 33:67-73.

Maurice RL, Fromageau J, Brusseau E, Finet G, Rioufol G, Cloutier G. On the potential of the lagrangian estimator for endovascular ultrasound elastography: *in vivo* human coronary artery study. 33:1199-1205.

Ischemia

Synonyms: ischaemia

Search String: isch*emia OR isch*emic

See also: thrombolysis, atherosclerosis, blood perfusion

Atar S, Siegel RJ, Akel R, Ye Y, Lin Y, Modi SA, Sewani A, Tuero E, Birnbaum Y. Ultrasound at 27 kHz increases tissue expression and activity of nitric oxide synthases in acute limb ischemia in rabbits. 33:1483-1488.

Bertuglia S. Mechanisms by which low-intensity ultrasound improve tolerance to ischemia-reperfusion injury. 33:663-671.

Claus P, Weidemann F, Dommke C, Bito V, Heinzel FR, D'hooge J, Sipido KR, Sutherland GR, Bijmens B. Mechanisms of postsystolic thickening in ischemic myocardium: mathematical modelling and comparison with experimental ischemic substrates. 33:1963-1970.

K

Kidney

Synonyms: nephrology, renal

Search String: kidney OR nephr* OR renal

Freund JB, Colonius T, Evan AP. A cumulative shear mechanism for tissue damage initiation in shock-wave lithotripsy. 33:1495-1503.

Lafon C, Bouchoux G, Murat FJ, Birer A, Theillere Y, Chapelon JY, Cathignol D. High intensity ultrasound clamp for bloodless partial nephrectomy: *in vitro* and *in vivo* experiments. 33:105-112.

Miller DL, Dou C, Wiggins RC, Wharram BL, Goyal M, Williams AR. An *in vivo* rat model simulating imaging of human kidney by diagnostic ultrasound with gas-body contrast agent. 33:129-135.

Pluskiewicz W, Gumprecht J, Zywiec J, Kuźniewicz R. Quantitative ultrasound measurements in diabetic and nondiabetic patients with end-stage renal disease. 33:691-698.

Pluskiewicz W, Zwic J, Gumprecht J, Grzeszczak W. Quantitative ultrasound of phalanges of adults with end-stage renal disease or who have undergone renal transplantation. 33:1353-1361.

Shemesh D, Goldin I, Berelowitz D, Zaghal I, Zigelman C, Olsha O. Blood flow volume changes in the maturing arteriovenous access for Hemodialysis. Presented at the 4th International Congress of the Vascular Access Society (VAS), Berlin, Germany, May 25th-27th, 2005. 33:727-733.

Su H, Lin T, Voon W, Chen H, Chang J, Lee K, Chu C, Cheng K, Lai W, Sheu S. Isovolumic relaxation flow propagation velocity: a promising load-independent relaxation parameter in hemodialysis patients. 33:1819-1894.

Wang YJ, Betton G, Floettmann E, Fantham E, Ridgwell G. Imaging kidney in conscious rats with high-frequency ultrasound and detection of two cases of unilateral congenital hydronephrosis. 33:483-486.

Williams AR, Wiggins RC, Wharram BL, Goyal M, Dou C, Johnson KJ, Miller DL. Nephron injury induced by diagnostic ultrasound imaging at high mechanical index with gas body contrast agent. 33:1336-1344.

L

Letters to the editor

Campbell P, Prausnitz MR. Future Directions for Therapeutic Ultrasound. 33:657.

Karagöz I, Kartal MK. Response to Dr. Lubbers' Letter. 33: 489-490.

Kotz S, Nadarajah S. An Explicit Expression for the Rayleigh-Log Normal Probability Density Function. 33: 487.

Lubbers J. The Effects of Residual Temperature Rise on Ultrasound Heating. 33:488-489.

Reid JM. A Tribute to Peter N. T. Wells, Emeritus Editor of Ultrasound in Medicine and Biology. 33:1676-1678.

Ligament

Synonyms: Connective tissue, Collagen

Search String: Ligament OR Collagen OR "Connective tissue"

See also: tendon

Liposomes

Synonyms: vesicle, reverse micelle

Search String: Liposome* OR vesicle* OR micelle

See also: drug delivery

Smith DAB, Porter TM, Martinez J, Huang S, MacDonald RC, McPherson DD, Holland CK. Destruction thresholds of echogenic liposomes with clinical diagnostic ultrasound. 33:797-809.

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

Freund JB, Colonius T, Evan AP. A cumulative shear mechanism for tissue damage initiation in shock-wave lithotripsy. 33:1495-1503.

Liver

Synonyms: hepatic

Search String: Liver OR hepat*

Bonnin P, Villemain A, Vincent F, Debbabi H, Silvestre JS, Contreres JO, Levy BI, Tobelem G, Dupuy E. Ultrasonic assessment of hepatic blood flow as a marker of mouse hepatocarcinoma. 33:561-570.

Burgess S, Zderic V, Vaezy S. Image-guided acoustic hemostasis for hemorrhage in the posterior liver. 33:113-119.

Pan H, Huang J, Yang T, Liang H. Hepatic portal venous gas in ultrasonogram-benign or noxious. 33:1179-1183.

Yanagisawa K, Moriyasu F, Miyahara T, Yuki M, Iijima H. Phagocytosis of ultrasound contrast agent microbubbles by kupffer cells. 33:318-325.

Zardi EM, Uwechie V, Vespasiani G, Dobrina A, Petitti T, Laghi V, Picardi A, Afeltra A. Portal diameter in the diagnosis of esophageal varices in 266 cirrhotic patients: which role? 33:506-511.

Low frequency ultrasound

Synonyms: LFUS

Search String: "Low frequency ultrasound" OR LFUS

See also: physiotherapy

Atar S, Siegel RJ, Akel R, Ye Y, Lin Y, Modi SA, Sewani A, Tuero E, Birnbaum Y. Ultrasound at 27 kHz increases tissue expression and activity of nitric oxide synthases in acute limb ischemia in rabbits. 33:1483-1488.

Low intensity ultrasound

Synonyms: Low intensity pulsed ultrasound, LIPUS, LIFU

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

Bertuglia S. Mechanisms by which low-intensity ultrasound improve tolerance to ischemia-reperfusion injury. 33:663-671.

Park K, Hoffmeister B, Han DK, Hasty K. Therapeutic ultrasound effects on interleukin-1 β stimulated cartilage construct *in vitro*. 33:286-295.

Scheven BA, Millard JL, Cooper PR, Lea SC, Walmsley AD, Smith AJ. Short-term *in vitro* effects of low

frequency ultrasound on odontoblast-like cells. 33:1475-1482.

Unsworth J, Kaneez S, Harris S, Ridgway J, Fenwick S, Chenery D, Harrison A. Pulsed low intensity ultrasound enhances mineralisation in preosteoblast cells. 33:1468-1474.

White D, Evans JA, Truscott JG, Chivers RA. Can ultrasound propagate in the joint space of a human knee? 33:1104-1111.

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

Church CC, O'Brien Jr. WD. Evaluation of the threshold for lung hemorrhage by diagnostic ultrasound and a proposed new safety index. 33:810-818.

Hsu W, Yu Y, Tu C, Hsu J, Chen C, Chen C, Kwan P. Color doppler US pulmonary artery vessel signal: A sign for predicting the benign lesions. 33:379-388.

Lymphatic system

Synonyms: lymph nodes

Search String: lymph*

Friedrich-Rust M, Forestier N, Sarrazin C, Reesink HW, Herrmann E, Zeuzem S. Ultrasound evaluation of perihepatic lymph nodes during antiviral therapy with the protease inhibitor telaprevir (VX-950) in patients with chronic hepatitis C infection. 33:1362-1367.

Zenk J, Bozzato A, Hornung J, Gottwald F, Rabe C, Gill S, Iro H. Neck lymph nodes: Prediction by computer-assisted contrast medium analysis? 33:246-253.

M

Magnetic resonance imaging

Synonyms: MRI, nuclear imaging, MR imaging

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

Li Y, Garson CD, Xu Y, Beyers RJ, Epstein FH, French BA, Hossack JA. Quantification and MRI Validation of Regional Contractile Dysfunction in Mice Post Myocardial infarction Using High Resolution Ultrasound. 33:894-904.

Mammography

Synonyms: breast imaging, breast screening, mammogram

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

See also: breast

Booi RC, Krücker JF, Goodsitt MM, O'Donnell M, Kapur A, LeCarpentier GL, Roubidoux MA, Fowlkes JB, Carson PL. Evaluating thin compression paddles for mammographically compatible ultrasound. 33:472-482.

Jiang Y, Liu H, Liu J, Zhu Q, Sun Q, Chang X. Breast tumor size assessment: comparison of conventional ultrasound and contrast-enhanced ultrasound. 33:1873-1881.

Shen W, Chang R, Moon W. Computer aided classification system for breast ultrasound based on breast imaging reporting and data system (BI-RADS). 33:1688-1698.

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

Church CC, O'Brien Jr. WD. Evaluation of the threshold for lung hemorrhage by diagnostic ultrasound and a proposed new safety index. 33:810-818.

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"

Claus P, Weidemann F, Dommke C, Bito V, Heinzel FR, D'hooge J, Sipido KR, Sutherland GR, Bijmens B. Mechanisms of postsystolic thickening in ischemic myocardium: mathematical modelling and comparison with experimental ischemic substrates. 33:1963-1970.

Molecular imaging

Synonyms: molecular tagging, targeted imaging, biomarkers

Search String: "molecular imaging" OR "molecular tagging" OR "targeted imaging" OR bio*markers

Marsh JN, Partlow KC, Abendschein DR, Scott MJ, Lanza GM, Wickline SA. Molecular imaging with targeted perfluorocarbon nanoparticles: Quantification of the concentration dependence of contrast enhancement for binding to sparse cellular epitopes. 33:950-958.

Motion analysis

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

Search String: Motion OR "phased tracking" OR M*mode

Fahey BJ, Palmeri ML, Trahey GE. The impact of physiological motion on tissue tracking during radiation force imaging. 33:1149-1166.

Hammer SJ, Dineley J, Easson WJ, Hoskins PR. An arterial wall motion test phantom for the evaluation of wall motion software. 33:1504-1511.

Kribèche A, Tranquart F, Kouame D, Pourcelot L. The actifetus system: A multidoppler sensor system for monitoring fetal movements. 33:430-438.

Nevo ST, van Stralen M, Vossepel AM, Reiber JHC, de Jong N, van der Steen AFW, Bosch JG. Automated tracking of the mitral valve annulus motion in apical echocardiographic images using multidimensional dynamic programming. 33:1389-1399.

Peng Q, Jones R, Shishido K, Constantinou CE. Ultrasound evaluation of dynamic responses of female pelvic floor muscles. 33:342-352.

Poon TC, Rohling RN. Tracking a 3-D ultrasound probe with constantly visible fiducials. 33:152-157.

Musculoskeletal

Synonyms: Sonomyography

Search String: Musc* OR Sonomyography

Hughes MS, Marsh JN, Wallace KD, Donahue TA, Connolly AM, Lanza GM, Wickline SA. Sensitive ultrasonic detection of dystrophic skeletal muscle in patients with duchenne muscular dystrophy using an entropy-based signal receiver. 33:1236-1243.

Weller R, Pfau T, Ferrari M, Griffith R, Bradford T, Wilson A. The determination of muscle volume with a freehand 3D ultrasonography system. 33:402-407.

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

Li J, Liu X, Zhang D, Gong X. Influence of ribs on the nonlinear sound field of therapeutic ultrasound. 33:1413-1420.

Nowicki A, Wojcik J, Secomski W. Harmonic imaging using multitone nonlinear coding. 33:1112-1122.

Wallace KD, Lloyd CW, Holland MR, Miller JG. Finite amplitude measurements of the nonlinear parameter B/A for liquid mixtures spanning a range relevant to tissue harmonic mode. 33:620-629.

O

Obstetrics

Synonyms: prenatal, fetal, gynaecology

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

See also: fetal ultrasound, uterus

Ophthalmology

Synonyms:

Search String: Ophthalmolog*

See also: eyes

Huang C, Ameri H, DeBoer C, Rowley AP, Xu X, Sun L, Wang S, Humayun MS, Shung KK. Evaluation of lens hardness in cataract surgery using high-frequency ultrasonic parameters *in vitro*. 33:1609-1616.

Optoacoustic

Synonyms: photoacoustic, ultrasound light modulation, laser ultrasonic

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

Osteoarthritis

Synonyms: arthritis

Search String: *arthritis

See also: bone, bone density measurement

Nieminen HJ, Julkunen P, Töyräs J, Jurvelin JS. Ultrasound speed in articular cartilage under mechanical compression. 33:1755-1766.

Park K, Hoffmeister B, Han DK, Hasty K. Therapeutic ultrasound effects on interleukin-1 β stimulated cartilage construct *in vitro*. 33:286-295.

Osteoporosis

Synonyms: loss of bone density, bone fragility

Search String: Osteoporosis OR "bone mineral density"

See also: bone, bone density measurement

Agostinelli D, de Terlizzi F. QUS in Monitoring raloxifene and estrogen-progestogens: a 4-year longitudinal study. 33:1184-1190.

Camozzi V, de Terlizzi F, Zangari M, Luisetto G. Quantitative bone ultrasound at phalanges and calcaneus in osteoporotic postmenopausal women: Influence of age and measurement site. 33:1039-1045.

Kaufman JJ, Luo G, Siffert RS. A portable real-time ultrasonic bone densitometer. 33:1445-1452.

Riekkinen O, Hakulinen MA, Lammi MJ, Jurvelin JS, Kallioniemi A, Töyräs J. Acoustic properties of trabecular bone-relationships to tissue composition. 33:1438-1444.

Ovary

Synonyms: reproductive system, ovarian

Search String: Ovar* OR "reproductive system"

See also: genitourinary

P**Pancreas**

Synonyms: Pancreatic, gastrointestinal

Search String: Pancrea* OR gastrointestinal

See also: Gastroenterology

Pathophysiology

Synonyms: pathology

Search String: Pathophysiology OR pathology

Pediatrics

Synonyms: children, infants

Search String: Pediatrics OR child* or infant*

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

Divkovic GW, Liebler M, Braun K, Dreyer T, Huber PE, Jenne JW. Thermal properties and changes of acoustic parameters in an egg white phantom during heating and coagulation by high intensity focused ultrasound. 33:981-986.

Greaby R, Zderic V, Vaezy S. Pulsatile flow phantom for ultrasound image-guided HIFU treatment of vascular injuries. 33:1269-1276.

Hammer SJ, Dineley J, Easson WJ, Hoskins PR. An arterial wall motion test phantom for the evaluation of wall motion software. 33:1504-1511.

Watts DM, Sutcliffe CJ, Morgan RH, Meagher S, Wardlaw J, Connell M, Bastin ME, Marshall I, Ramnarine KV, Hoskins PR, Black RA. Anatomical flow phantoms of the nonplanar carotid bifurcation, part I: Computer-aided design and fabrication. 33:296-302.

Physiotherapy

Synonyms: Physical therapy

Search String: Physiotherapy OR "Physical therapy"

See also: healing, hyperthermia, therapeutic applications of ultrasound

Johns LD, Demchak TJ, Straub SJ, Howard SM. The role of quantitative schlieren assessment of physiotherapy ultrasound fields in describing variations between tissue heating rates of different transducers. 33:1911-1917.

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

Prostate

Synonyms: prostate gland

Search String: prostate OR transrectal OR endorectal OR TRUS

See also: genitourinary

Elie N, Kaliski A, Péronneau P, Opolon P, Roche A, Lassau N. Methodology for quantifying interactions between perfusion evaluated by DCE-US and hypoxia throughout tumor growth. 33:549-560.

Moradi M, Mousavi P, Abolmaesumi P. Computer-aided diagnosis of prostate cancer with emphasis on ultrasound-based approaches: A review. 33:1010-1028.

Pulsatility index

Synonyms: tissue pulsatility imaging

Search String: Pulsatil*

Kucewicz JC, Dunmire B, Leotta DF, Panagiotides H, Paun M, Beach KW. Functional tissue pulsatility imaging of the brain during visual stimulation. 33:681-690.

Pulse wave velocity

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

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

Hermeling E, Reesink KD, Reneman RS, Hoeks APG. Measurement of local pulse wave velocity: Effects of signal processing on precision. 33:774-781.

van Houwelingen MJ, Barenbrug PJ, Hoerberigs MC, Reneman RS, Hoeks APG. The onset of ventricular isovolumic contraction as reflected in the carotid artery distension waveform. 33:371-378.

Williams R, Needles A, Cherin E, Zhou Y, Henkelman RM, Adamson SL, Foster FS. Noninvasive ultrasonic measurement of regional and local pulse-wave velocity in mice. 33:1368-1375.

Q**Quantitative ultrasound**

Synonyms: QUS, quantification, quantitation

Search String: Quantit* OR QUS

Agostinelli D, deTerlizzi F. QUS in Monitoring raloxifene and estrogen-progestogens: a 4-year longitudinal study. 33:1184-1190.

Boudinet M, Berges O, LeHuerou J, Lumbroso-LeRouic L, Desjardins L, Laugier P. Quantitative echography in the follow-up of patients treated with proton-beam irradiation for primary choroidal melanomas. 33:1046-1056.

Dencks S, Barkmann R, Padilla F, Haïat G, Laugier P, Glüer C. Wavelet-based signal processing of *in vitro* ultrasonic measurements at the proximal femur. 33:970-980.

Johns LD, Demchak TJ, Straub SJ, Howard SM. The role of quantitative schlieren assessment of physiotherapy ultrasound fields in describing variations between tissue heating rates of different transducers. 33:1911-1917.

Pluskiewicz W, Gumprecht J, Zywiec J, Kuziniewicz R. Quantitative ultrasound measurements in diabetic and nondiabetic patients with end-stage renal disease. 33:691-698.

Pluskiewicz W, Zwic J, Gumprecht J, Grzeszczak W. Quantitative ultrasound of phalanges of adults with end-stage renal disease or who have undergone renal transplantation. 33:1353-1361.

Pollard RE, Broumas AR, Wisner ER, Vekich SV, Ferrara KW. Quantitative contrast enhanced ultrasound and ct assessment of tumor response to antiangiogenic therapy in rats. 33:235-245.

Sasso M, Haïat G, Yamato Y, Naili S, Matsukawa M. Frequency dependence of ultrasonic attenuation in bovine cortical bone: An *in vitro* study. 33:1933-1942.

Yang F, Fu W, Yang R, Liou H, Kang K, Lin W. Quantitative evaluation of focused ultrasound with a contrast agent on blood-brain barrier disruption. 33:1421-1427.

Yang Z, Tuthill TA, Raunig DL, Fox MD, Analoui M. Pixel compounding: Resolution-enhanced ultrasound imaging for quantitative analysis. 33:1309-1319.

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"

Erpelding TN, Hollman KW, O'Donnell M. Bubble-based acoustic radiation force using chirp insonation to reduce standing wave effects. 33:263-269.

Fahey BJ, Palmeri ML, Trahey GE. The impact of physiological motion on tissue tracking during radiation force imaging. 33:1149-1166.

Hsu SJ, Bouchard RR, Dumont DM, Wolf PD, Trahey GE. *in vivo* assessment of myocardial stiffness with acoustic radiation force impulse imaging. 33:1706-1719.

Melodelima D, Bamber JC, Duck FA, Shipley JA. Transient elastography using impulsive ultrasound radiation force: A preliminary comparison with surface palpation elastography. 33:959-969.

Rychak JJ, Klibanov AL, Ley KF, Hossack JA. Enhanced targeting of ultrasound contrast agents using acoustic radiation force. 33:1132-1139.

Radio-frequency

Synonyms: RF

Search String: "radio*frequency" OR RF

Real-time imaging

Synonyms:

Search String: real*time

Review

Bertuglia S. Mechanisms by which low-intensity ultrasound improve tolerance to ischemia-reperfusion injury. 33:663-671.

Claessens TE, De Sutter J, Vanhercke D, Segers P, Verdonck PR. New echocardiographic applications for assessing global left ventricular diastolic function. 33:823-841.

Hoskins PR. Physical properties of tissues relevant to arterial ultrasound imaging and blood velocity measurement. 33:1527-1539.

Konopke R, Bunk A, Kersting S. The role of contrast-enhanced ultrasound for focal liver lesion detection: An overview. 33:1515-1526.

Moradi M, Mousavi P, Abolmaesumi P. Computer-aided diagnosis of prostate cancer with emphasis on ultrasound-based approaches: A review. 33:1010-1028.

Solberg OV, Lindseth F, Torp H, Blake RE, Nagelhus Hernes TA. Freehand 3D ultrasound reconstruction algorithms - A review. 33:991-1009.

Walter U, Behnke S, Eyding J, Niehaus L, Postert T, Seidel G, Berg D. Transcranial brain parenchyma sonography in movement disorders: State of the Art. 33:15-25.

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

Barnett SB. Safe use of ultrasound contrast agents. 33:171-172.

Barnett SB, Duck F, Ziskin M. Recommendations on the safe use of ultrasound contrast agents. 33:173-174.

Barnett SB, Duck F, Ziskin M. WFUMB safety symposium on ultrasound contrast agents: Executive summary. 33:175-177.

Barnett SB, Duck F, Ziskin M. WFUMB symposium on safety of ultrasound in medicine: Conclusions and recommendations on biological effects and safety of ultrasound contrast agents, 2006. 33:233-234.

Bigelow TA, Miller RJ, BlueJr. JP, O'Brien Jr. WD. Hemorrhage near fetal rat bone exposed to pulsed ultrasound. 33:311-317.

Blomley M, Claudon M, Cosgrove D. WFUMB safety symposium on ultrasound contrast agents: Clinical applications and safety concerns. 33:180-186.

Bouakaz B, de Jong N. WFUMB safety symposium on echo-contrast agents: Nature and types of ultrasound contrast agents. 33:187-196.

Church CC, O'Brien Jr. WD. Evaluation of the threshold for lung hemorrhage by diagnostic ultrasound and a proposed new safety index. 33:810-818.

Church CC. A proposal to clarify the relationship between the thermal index and the corresponding risk to the patient. 33:1489-1494.

Dalecki D. WFUMB safety symposium on echo-contrast agents: Bioeffects of ultrasound contrast agents *in vivo*. 33:205-213.

Duck F. WFUMB safety symposium on ultrasound contrast agents: Lexicon of terms. 33:178-179.

Miller DL. WFUMB safety symposium on echo-contrast agents: *in vitro* bioeffects. 33:197-204.

Nyborg W. WFUMB safety symposium on echo-contrast agents: Mechanisms for the interaction of ultrasound. 33:224-232.

Thijssen JM, Weijers G, de Korte CL. Objective performance testing and quality assurance of medical ultrasound equipment. 33:460-471.

Wittingham TA. WFUMB safety symposium on echo-contrast agents: Exposure from diagnostic ultrasound equipment relating to cavitation risk. 33:214-223.

Shear waves

Synonyms:

Search String: "Shear Wave*"

See also: elastography

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

Bekeredjian R, Bohris C, Hansen A, Katus HA, Kuecherer HF, Hardt SE. Impact of microbubbles on shock wave-mediated DNA uptake in cells *in vitro*. 33:743-750.

Cleveland RO, Chitnis PV, McClure SR. Acoustic field of a ballistic shock wave therapy device. 33:1327-1335.

Freund JB, Colonius T, Evan AP. A cumulative shear mechanism for tissue damage initiation in shock-wave lithotripsy. 33:1495-1503.

Signal processing

Synonyms:

Search String: "signal processing"

See also: image processing, wave form analysis

Dencks S, Barkmann R, Padilla F, Haïat G, Laugier P, Gliër C. Wavelet-based signal processing of *in vitro* ultrasonic measurements at the proximal femur. 33:970-980.

Hermeling E, Reesink KD, Reneman RS, Hoeks APG. Measurement of local pulse wave velocity: Effects of signal processing on precision. 33:774-781.

Kotz S, Nadarajah S. An explicit expression for the rayleigh-log normal probability density function. 33:487.

Skin

Synonyms: dermal, transdermal, cutaneous, transcutaneous, subcutaneous

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

da Costa Gonçalves A, Barbieri CH, Mazzer N, Garcia SB, Thomazini JA. Can therapeutic ultrasound influence the integration of skin grafts? 33:1406-1412.

Huang YP, Zheng YP, Leung SF, Choi APC. High frequency ultrasound assessment of skin fibrosis: Clinical results. 33:1191-1198.

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

Azencott HR, Peter GF, Prausnitz MR. Influence of the cell wall on intracellular delivery to algal cells by electroporation and sonication. 33:1805-1817.

Bekeredjian R, Kroll RD, Fein E, Tinkov S, Coester C, Winter G, Katus HA, Kulaksiz H. Ultrasound targeted microbubble destruction increases capillary permeability in hepatomas. 33:1592-1598.

Lee Y, Peng C. Nonviral transfection of suspension cells in ultrasound standing wave fields. 33:734-742.

Tran TA, Roger S, LeGuennec JY, Tranquart F, Bouakaz A. Effect of ultrasound-activated microbubbles on the cell electrophysiological properties. 33:158-163.

Speckle

Synonyms: interference pattern, noise

Search String: speckle OR noise OR interference

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

Housden RJ, Gee AH, Treece GM, Prager RW. Sensorless reconstruction of unconstrained freehand 3D ultrasound data. 33:408-419.

Li Y, Garson CD, Xu Y, Beyers RJ, Epstein FH, French BA, Hossack JA. Quantification and MRI validation of regional contractile dysfunction in mice post myocardial infarction using high resolution ultrasound. 33:894-904.

Spectral analysis

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

Search String: "Spectr* analysis" OR Fourier OR wavelet

See also: waveform analysis

Boudinet M, Berges O, LeHuerou J, Lumbroso-LeRouic L, Desjardins L, Laugier P. Quantitative echography in the follow-up of patients treated with proton-beam irradiation for primary choroidal melanomas. 33:1046-1056.

Dencks S, Barkmann R, Padilla F, Haïat G, Laugier P, Glüer C. Wavelet-based signal processing of *in vitro* ultrasonic measurements at the proximal femur. 33:970-980.

Strowitzki M, Brand S, Jenderka K. Ultrasonic radio-frequency spectrum analysis of normal brain tissue. 33:522-529.

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

Erpelding TN, Hollman KW, O'Donnell M. Bubble-based acoustic radiation force using chirp insonation to reduce standing wave effects. 33:263-269.

Hultström J, Manneberg O, Dopf K, Hertz HM, Brismar H, Wiklund M. Proliferation and viability of adherent cells manipulated by standing-wave ultrasound in a microfluidic chip. 33:145-151.

Lee Y, Peng C. Nonviral transfection of suspension cells in ultrasound standing wave fields. 33:734-742.

Streaming

Synonyms: Acoustic streaming, microstreaming

Search String: *streaming

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

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

Eyding J, Nolte-Martin A, Krogias C, Postert T. Changes of contrast-specific ultrasonic cerebral perfusion patterns in

the course of stroke; reliability of region-wise and parametric imaging analysis. 33:329-334.

Meyer-Wiethe K, Cangür H, Schindler A, Koch C, Seidel G. Ultrasound perfusion imaging: Determination of thresholds for the identification of critically disturbed perfusion in acute ischemic stroke - A pilot study. 33:851-856.

Schmitt C, Soulez G, Maurice RL, Giroux M, Cloutier G. Noninvasive vascular elastography: toward a complementary characterization tool of atherosclerosis in carotid arteries. 33:1841-1858.

T

Technical note

de Jong N, Emmer M, Chin CT, Bouakaz A, Mastik F, Lohse D, Versluis M. "Compression-only" behavior of phospholipid-coated contrast bubbles. 33:653-656.

Divkovic GW, Liebler M, Braun K, Dreyer T, Huber PE, Jenne JW. Thermal properties and changes of acoustic parameters in an egg white phantom during heating and coagulation by high intensity focused ultrasound. 33:981-986.

Hammer SJ, Dineley J, Easson WJ, Hoskins PR. An arterial wall motion test phantom for the evaluation of wall motion software. 33:1504-1511.

Poon TC, Rohling RN. Tracking a 3-D ultrasound probe with constantly visible fiducials. 33:152-157.

Sumi C. Ultrasonic axial strain measurement for lateral tissue deformation. 33:1830-1837.

Tang M, Eckersley RJ. Frequency and pressure dependent attenuation and scattering by microbubbles. 33:164-168.

Tran TA, Roger S, LeGuennec JY, Tranquart F, Bouakaz A. Effect of ultrasound-activated microbubbles on the cell electrophysiological properties. 33:158-163.

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

Tendon

Synonyms: Collagen, Connective tissue

Search String: tendon OR "connective tissue" OR collagen

Ng GYF, Fung DTC. The effect of therapeutic ultrasound intensity on the ultrastructural morphology of tendon repair. 33:1750-1754.

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

Burgess S, Zderic V, Vaezy S. Image-guided acoustic hemostasis for hemorrhage in the posterior liver. 33:113-119.

Campbell P, Prausnitz MR. Future directions for therapeutic ultrasound. 33:657.

da Costa Gonçalves A, Barbieri CH, Mazzer N, Garcia SB, Thomazini JA. Can therapeutic ultrasound influence the integration of skin grafts? 33:1406-1412.

Lubbers J. The effects of residual temperature rise on ultrasound heating. 33:488-489.

Ng GYF, Fung DTC. The effect of therapeutic ultrasound intensity on the ultrastructural morphology of tendon repair. 33:1750-1754.

Noble JG, Lee V, Griffith-Noble F. Therapeutic ultrasound: The effects upon cutaneous blood flow in humans. 33:279-285.

Park K, Hoffmeister B, Han DK, Hasty K. Therapeutic ultrasound effects on interleukin-1 β stimulated cartilage construct *in vitro*. 33:286-295.

Pedersen MH, Gammelmark KL, Jensen JA. In-vivo evaluation of convex array synthetic aperture imaging. 33:37-47.

Poltawski L, Watson T. Relative transmissivity of ultrasound coupling agents commonly used by therapists in the UK. 33:120-128.

Wood AKW, Bunte RM, Cohen JD, Tsai JH, Lee WMF, Sehgal CM. The antivasular action of physiotherapy ultrasound on a murine tumor: role of a microbubble contrast agent. 33:1901-1910.

Xie F, Tsutsui JM, Gao L, Zucker IH, Porter TR. Interaction of transthoracic ultrasound and intravenous microbubbles with cardiac mechanoreceptors. 33:136-144.

Thermal effects**Synonyms:** ultrasound heating, tissue heating**Search String:** "Thermal effects" OR heating**See also:** high intensity focused ultrasound, hyperthermia, therapeutic effects

Church CC. A proposal to clarify the relationship between the thermal index and the corresponding risk to the patient. 33:1489-1494.

Divkovic GW, Liebler M, Braun K, Dreyer T, Huber PE, Jenne JW. Thermal properties and changes of acoustic

parameters in an egg white phantom during heating and coagulation by high intensity focused ultrasound. 33:981-986.

Lubbers J. The effects of residual temperature rise on ultrasound heating. 33:488-489.

Thermoacoustic imaging**Synonyms:** Acousto-thermal imaging**Search String:** thermo*acoustic OR Acousto*thermal**See also:** temperature imaging**Thrombolysis****Synonyms:** sonothrombolysis, recanalisation, clot busting**Search String:** Thromb* OR sonothrombolysis OR stroke OR clot OR stenosis OR recanalisation**See also:** ischemia

Meunier JM, Holland CK, Lindsell CJ, Shaw GJ. Duty cycle dependence of ultrasound enhanced thrombolysis in a human clot model. 33:576-583.

Nahirnyak V, Mast TD, Holland CK. Ultrasound-induced thermal elevation in clotted blood and cranial bone. 33:1285-1295.

Prokop AF, Soltani A, Roy RA. Cavitation mechanisms in ultrasound-accelerated fibrinolysis. 33:924-933.

Thyroid**Synonyms:** Thyroid gland**Search String:** Thyroid* OR goitre**Time-of-flight****Synonyms:** TOF, transmit time**Search String:** "Time of flight" OR TOF OR "transmi* time"**See also:** velocity

Chang C, Huang S, Yang H, Chou Y, Li P. Reconstruction of ultrasonic sound velocity and attenuation coefficient using linear arrays: clinical assessment. 33:1681-1687.

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

Boudinet M, Berges O, LeHuerou J, Lumbroso-LeRouic L, Desjardins L, Laugier P. Quantitative echography in the follow-up of patients treated with proton-beam irradiation for primary choroidal melanomas. 33:1046-1056.

Ellis SM, Naoumova RP, Neuwirth CK, Eckersley R, Cosgrove DO, Thompson GR, Sidhu PS. Measurement of the reflectivity of the intima-medial layer of the common carotid artery improves the discriminatory value of intima-medial thickness measurement as a predictor of risk of atherosclerotic disease. 33:1029-1038.

Gibson AA, Singh GK, Kulikowska A, Wallace KD, Hoffman JJ, Ludomirsky A, Holland MR. Regional variation in the measured apparent ultrasonic backscatter of mid-gestational fetal pig hearts. 33:1955-1962.

Hughes MS, Marsh JN, Wallace KD, Donahue TA, Connolly AM, Lanza GM, Wickline SA. Sensitive ultrasonic detection of dystrophic skeletal muscle in patients with duchenne muscular dystrophy using an entropy-based signal receiver. 33:1236-1243.

Hoskins PR. Physical properties of tissues relevant to arterial ultrasound imaging and blood velocity measurement. 33:1527-1539.

Levy Y, Agnon Y, Azhari H. Ultrasonic speed of sound dispersion imaging. 33:762-767.

Strowitzki M, Brand S, Jenderka K. Ultrasonic radio-frequency spectrum analysis of normal brain tissue. 33:522-529.

Taggart LR, Baddour RE, Giles A, Czarnota GJ, Kolios MC. Ultrasonic characterization of whole cells and isolated nuclei. 33:389-401.

Zhang M, Castaneda B, Wu Z, Nigwekar P, Joseph JV, Rubens DJ, Parker KJ. Congruence of imaging estimators and mechanical measurements of viscoelastic properties of soft tissues. 33:1617-1631.

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

Zhang M, Castaneda B, Wu Z, Nigwekar P, Joseph JV, Rubens DJ, Parker KJ. Congruence of imaging estimators and mechanical measurements of viscoelastic properties of soft tissues. 33:1617-1631.

Sumi C. Ultrasonic axial strain measurement for lateral tissue deformation. 33:1830-1837.

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

Choi JJ, Pernot M, Small SA, Konofagou EE.

Noninvasive, transcranial and localized opening of the blood-brain barrier using focused ultrasound in mice. 33:95-104.

Cowe J, Gittins J, Evans DH. Coded excitation in TCD ultrasound systems to improve axial resolution. 33:1296-1308.

Lorenz MW, Gonzalez M, Lienert C, Loesel N, Thoelen N, Sitzer M. Influence of temporal insonation window quality on the assessment of cerebral autoregulation with transcranial doppler sonography. 33:1540-1545.

Meyer-Wiethe K, Cangür H, Schindler A, Koch C, Seidel G. Ultrasound perfusion imaging: Determination of thresholds for the identification of critically disturbed perfusion in acute ischemic stroke - A pilot study. 33:851-856.

Pretnar-Oblak J, Sabovic M, Vidmar G, Zaletel M. Evaluation of L-arginine reactivity in comparison with flow-mediated dilatation and intima-media thickness. 33:1546-1551.

Školoudík D, Fadrná T, Bártová P, Langová K, Ressler P, Zapletalová O, Hlušťák P, Herzig R, Kaňnovský P. Reproducibility of sonographic measurement of the substantia nigra. 33:1347-1352.

Vu T-, Pourcelot L, Nguyen TTB, Luong K-, Sirinelli D, Tranquart F. Constant delay in adapted cerebral response to light stimulation in premature neonates: A transcranial doppler study. 33:672-680.

Walter U, Behnke S, Eyding J, Niehaus L, Postert T, Seidel G, Berg D. Transcranial brain parenchyma sonography in movement disorders: State of the art. 33:15-25.

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

Huang C, Zhou Q, Ameri H, Wu DW, Sun L, Want S, Humayun MS, Shung KK. Determining the acoustic properties of the lens using a high-frequency ultrasonic needle transducer. 33:1971-1977.

Trauma

Synonyms: injury, bleeding, vascular injury, wound

Search String: trauma OR "vascular injur*" OR bleeding OR wound

See also: hemorrhage

Zagrodsky V, Phelan M, Shekhar R. Automated detection of a blood pool in ultrasound images of abdominal trauma. 33:1720-1726.

Tumor

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

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

See also: cancer

Rebol J. The vascularisation of oral cavity tumours and tumour shell tissue determined by three-dimensional power doppler sonography. 33:493-499.

U

Ultrasonic vibration cutting

Synonyms: Ultrasonic scalpel

Search String: "ultrasonic vibration cutting" OR "ultrasonic scalpel"

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*"

Burgess S, Zderic V, Vaezy S. Image-guided acoustic hemostasis for hemorrhage in the posterior liver. 33:113-119.

Ichihara M, Sasaki K, Umemura S, Kushima M, Okai T. Blood flow occlusion via ultrasound image-guided high-intensity focused ultrasound and its effect on tissue perfusion. 33:452-459.

Light ED, Mukundan S, Wolf PD, Smith SW. Real-time 3-D intracranial ultrasound with an endoscopic matrix array transducer. 33:1277-1284.

Mokhtari-Dizaji M, Gorjiara T, Ghanaati H. Assessment of pixel shift in ultrasound images due to local temperature changes during the laser interstitial thermotherapy of liver: *in vitro* study. 33:934-940.

Zhong H, Wan M, Jiang Y, Wang S. Monitoring imaging of lesions induced by high intensity focused ultrasound based on differential ultrasonic attenuation and integrated backscatter estimation. 33:82-94.

Uterus

Synonyms: Womb

Search String: Uter* OR Cervi* OR Womb

See also: Fetal ultrasound, Abdominal imaging

Struijk PC, Fernando KL, Mathews VJ, Steegers EAP, Wladimiroff JW, Clark EB, Varner MW. Application of the magnitude-squared coherence function between uterine and umbilical flow velocity waveforms for predicting placental dysfunction: A preliminary study. 33:1057-1063.

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

Bennett MJ, McLaughlin S, Anderson T, McDicken WN. Error analysis of ultrasonic tissue doppler velocity estimation techniques for quantification of velocity and strain. 33:74-81.

Chang C, Huang S, Yang H, Chou Y, Li P. Reconstruction of ultrasonic sound velocity and attenuation coefficient using linear arrays: clinical assessment. 33:1681-1687.

Hoyt K, Parker KJ, Rubens DJ. Real-time shear velocity imaging using sonoelastographic techniques. 33:1086-1097.

Levy Y, Agnon Y, Azhari H. Ultrasonic speed of sound dispersion imaging. 33:762-767.

Levy Y, Azhari H. Velocity measurements using a single transmitted linear frequency-modulated chirp. 33:768-773.

Moilanen P, Nicholson PHF, Kilappa V, Cheng S, Timonen J. Assessment of the cortical bone thickness using ultrasonic guided waves: Modelling and *in vitro* study. 33:254-262.

Nieminen HJ, Julkunen P, Töyräs J, Jurvelin JS. Ultrasound speed in articular cartilage under mechanical compression. 33:1755-1766.

Su H, Lin T, Voon W, Chen H, Chang J, Lee K, Chu C, Cheng K, Lai W, Sheu S. Isovolumic relaxation flow propagation velocity: a promising load-independent relaxation parameter in hemodialysis patients. 33:1819-1894.

Volume measurement

Synonyms: volumetric measurement

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

Chang C, Tsai P, Yu C, Ko H, Chang F. Prenatal detection of fetal growth restriction by fetal femur volume: Efficacy assessment using three-dimensional ultrasound. 33:335-341.

Jiang Y, Liu H, Liu J, Zhu Q, Sun Q, Chang X. Breast tumor size assessment: comparison of conventional ultrasound and contrast-enhanced ultrasound. 33:1873-1881.

Lind BL, Fagertun J, Wilhjelm JE, Jensen MS, Sillesen H. 3D reconstruction of carotid atherosclerotic plaque: Comparison between spatial compound ultrasound models and anatomical models. 33:1064-1074.

Shemesh D, Goldin I, Berelowitz D, Zaghafal I, Zigelman C, Olsha O. Blood flow volume changes in the maturing

arteriovenous access for Hemodialysis. Presented at the 4th International Congress of the Vascular Access Society (VAS), Berlin, Germany, May 25th-27th, 2005. 33:727-733.

Stormark TA, Strømme K, Iversen BM, Matre K. Three-dimensional ultrasonography can detect the modulation of kidney volume in two-kidney, one-clip hypertensive rats. 33:1882-1888.

Weller R, Pfau T, Ferrari M, Griffith R, Bradford T, Wilson A. The determination of muscle volume with a freehand 3D ultrasonography system. 33:402-407.

W

Waveform analysis

Synonyms:

Search String: "waveform analysis"

See also: image processing, cardiology, spectral analysis

Hermeling E, Reesink KD, Reneman RS, Hoeks APG. Measurement of local pulse wave velocity: Effects of signal processing on precision. 33:774-781.