

## ● *Subject Index to Volume 40*

For a version of the subject index with embedded hyperlinks,  
please see <http://www.umbjournal.org/content/indices>

### 3D

#### Synonyms

3-D, three dimensional, three-dimensional, 3-dimensional

#### Scopus Search

3D OR 3-D OR “three dimensional” OR three-dimensional OR 3-dimensional

Obst SJ, Newsham-West R, Barrett RS. In Vivo Measurement of Human Achilles Tendon Morphology Using Freehand 3-D Ultrasound. *40:62-70*.

Lindsey BD, Nicoletto HA, Bennett ER, Laskowitz DT, Smith SW. 3-D Transcranial Ultrasound Imaging with Bilateral Phase Aberration Correction of Multiple Isoplanatic Patches: A Pilot Human Study with Microbubble Contrast Enhancement. *40:90-101*.

Janvier M-A, Merouche S, Allard L, Soulez G, Cloutier G. A 3-D Ultrasound Imaging Robotic System to Detect and Quantify Lower Limb Arterial Stenoses: In Vivo Feasibility. *40:232-243*.

Männicke N, Schöne M, Gottwald M, Göbel F, Oelze ML, Raum K. 3-D High-Frequency Ultrasound Backscatter Analysis of Human Articular Cartilage. *40:244-257*.

Jiang W-w, Li A-h, Zheng Y-P. A Semi-automated 3-D Annotation Method for Breast Ultrasound Imaging: System Development and Feasibility Study on Phantoms. *40:434-446*.

LeCarpentier GL, Goodsitt MM, Verweij S, Li J, Padilla FR, Carson PL. Acoustic Performance of Mesh Compression Paddles for a Multimodality Breast Imaging System. *40:1503-1511*.

Græbe M, Entrekun R, Collet-Billon A, Harrison G, Sillesen H. Reproducibility of Two 3-D Ultrasound Carotid Plaque Quantification Methods. *40:1641-1649*.

Reus AD, Klop-van der Aa J, Rifouna MS, Koning AHJ, Exalto N, van der Spek PJ, Steegers EAP. Early Pregnancy Placental Bed and Fetal Vascular Volume Measurements Using 3-D Virtual Reality. *40:1796-1803*.

Romero JM, Madan N, Betancur I, Ciobanu A, Murphy E, McCullough D, Grant PE. Time Efficiency and Diagnostic Agreement of 2-D Versus 3-D Ultrasound Acquisition of the Neonatal Brain. *40:1804-1809*.

Fang L, Chen L, Wang W-P, Chen Y, Pang Y, Qiu Z-Y, Tang J-X. Diagnostic Value of Automated 3D Ultrasound for Incisional Hernia. *40:1966-1972*.

Meng X, Xie L. Quantitative Evaluation of Fetal Brainstem–Vermis and Brainstem–Tentorium Angles by Three-Dimensional Ultrasound. *40:2076-2081*.

Najafi M, Afsham N, Abolmaesumi P, Rohling R. A Closed-Form Differential Formulation for Ultrasound Spatial Calibration: Multi-wedge Phantom. *40:2231-2243*.

Ho M-C, Tsui P-H, Lee Y-H, Chen Y-S, Chen C-N, Lin J-J, Chang C-C. Early Detection of Liver Fibrosis in Rats Using 3-D Ultrasound Nakagami Imaging: A Feasibility Evaluation. *40:2272-2284*.

Bondoc AB, Detombe S, Dunmore-Buyze J, Guppell KM, Liu L, Kaszuba A, Han S, McGirr R, Hadway J, Drangova M, Hoffman LM. Application of 3-D Echocardiography and Gated Micro-Computed Tomography to Assess Cardiomyopathy in a Mouse Model of Duchenne Muscular Dystrophy. *40:2857-2867*.

Curiale AH, Haak A, Vegas-Sánchez-Ferrero G, Ren B, Aja-Fernández S, Bosch JG. Fully Automatic Detection of Salient Features in 3-D Transesophageal Images. *40:2868-2884*.

### 4D

#### Synonyms

4-D, four dimensional, four-dimensional, 4-dimensional

#### Scopus Search

4D OR 4-D OR “four dimensional” OR four-dimensional OR 4-dimensional

Qin Y, Zhang Y, Zhou X, Wang Y, Sun W, Chen L, Zhao D, Zhan Y, Cai A. Four-Dimensional Echocardiography with Spatiotemporal Image Correlation and Inversion Mode for Detection of Congenital Heart Disease. *40:1434-1441*.

### A

#### Aneurysm

*Synonyms:* aneurism

*Scopus Search:* Aneur\*sm OR AAA

*See also:* atherosclerosis

Nandlall SD, Goldklang MP, Kalashian A, Dangra NA, Darmiento JM, Konofagou EE. Monitoring and Staging Abdominal Aortic Aneurysm Disease With Pulse Wave Imaging. *40:2404-2414*.

### Angiogenesis

**Synonyms:** increase in vascularity, vascularisation

**Scopus Search:** Angiogenesis OR “increase in vascularity” OR “vascularity index” OR VI OR vasculari\*ation OR “capillary density” OR “microvessel density” OR neoangiogenesis OR neovasculari\*ation

Müller HFG, Viacoz A, Kuzmanovic I, Bonvin C, Burkhardt K, Bochaton-Piallat M-L, Sztajzel R. Contrast-Enhanced Ultrasound Imaging of Carotid Plaque Neo-vascularization: Accuracy of Visual Analysis. *40:18-24*.

Akkus Z, Hoogi A, Renaud G, van den Oord SCH, ten Kate GL, Schinkel AFL, Adam D, de Jong N, van der Steen AFW, Bosch JG. New Quantification Methods for Carotid Intra-plaque Neovascularization Using Contrast-Enhanced Ultrasound. *40:25-36*.

Liu H, Jiang Y, Dai Q, Zhu Q, Wang L, Lu J. Peripheral Enhancement of Breast Cancers on Contrast-Enhanced Ultrasound: Correlation with Microvessel Density and Vascular Endothelial Growth Factor Expression. *40:293-299*.

Denbeigh JM, Nixon BA, Hudson JM, Puri MC, Foster FS. VEGFR2-Targeted Molecular Imaging in the Mouse Embryo: An Alternative to the Tumor Model. *40:389-399*.

Sehgal CM, Wood AKW. Re “Disruption of Tumor Neovasculature by Microbubble Enhanced Ultrasound: A Potential New Physical Therapy of Anti-angiogenesis”. *40:455-456*.

### Animal studies

**Synonyms:** animal model

**Scopus Search:** “animal stud\*” OR “animal model” OR mouse OR dog OR bovine OR murine OR canine OR porcine OR rabbit OR pig OR rat OR primate

Subramanian S, Rudich SM, Alqadah A, Karunakaran CP, Rao MB, Mast TD. In Vivo Thermal Ablation Monitoring Using Ultrasound Echo Decorrelation Imaging. *40:102-114*.

Wang S, Samiotaki G, Olumolade O, Feshitan JA, Konofagou EE. Microbubble Type and Distribution Dependence of Focused Ultrasound-Induced Blood–Brain Barrier Opening. *40:130-137*.

DeWall RJ, Jiang J, Wilson JJ, Lee KS. Visualizing Tendon Elasticity in an ex Vivo Partial Tear Model. *40:158-167*.

Costet A, Provost J, Gambhir A, Bobkov Y, Danilo Jr P, Boink GJJ, Rosen MR, Konofagou EE. Electromechanical Wave Imaging of Biologically and Electrically Paced Canine Hearts in Vivo. *40:177-187*.

Shahmirzadi D, Hou GY, Chen J, Konofagou EE. Ex Vivo Characterization of Canine Liver Tissue Viscoelasticity after High-Intensity Focused Ultrasound Ablation. *40:341-350*.

McCabe JT, Moratz C, Liu Y, Burton E, Morgan A, Budinich C, Lowe D, Rosenberger J, Chen H, Liu J, Myers M. Application of High-Intensity Focused Ultrasound to the Study of Mild Traumatic Brain Injury. *40:965-978*.

Byram B, Kim H, Van Assche L, Wolf PD, Trahey GE. The Feasibility of Myocardial Infarct Visualization Using Atrial Kick Induced Strain (AKIS) Contrast. *40:1104-1117*.

Kee PH, Kim H, Huang S, Laing ST, Moody MR, Vela D, Klegerman ME, McPherson DD. Nitric Oxide Pretreatment Enhances Atheroma Component Highlighting in Vivo with Intercellular Adhesion Molecule-1-Targeted Echogenic Liposomes. *40:1167-1176*.

Al-Daghreer S, Doschak M, Sloan AJ, Major PW, Heo G, Scurtescu C, Tsui YY, El-Bialy T. Effect of Low-Intensity Pulsed Ultrasound on Orthodontically Induced Root Resorption in Beagle Dogs. *40:1187-1196*.

Razavi A, Clement D, Fowler RA, Birer A, Chavrier F, Mestas J-I, Romano F, Chapelon J-Y, Bégé A, Lafon C. Contribution of Inertial Cavitation in the Enhancement of In Vitro Transscleral Drug Delivery. *40:1216-1227*.

Miller DL, Dou C, Owens GE, Kripfgans OD. Optimization of Ultrasound Parameters of Myocardial Cavitation Microlesions for Therapeutic Application. *40:1228-1236*.

Sato T, Mori S, Arai Y, Kodama T. The Combination of Intralymphatic Chemotherapy with Ultrasound and Nano-/Microbubbles Is Efficient in the Treatment of Experimental Tumors in Mouse Lymph Nodes. *40:1237-1249*.

Wei S, Fu N, Sun Y, Yang Z, Lei L, Huang P, Yang B. Targeted Contrast-Enhanced Ultrasound Imaging of Angiogenesis in an Orthotopic Mouse Tumor Model of Renal Carcinoma. *40:1250-1259*.

Zhang Y, Ye C, Xu Y, Dong X, Li J, Liu R, Gao Y. Ultrasound-Mediated Microbubble Destruction Increases Renal Interstitial Capillary Permeability in Early Diabetic Nephropathy Rats. *40:1273-1281*.

Wang Y, Huang Y-P, Liu A, Wan W, Zheng Y-P. An Ultrasound Biomicroscopic and Water Jet Ultrasound Indentation Method for Detecting the Degenerative Changes of Articular Cartilage in a Rabbit Model of Progressive Osteoarthritis. *40:1296-1306*.

Maresca D, Skachkov I, Renaud G, Jansen K, van Soest G, de Jong N, van der Steen AFW. Imaging Microvasculature with Contrast-Enhanced Ultraharmonic Ultrasound. *40:1318-1328*.

Stasinopoulou M, Mantziaras G, Paronis E, Balafas E, Lelovas P, Samara A, Kostomitsopoulos N. Use of Real-Time Ultrasonography as an Alternative Method for Early Detection, Confirmation and Evaluation of Rat Pregnancy. *40:1372-1378*.

King RL, Brown JR, Pauly KB. Localization of Ultrasound-Induced In Vivo Neurostimulation in the Mouse Model. *40:1512-1522*.

Li T, Chen H, Khokhlova T, Wang Y-N, Kreider W, He X, Hwang JH. Passive Cavitation Detection during Pulsed HIFU Exposures of Ex Vivo Tissues and In Vivo Mouse Pancreatic Tumors. *40:1523-1534*.

- Abtahi NS, Eimani H, Vosough A, Shahverdi A, Fathi R, Hayati N, Nasiri N. Effect of Therapeutic Ultrasound on Folliculogenesis, Angiogenesis and Apoptosis After Heterotopic Mouse Ovarian Transplantation. *40:1535-1544.*
- Poliachik SL, Khokhlova TD, Wang Y-N, Simon JC, Bailey MR. Pulsed Focused Ultrasound Treatment of Muscle Mitigates Paralysis-Induced Bone Loss in the Adjacent Bone: A Study in a Mouse Model. *40:2113-2124.*
- Pajek D, Burgess A, Huang Y, Hynynen K. High-Intensity Focused Ultrasound Sonothrombolysis: The Use of Perfluorocarbon Droplets to Achieve Clot Lysis at Reduced Acoustic Power. *40:2151-2161.*
- Ho M-C, Tsui P-H, Lee Y-H, Chen Y-S, Chen C-N, Lin J-J, Chang C-C. Early Detection of Liver Fibrosis in Rats Using 3-D Ultrasound Nakagami Imaging: A Feasibility Evaluation. *40:2272-2284.*
- Nandlall SD, Goldklang MP, Kalashian A, Dangra NA, DArmiento JM, Konofagou EE. Monitoring and Staging Abdominal Aortic Aneurysm Disease With Pulse Wave Imaging. *40:2404-2414.*
- Rahmani-Cherati T, Mokhtari-Dizaji M, Vajhi A, Rostami A. Evaluation of Statin Therapy on Endothelial Function in Hypercholesterolemic Rabbits by Automatic Measurement of Arterial Wall Movement Using Ultrasound Images. *40:2415-2424.*
- Kilroy JP, Klivanov AL, Wamhoff BR, Bowles DK, Hossack JA. Localized in Vivo Model Drug Delivery with Intravascular Ultrasound and Microbubbles. *40:2458-2467.*
- Rix A, Palmowski M, Gremse F, Palmowski K, Lederle W, Kiessling F, Bzyl J. Influence of Repetitive Contrast Agent Injections on Functional and Molecular Ultrasound Measurements. *40:2468-2475.*
- Kumagai H, Yokoyama K, Katsuyama K, Hara S, Yamamoto H, Yamagata T, Taniguchi N, Hirota N, Itoh K. A New Method for Measuring the Speed of Sound in Rat Liver ex Vivo Using an Ultrasound System: Correlation of Sound Speed with Fat Deposition. *40:2499-2507.*
- Sun J, Deng Y-B, Liu K, Wang Y-B. Effects of Noradrenaline and Adenosine Triphosphate on the Degree on Contrast Enhancement in a Rabbit Model of Atherosclerosis during Contrast-Enhanced Ultrasonography. *40:2655-2661.*
- Gao R, Zhou X, Yang Y, Wang Z. Transfection of wtp53 and Rb94 Genes Into Retinoblastomas of Nude Mice by Ultrasound-Targeted Microbubble Destruction. *40:2662-2670.*
- Yonan KA, Greene ER, Sharrar JM, Caprihan A, Qualls C, Roldan CA. Middle Cerebral Artery Blood Flows by Combining TCD Velocities and MRA Diameters: In Vitro and In Vivo Validations. *40:2692-2699.*
- Bondoc AB, Detombe S, Dunmore-Buyze J, Gutpell KM, Liu L, Kaszuba A, Han S, McGirr R, Hadway J, Drangova M, Hoffman LM. Application of 3-D Echocardiography and Gated Micro-Computed Tomography to Assess Cardiomyopathy in a Mouse Model of Duchenne Muscular Dystrophy. *40:2857-2867.*
- Artefacts**  
*See image artifacts*
- Atherosclerosis**  
**Synonyms:** vascular disease, atheromatous plaque, arterial hardening  
**Scopus Search:** Atherosclerosis OR plaque OR stenosis OR “vascular disease” OR atheromatous OR “arter\* hardening”  
*See also: blood vessels, aneurysm*
- Akkus Z, Hoogi A, Renaud G, van den Oord SCH, ten Kate GL, Schinkel AFL, Adam D, de Jong N, van der Steen AFW, Bosch JG. New Quantification Methods for Carotid Intra-plaque Neovascularization Using Contrast-Enhanced Ultrasound. *40:25-36.*
- Wang X, Jackson DC, Varghese T, Mitchell CC, Hermann BP, Kliever MA, Dempsey RJ. Correlation of Cognitive Function with Ultrasound Strain Indices in Carotid Plaque. *40:78-89.*
- Ramnarine KV, Garrard JW, Dexter K, Nduwayo S, Panerai RB, Robinson TG. Shear Wave Elastography Assessment of Carotid Plaque Stiffness: In Vitro Reproducibility Study. *40:200-209.*
- Wan J, He F, Zhao Y, Zhang H, Zhou X, Wan M. Non-invasive Vascular Radial/Circumferential Strain Imaging and Wall Shear Rate Estimation Using Video Images of Diagnostic Ultrasound. *40:622-636.*
- Maurice RL, Vaujois L, Dahdah N, Chibab N, Maurice A, Nuyt A-M, Lévy É, Bigras J-L. Carotid Wall Elastography to Assess Midterm Vascular Dysfunction Secondary to Intrauterine Growth Restriction: Feasibility and Comparison with Standardized Intima-Media Thickness. *40:864-870.*
- Sugioka K, Fujita S, Iwata S, Ito A, Matsumura Y, Hanatani A, Doi A, Takagi M, Naruko T, Ueda M, Yoshiyama M. Relationship between CHADS2 Score and Complex Aortic Plaques by Transesophageal Echocardiography in Patients with Nonvalvular Atrial Fibrillation. *40:2358-2364.*
- Rahmani-Cherati T, Mokhtari-Dizaji M, Vajhi A, Rostami A. Evaluation of Statin Therapy on Endothelial Function in Hypercholesterolemic Rabbits by Automatic Measurement of Arterial Wall Movement Using Ultrasound Images. *40:2415-2424.*
- Sun J, Deng Y-B, Liu K, Wang Y-B. Effects of Noradrenaline and Adenosine Triphosphate on the Degree on Contrast Enhancement in a Rabbit Model of Atherosclerosis during Contrast-Enhanced Ultrasonography. *40:2655-2661.*
- Attenuation**  
**Synonyms:** BUA  
**Scopus Search:** attenuat\* OR BUA

Katz-Hanani I, Rothstein T, Gaitini D, Gallimidi Z, Azhari H. Age-Related Ultrasonic Properties of Breast Tissue In Vivo. *40:2265-2271*.

Holm S, Näsholm SP. Comparison of Fractional Wave Equations for Power Law Attenuation in Ultrasound and Elastography. *40:695-703*.

## B

### Bacteria

**Synonyms:** biofilms, infection

**Scopus Search:** Bacteria\* OR biofilm OR bio-film OR infectio\*

Vaidya K, Osgood R, Ren D, Pichichero ME, Helguera M. Ultrasound Imaging and Characterization of Biofilms Based on Wavelet De-noised Radiofrequency Data. *40:583-595*.

### Biological effects

**Synonyms:** Bioeffects, Biochemical effect

**Scopus Search:** Bioeffect\* OR Bio-effect\* OR "Bio effect"

*See also: therapeutic effects of ultrasound, thermal effects*

Qin P, Xu L, Hu Y, Zhong W, Cai P, Du L, Jin L, Yu ACH. Sonoporation-Induced Depolarization of Plasma Membrane Potential: Analysis of Heterogeneous Impact. *40:979-989*.

Matsumoto Y, Nakano J, Oga S, Kataoka H, Honda Y, Sakamoto J, Okita M. The Non-Thermal Effects of Pulsed Ultrasound Irradiation on the Development of Disuse Muscle Atrophy in Rat Gastrocnemius Muscle. *40:1578-1586*.

Hu Y, Wan JMF, Yu ACH. Cytomechanical Perturbations during Low-Intensity Ultrasound Pulsing. *40:1587-1598*.

Cheng K, Xia P, Lin Q, Shen S, Gao M, Ren S, Li X. Effects of Low-Intensity Pulsed Ultrasound on Integrin-FAK-PI3K/Akt Mechanochemical Transduction in Rabbit Osteoarthritis Chondrocytes. *40:1609-1618*.

Hwang JY, Lim HG, Yoon CW, Lam KH, Yoon S, Lee C, Chiu CT, Kang BJ, Kim HH, Shung KK. Non-contact High-Frequency Ultrasound Microbeam Stimulation for Studying Mechanotransduction in Human Umbilical Vein Endothelial Cells. *40:2172-2182*.

Fariñas MD, Sancho Knapik D, Peguero Pina JJ, Gil Pelegrin E, Álvarez-Arenas TEG. Monitoring Plant Response to Environmental Stimuli by Ultrasonic Sensing of the Leaves. *40:2183-2194*.

Lee IC, Lo T-L, Young T-H, Li Y-C, Chen NG, Chen C-H, Chang Y-C. Differentiation of Neural Stem/Progenitor Cells Using Low-Intensity Ultrasound. *40:2195-2206*.

### Blood flow

**Synonyms:** haemodynamics, venous reflux

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

*See also: Doppler*

Janvier M-A, Merouche S, Allard L, Soulez G, Cloutier G. A 3-D Ultrasound Imaging Robotic System to Detect and Quantify Lower Limb Arterial Stenoses: In Vivo Feasibility. *40:232-243*.

Paltiel HJ, Estrada Jr CR, Alomari AI, Stamoulis C, Passerotti CC, Meral FC, Lee RS, Clement GT. Multi-planar Dynamic Contrast-Enhanced Ultrasound Assessment of Blood Flow in a Rabbit Model of Testicular Torsion. *40:361-370*.

Wallace S, Logallo N, Faiz KW, Lund C, Brucher R, Russell D. Relative Blood Flow Changes Measured Using Calibrated Frequency-Weighted Doppler Power at Different Hematocrit Levels. *40:828-836*.

Xu T, Hozan M, Bashford GR. In Vivo Lateral Blood Flow Velocity Measurement Using Speckle Size Estimation. *40:931-937*.

Chen S-P, Hu Y-P, Fan L-H, Guan L-J. Completely Reversed Flow in the Vertebral Artery Does Not Always Indicate Subclavian Steal Phenomenon. *40:1072-1082*.

Nam K-H, Paeng D-G. In Vivo Observation of the Hypo-echoic "Black Hole" Phenomenon in Rat Arterial Bloodstream: A Preliminary Study. *40:1619-1628*.

Ekröll IK, Dahl T, Torp H, Løvstakken L. Combined Vector Velocity and Spectral Doppler Imaging for Improved Imaging of Complex Blood Flow in the Carotid Arteries. *40:1629-1640*.

Liu S, Li L, Yao K, Li W, Wang N, Cui L, Zou Z, Ma Z. Application of Vertebral Artery Ultrasonography in Enlistment-Age Male Student Pilots. *40:2064-2068*.

Yiu BYS, Lai SSM, Yu ACH. Vector Projectile Imaging: Time-Resolved Dynamic Visualization of Complex Flow Patterns. *40:2295-2309*.

Shi H, Song H, Wang J, Xia L, Yang J, Shang Y, Zhou H. Ultrasound in Assessing the Efficacy of Propranolol Therapy for Infantile Hemangiomas. *40:2622-2629*.

Yonan KA, Greene ER, Sharrar JM, Caprihan A, Qualls C, Roldan CA. Middle Cerebral Artery Blood Flows by Combining TCD Velocities and MRA Diameters: In Vitro and In Vivo Validations. *40:2692-2699*.

Pedersen MM, Pihl MJ, Haugaard P, Hansen KL, Lange T, Lönn L, Nielsen MB, Jensen JA. Novel Flow Quantification of the Carotid Bulb and the Common Carotid Artery with Vector Flow Ultrasound. *40:2700-2706*.

Hansen PM, Olesen JB, Pihl MJ, Lange T, Heerwagen S, Pedersen MM, Rix M, Lönn L, Jensen JA, Nielsen MB. Volume Flow in Arteriovenous Fistulas Using Vector Velocity Ultrasound. *40:2707-2714*.

Filipiak-Strzecka D, Michalski B, Kasprzak JD, Lipiec P. Pocket-Size Imaging Devices Allow for Reliable Bedside Screening for Femoral Artery Access Site Complications. *40:2753-2758*.



Voiculescu A, Heusch A, Düppers P, Pourhassan S, Klee D, Rump LC, Sandmann W. Duplex Ultrasound Findings Before and After Surgery in Children and Adolescents with Renovascular Hypertension. *40:2786-2793*.

### Blood vessel

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

**Scopus Search:** “blood vessel” OR artery OR vein OR capillary OR vascular

Nilsson T, Segstedt S, Milton P, Sveinsdottir S, Jansson T, Persson HW, Ley D, Cinthio M. Automatic Measurements of Diameter, Distension and Intima Media Thickness of the Aorta in Premature Rabbit Pups Using B-Mode Images. *40:371-377*.

Johnson JL, van Wijk K, Sabick M. Characterizing Phantom Arteries with Multi-channel Laser Ultrasonics and Photo-acoustics. *40:513-520*.

Zhang H, Zheng R, Qian X, Zhang C, Hao B, Huang Z, Wu T. Use of Wave Intensity Analysis of Carotid Arteries in Identifying and Monitoring Left Ventricular Systolic Function Dynamics in Rabbits. *40:611-621*.

Wan J, He F, Zhao Y, Zhang H, Zhou X, Wan M. Non-invasive Vascular Radial/Circumferential Strain Imaging and Wall Shear Rate Estimation Using Video Images of Diagnostic Ultrasound. *40:622-636*.

Zhang P, Guo R, Li Z, Xiao D, Ma L, Huang P, Wang C. Effect of Smoking on Common Carotid Artery Wall Elasticity Evaluated by Echo Tracking Technique. *40:643-649*.

Zhang Z, Xu X, Ye S, Xu L. Ultrasonographic Measurement of the Respiratory Variation in the Inferior Vena Cava Diameter Is Predictive of Fluid Responsiveness in Critically Ill Patients: Systematic Review and Meta-analysis. *40:845-853*.

Maurice RL, Vaujois L, Dahdah N, Chibab N, Maurice A, Nuyt A-M, Lévy É, Bigras J-L. Carotid Wall Elastography to Assess Midterm Vascular Dysfunction Secondary to Intrauterine Growth Restriction: Feasibility and Comparison with Standardized Intima-Media Thickness. *40:864-870*.

Hacıhamdioğlu B, Öçal G, Berberoğlu M, Şıklar Z, Fitöz S, Tutar E, Nergisioğlu G, Erdeve ŞŞ, Çamtosun E. Preperitoneal Fat Tissue May Be Associated with Arterial Stiffness in Obese Adolescents. *40:871-876*.

Majdouline Y, Ohayon J, Keshavarz-Motamed Z, Roy Cardinal M-H, Garcia D, Allard L, Lerouge S, Arsenault F, Soulez G, Cloutier G. Endovascular Shear Strain Elastography for the Detection and Characterization of the Severity of Atherosclerotic Plaques: In Vitro Validation and In Vivo Evaluation. *40:890-903*.

Lopata RGP, Peters MFJ, Nijs J, Oomens CWJ, Rutten MCM, van de Vosse FN. Vascular Elastography: A Validation Study. *40:1882-1895*.

Kruizinga P, Mastik F, van den Oord SCH, Schinkel AFL, Bosch JG, de Jong N, van Soest G, van der Steen AFW.

High-Definition Imaging of Carotid Artery Wall Dynamics. *40:2392-2403*.

Nandlall SD, Goldklang MP, Kalashian A, Dangra NA, DArmiento JM, Konofagou EE. Monitoring and Staging Abdominal Aortic Aneurysm Disease With Pulse Wave Imaging. *40:2404-2414*.

Rahmani-Cherati T, Mokhtari-Dizaji M, Vajhi A, Rostami A. Evaluation of Statin Therapy on Endothelial Function in Hypercholesterolemic Rabbits by Automatic Measurement of Arterial Wall Movement Using Ultrasound Images. *40:2415-2424*.

### Blood-brain barrier

**Synonyms:** BBB

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

*See also:* **thrombolysis, transcranial ultrasound**

Wang S, Samiotaki G, Olumolade O, Feshitan JA, Konofagou EE. Microbubble Type and Distribution Dependence of Focused Ultrasound-Induced Blood-Brain Barrier Opening. *40:130-137*.

McCabe JT, Moratz C, Liu Y, Burton E, Morgan A, Budinich C, Lowe D, Rosenberger J, Chen H, Liu J, Myers M. Application of High-Intensity Focused Ultrasound to the Study of Mild Traumatic Brain Injury. *40:965-978*.

### Bone

**Synonyms:** osteo-

**Scopus Search:** bone OR trabecular OR cortical OR osteo\*

Moilanen P, Zhao Z, Karppinen P, Karppinen T, Kilappa V, Pirhonen J, Myllylä R, Hæggeström E, Timonen J. Photo-acoustic Excitation and Optical Detection of Fundamental Flexural Guided Wave in Coated Bone Phantoms. *40:521-531*.

Xu K, Ta D, He R, Qin Y-X, Wang W. Axial Transmission Method for Long Bone Fracture Evaluation by Ultrasonic Guided Waves: Simulation, Phantom and in Vitro Experiments. *40:817-827*.

Grimal Q, Rohrbach D, Grondin J, Barkmann R, Glüer C-C, Raum K, Laugier P. Modeling of Femoral Neck Cortical Bone for the Numerical Simulation of Ultrasound Propagation. *40:1015-1026*.

Akiyama H, Hachiya Y, Otsuka H, Kurisuno M, Kawanabe K, Katayama N, Ohura H, Yamamoto K, Sato K, Matsuda S. Low-Intensity Pulsed Ultrasound Therapy Stimulates Callus Formation between Host Femur and Cortical Onlay Strut Allograft. *40:1197-1203*.

Jiang Y-q, Liu C-c, Li R-y, Wang W-P, Ding H, Qi Q, Ta D, Dong J, Wang W-q. Analysis of Apparent Integrated Backscatter Coefficient and Backscattered Spectral Centroid Shift in Calcaneus in vivo for the Ultrasonic Evaluation of Osteoporosis. *40:1307-1317*.

Gonçalves EM, Sewaybricker LE, Baptista F, Silva AM, Carvalho WRG, Santos AO, de Mello MP, Lemos-Marini SHV, Guerra-Junior G. Performance of Phalangeal Quantitative Ultrasound Parameters in the Evaluation of Reduced Bone Mineral Density Assessed By DX in Patients with 21 Hydroxylase Deficiency. *40:1414-1419.*

Zhang Z, Liu D, Deng M, Ta D, Wang W. Experimental Observation of Cumulative Second-Harmonic Generation of Lamb Waves Propagating in Long Bones. *40:1660-1670.*

Liukkonen J, Lehenkari P, Hirvasniemi J, Joukainen A, Virén T, Saarakkala S, Nieminen MT, Jurvelin JS, Töyräs J. Ultrasound Arthroscopy of Human Knee Cartilage and Subchondral Bone in Vivo. *40:2039-2047.*

Kok AC, Terra MP, Muller S, Askeland C, van Dijk CN, Kerkhoffs GMMJ, Tuijthof GJM. Feasibility of Ultrasound Imaging of Osteochondral Defects in the Ankle: A Clinical Pilot Study. *40:2530-2536.*

Tran TNHT, Nguyen K-CT, Sacchi MD, Le LH. Imaging Ultrasonic Dispersive Guided Wave Energy in Long Bones Using Linear Radon Transform. *40:2715-2727.*

#### Book review

Huang D. Learning Ultrasound Imaging, Jose Luís del Cura, Pedro Seguí, Carlos Nicolau (Eds.). Springer-Verlag, Berlin/Heidelberg (2012), 244, ISBN: 978-3-642-30585-6. *40:263.*

McHale AP. Color Atlas of Genetics (Fourth Edition), Eberhard Passarge. Thieme, Stuttgart/New York (2013), 453, ISBN: 9783131003645. *40:264.*

Nanna M. Echocardiography (Second Edition), Paul Leeson, Daniel Augustine, Andrew R.J. Mitchell, Harald Becher (Eds.). Oxford University Press, Oxford, United Kingdom (2012), 672, ISBN: 978-0-19-959179-4. *40:265.*

Mulvana H. New Materials and Technologies for Healthcare, Larry L. Hench, Julian R. Jones, Michael B. Fenn (Eds.). Imperial College Press, London, UK (2012), 511, ISBN: 978-1-84816-558-8. *40:457.*

Eckersley RJ. Webb's Physics of Medical Imaging (Second Edition), M.A. Flower (Ed.). CRC Press, Boca Raton, FL, USA (2012), 811. *40:1734.*

Eckersley RJ. Biomedical Signal and Imaging Processing (Second Edition). *40:1920.*

Bianchi S. Ultrasonography of the Upper Extremity: Hand and Wrist. *40:2325.*

Tang M-X. Emerging Imaging Technologies in Medicine. *40:2542.*

Evans KD. Diagnostic Breast Imaging: Mammography, Sonography, MRI, and Interventional Procedures (Third Edition). *40:2543-2544.*

Brezinka C. Manual of Diagnostic Ultrasound, Volume 2 (Second Edition). *40:2903-2904.*

Martins WP. Ultrasound Imaging in Reproductive Medicine: Advances in Infertility Workup, Treatment, and ART. *40:2905-2905.*

#### Brain

**Synonyms:** cerebral, cerebrovascular, cerebrum

**Scopus Search:** Brain OR cerebr\* OR neurosurgery

McCabe JT, Moratz C, Liu Y, Burton E, Morgan A, Budinich C, Lowe D, Rosenberger J, Chen H, Liu J, Myers M. Application of High-Intensity Focused Ultrasound to the Study of Mild Traumatic Brain Injury. *40:965-978.*

Burkhardt J-K, Serra C, Neidert MC, Woernle CM, Fierstra J, Regli L, Bozinov O. High-Frequency Intra-operative Ultrasound-Guided Surgery of Superficial Intra-cerebral Lesions via a Single-Burr-Hole Approach. *40:1469-1475.*

Umemoto T, Ueno E, Matsumura T, Yamakawa M, Bando H, Mitake T, Shiina T. Ex Vivo and In Vivo Assessment of the Non-linearity of Elasticity Properties of Breast Tissues for Quantitative Strain Elastography. *40:1755-1768.*

Romero JM, Madan N, Betancur I, Ciobanu A, Murphy E, McCullough D, Grant PE. Time Efficiency and Diagnostic Agreement of 2-D Versus 3-D Ultrasound Acquisition of the Neonatal Brain. *40:1804-1809.*

Meng X, Xie L. Quantitative Evaluation of Fetal Brainstem–Vermis and Brainstem–Tentorium Angles by Three-Dimensional Ultrasound. *40:2076-2081.*

Bártová P, Kraft O, Bernátek J, Havel M, Rössner P, Langová K, Herzig R, Školoudík D. Transcranial Sonography and 123I-FP-CIT Single Photon Emission Computed Tomography in Movement Disorders. *40:2365-2371.*

Liu X, Yang YL, Sun SG, Yang RJ, Wang J, Li Y, Zhang L, Duan YY. A New Method of Measurement of Cerebral Circulation Time: Contrast-Enhanced Ultrasonography in Healthy Adults and Patients with Intracranial Shunts. *40:2372-2378.*

#### Breast

**Synonyms:** mammary glands

**Scopus Search:** Breast OR Mamm\*

Zhang H, Qin D, Yang Z, Wang K, Sun F, Li B, Cui G. Comparison of Diffuse Optical Tomography, Ultrasound Elastography and Mammography in the Diagnosis of Breast Tumors. *40:1-10.*

Cao X-L, Bao W, Zhu S-G, Wang L-H, Sun M-H, Wang L, Men Y-M, Xue J. Contrast-Enhanced Ultrasound Characteristics of Breast Cancer: Correlation with Prognostic Factors. *40:11-17.*

Choi WJ, Kim HH, Cha JH, Shin HJ, Kim H, Chae EY, Hong MJ. Predicting Prognostic Factors of Breast Cancer Using Shear Wave Elastography. *40:269-274.*

Xiao Y, Zeng J, Niu L, Zeng Q, Wu T, Wang C, Zheng R, Zheng H. Computer-Aided Diagnosis Based on Quantitative

- Elastographic Features with Supersonic Shear Wave Imaging. 40:275-286.
- Li Z, Sun J, Zhang J, Hu D, Wang Q, Peng K. Quantification of Acoustic Radiation Force Impulse in Differentiating Between Malignant and Benign Breast Lesions. 40:287-292.
- Liu H, Jiang Y, Dai Q, Zhu Q, Wang L, Lu J. Peripheral Enhancement of Breast Cancers on Contrast-Enhanced Ultrasound: Correlation with Microvessel Density and Vascular Endothelial Growth Factor Expression. 40:293-299.
- Brusseau E, Detti V, Coulon A, Maissiat E, Boublay N, Berthezène Y, Fromageau J, Bush N, Bamber J. In Vivo Response to Compression of 35 Breast Lesions Observed with a Two-Dimensional Locally Regularized Strain Estimation Method. 40:300-312.
- Jiang W-w, Li A-h, Zheng Y-P. A Semi-automated 3-D Annotation Method for Breast Ultrasound Imaging: System Development and Feasibility Study on Phantoms. 40:434-446.
- Chang C-Y, Kuo S-J, Wu H-K, Huang Y-L, Chen D-R. Stellate Masses and Histologic Grades in Breast Cancer. 40:904-916.
- Larue A, Noble JA. Modeling of Errors in Nakagami Imaging: Illustration on Breast Mass Characterization. 40:917-930.
- Nakano S, Ando T, Tetsuka R, Fujii K, Yoshida M, Kousaka J, Shiomi-Mouri Y, Imai T, Fukutomi T, Ishiguchi T, Arai O. Reproducible Surveillance Breast Ultrasound Using an Image Fusion Technique in a Short-Interval Follow-up for BI-RADS 3 Lesions: A Pilot Study. 40:1049-1057.
- Park HY, Han KH, Yoon JH, Moon HJ, Kim MJ, Kim E-K. Intra-observer Reproducibility and Diagnostic Performance of Breast Shear-Wave Elastography in Asian Women. 40:1058-1064.
- Sayed A, Layne G, Abraham J, Mukdadi OM. 3-D Visualization and Non-linear Tissue Classification of Breast Tumors Using Ultrasound Elastography In Vivo. 40:1490-1502.
- LeCarpentier GL, Goodsitt MM, Verweij S, Li J, Padilla FR, Carson PL. Acoustic Performance of Mesh Compression Paddles for a Multimodality Breast Imaging System. 40:1503-1511.
- Pons G, Martí R, Ganau S, Sentís M, Martí J. Computerized Detection of Breast Lesions Using Deformable Part Models in Ultrasound Images. 40:2252-2264.
- Katz-Hanani I, Rothstein T, Gaitini D, Gallimidi Z, Azhari H. Age-Related Ultrasonic Properties of Breast Tissue In Vivo. 40:2265-2271.
- Machado P, Eisenbrey JR, Cavanaugh B, Forsberg F. Microcalcifications Versus Artifacts: Initial Evaluation of a New Ultrasound Image Processing Technique to Identify Breast Microcalcifications in a Screening Population. 40:2321-2324.
- Youk JH, Son EJ, Gweon HM, Kim H, Park YJ, Kim J-A. Comparison of Strain and Shear Wave Elastography for the Differentiation of Benign From Malignant Breast Lesions, Combined With B-mode Ultrasonography: Qualitative and Quantitative Assessments. 40:2336-2344.
- Evans KD. Diagnostic Breast Imaging: Mammography, Sonography, MRI, and Interventional Procedures (Third Edition). 40:2543-2544.
- Choi SH, Jo S, Kim D-H, Park JS, Choi Y, Kook S-H, Chung EC, Lee S-Y. Clinical and Imaging Characteristics of Papillary Neoplasms of the Breast Associated with Malignancy: A Retrospective Cohort Study. 40:2599-2608.
- Gómez Flores W, Pereira WCdA, Infantosi AFC. Breast Ultrasound Despeckling Using Anisotropic Diffusion Guided by Texture Descriptors. 40:2609-2621.

## C

### Calibration

**Synonyms:** standards, metrology, quality assurance, performance, reference

**Scopus Search:** calibration OR standard\* OR metrology OR quality assurance

*See also:* instrumentation

Rubert N, Varghese T. Scatterer Number Density Considerations in Reference Phantom-Based Attenuation Estimation. 40:1680-1696.

Madsen EL, Song C, Frank GR. Low-Echo Sphere Phantoms and Methods for Assessing Imaging Performance of Medical Ultrasound Scanners. 40:1697-1717.

Inglis S, Janeczko A, Ellis W, Plevris JN, Pye SD. Assessing the Imaging Capabilities of Radial Mechanical and Electronic Echo-endoscopes Using the Resolution Integral. 40:1896-1907.

Najafi M, Afsham N, Abolmaesumi P, Rohling R. A Closed-Form Differential Formulation for Ultrasound Spatial Calibration: Multi-wedge Phantom. 40:2231-2243.

### Cancer

**Synonyms:** tumor

**Scopus Search:** cancer\*

Zhang H, Qin D, Yang Z, Wang K, Sun F, Li B, Cui G. Comparison of Diffuse Optical Tomography, Ultrasound Elastography and Mammography in the Diagnosis of Breast Tumors. 40:1-10.

Cao X-L, Bao W, Zhu S-G, Wang L-H, Sun M-H, Wang L, Men Y-M, Xue J. Contrast-Enhanced Ultrasound Characteristics of Breast Cancer: Correlation with Prognostic Factors. 40:11-17.

Choi WJ, Kim HH, Cha JH, Shin HJ, Kim H, Chae EY, Hong MJ. Predicting Prognostic Factors of Breast Cancer Using Shear Wave Elastography. 40:269-274.

Xiao Y, Zeng J, Niu L, Zeng Q, Wu T, Wang C, Zheng R, Zheng H. Computer-Aided Diagnosis Based on Quantitative

- Elastographic Features with Supersonic Shear Wave Imaging. 40:275-286.
- Li Z, Sun J, Zhang J, Hu D, Wang Q, Peng K. Quantification of Acoustic Radiation Force Impulse in Differentiating Between Malignant and Benign Breast Lesions. 40:287-292.
- Liu H, Jiang Y, Dai Q, Zhu Q, Wang L, Lu J. Peripheral Enhancement of Breast Cancers on Contrast-Enhanced Ultrasound: Correlation with Microvessel Density and Vascular Endothelial Growth Factor Expression. 40:293-299.
- Brusseau E, Detti V, Coulon A, Maissiat E, Boublay N, Berthezène Y, Fromageau J, Bush N, Bamber J. In Vivo Response to Compression of 35 Breast Lesions Observed with a Two-Dimensional Locally Regularized Strain Estimation Method. 40:300-312.
- Li Y, Guo A, Tang J, Li Q, Fei X, Zhang Y, Gao J. Evaluation of Sonographic Features for Patients with Urinary Bladder Paraganglioma: A Comparison with Patients with Urothelial Carcinoma. 40:478-484.
- Ling W, Lu Q, Lu C, Quan J, Ma L, Li J, He D, Liu J, Yang J, Wen T, Wu H, Zhu H, Luo Y. Effects of Vascularity and Differentiation of Hepatocellular Carcinoma on Tumor and Liver Stiffness: In Vivo and in Vitro Studies. 40:739-746.
- Dudau C, Hameed S, Gibson D, Muthu S, Sandison A, Eckersley RJ, Clarke P, Cosgrove DO, Lim AK. Can Contrast-Enhanced Ultrasound Distinguish Malignant from Reactive Lymph Nodes in Patients with Head and Neck Cancers? 40:747-754.
- Sorace AG, Korb M, Warram JM, Umphrey H, Zinn KR, Rosenthal E, Hoyt K. Ultrasound-Stimulated Drug Delivery for Treatment of Residual Disease after Incomplete Resection of Head and Neck Cancer. 40:755-764.
- Chuang Y-H, Wang Y-H, Chang T-K, Lin C-J, Li P-C. Albumin Acts Like Transforming Growth Factor  $\beta$ 1 in Microbubble-Based Drug Delivery. 40:765-774.
- Ko SY, Kim E-K, Sung JM, Moon HJ, Kwak JY. Diagnostic Performance of Ultrasound and Ultrasound Elastography with Respect to Physician Experience. 40:854-863.
- Herh SJ, Kim E-K, Sung JM, Yoon JH, Moon HJ, Kwak JY. Heterogeneous Echogenicity of the Thyroid Parenchyma Does Not Influence the Detection of Multi-focality in Papillary Thyroid Carcinoma on Preoperative Ultrasound Staging. 40:884-889.
- Chang C-Y, Kuo S-J, Wu H-K, Huang Y-L, Chen D-R. Stellate Masses and Histologic Grades in Breast Cancer. 40:904-916.
- Larrue A, Noble JA. Modeling of Errors in Nakagami Imaging: Illustration on Breast Mass Characterization. 40:917-930.
- Ge H-Y, Miao L-Y, Xiong L-L, Yan F, Zheng C-S, Wang J-R, Jia J-W, Cui L-G, Chen W. High-Intensity Focused Ultrasound Treatment of Late-Stage Pancreatic Body Carcinoma: Optimal Tumor Depth for Safe Ablation. 40:947-955.
- Nakano S, Ando T, Tetsuka R, Fujii K, Yoshida M, Kousaka J, Shiomi-Mouri Y, Imai T, Fukutomi T, Ishiguchi T, Arai O. Reproducible Surveillance Breast Ultrasound Using an Image Fusion Technique in a Short-Interval Follow-up for BI-RADS 3 Lesions: A Pilot Study. 40:1049-1057.
- Park HY, Han KH, Yoon JH, Moon HJ, Kim MJ, Kim E-K. Intra-observer Reproducibility and Diagnostic Performance of Breast Shear-Wave Elastography in Asian Women. 40:1058-1064.
- Sato T, Mori S, Arai Y, Kodama T. The Combination of Intralymphatic Chemotherapy with Ultrasound and Nano-/Microbubbles Is Efficient in the Treatment of Experimental Tumors in Mouse Lymph Nodes. 40:1237-1249.
- Wei S, Fu N, Sun Y, Yang Z, Lei L, Huang P, Yang B. Targeted Contrast-Enhanced Ultrasound Imaging of Angiogenesis in an Orthotopic Mouse Tumor Model of Renal Carcinoma. 40:1250-1259.
- Chae SY, Kim Y-s, Park MJ, Yang J, Park H, Namgung M-S, Rhim H, Lim HK. High-Intensity Focused Ultrasound-Induced, Localized Mild Hyperthermia to Enhance Anticancer Efficacy of Systemic Doxorubicin: An Experimental Study. 40:1554-1563.
- Courivaud F, Kazaryan AM, Lund A, Orszagh VC, Svindland A, Marangos IP, Halvorsen PS, Jebsen P, Fosse E, Hol PK, Edwin B. Thermal Fixation of Swine Liver Tissue after Magnetic Resonance-Guided High-Intensity Focused Ultrasound Ablation. 40:1564-1577.
- Jin Z-Q, Lin M-Y, Hu W-H, Li W-Y, Bai S-J. Gray-Scale Ultrasonography Combined with Elastography Imaging for the Evaluation of Papillary Thyroid Microcarcinoma: As a Prognostic Clinicopathology Factor. 40:1769-1777.
- Hoang NH, Murad HY, Ratnayaka SH, Chen C, Khismatullin DB. Synergistic Ablation of Liver Tissue and Liver Cancer Cells with High-Intensity Focused Ultrasound and Ethanol. 40:1869-1881.
- Chen S-P, Hu Y-P, Chen B. Taller-Than-Wide Sign for Predicting Thyroid Microcarcinoma: Comparison and Combination of Two Ultrasonographic Planes. 40:2004-2011.
- Pons G, Martí R, Ganau S, Sentís M, Martí J. Computerized Detection of Breast Lesions Using Deformable Part Models in Ultrasound Images. 40:2252-2264.
- Machado P, Eisenbrey JR, Cavanaugh B, Forsberg F. Microcalcifications Versus Artifacts: Initial Evaluation of a New Ultrasound Image Processing Technique to Identify Breast Microcalcifications in a Screening Population. 40:2321-2324.
- Youk JH, Son EJ, Gweon HM, Kim H, Park YJ, Kim J-A. Comparison of Strain and Shear Wave Elastography for the Differentiation of Benign From Malignant Breast Lesions, Combined With B-mode Ultrasonography: Qualitative and Quantitative Assessments. 40:2336-2344.



- Choi SH, Jo S, Kim D-H, Park JS, Choi Y, Kook S-H, Chung EC, Lee S-Y. Clinical and Imaging Characteristics of Papillary Neoplasms of the Breast Associated with Malignancy: A Retrospective Cohort Study. *40:2599-2608.*
- Gao R, Zhou X, Yang Y, Wang Z. Transfection of wtp53 and Rb94 Genes Into Retinoblastomas of Nude Mice by Ultrasound-Targeted Microbubble Destruction. *40:2662-2670.*
- Li YJ, Huang P, Jiang CL, Jia DX, Du XX, Zhou JH, Han Y, Sui H, Wei XL, Liu L, Yuan HH, Zhang TT, Zhang WJ, Xie R, Lang XH, Wang LY, Liu T, Bai YX, Tian Y. Sonodynamically Induced Anti-tumor Effect of 5-Aminolevulinic Acid on Pancreatic Cancer Cells. *40:2671-2679.*
- Hansen PM, Hemmsen M, Brandt A, Rasmussen J, Lange T, Krohn PS, Lönn L, Jensen JA, Nielsen MB. Clinical Evaluation of Synthetic Aperture Sequential Beamforming Ultrasound in Patients with Liver Tumors. *40:2805-2810.*
- Mehrmohammadi MF, Robert T.; Whaley, Dana H.; Pruthi, Sandhya; Kinnick, Randall R.; Fatemi, Mostafa; Alizad, Azra Preliminary in vivo breast vibroacoustography results with a quasi 2 dimensional array transducer: a step forwards towards clinical applications. *40:2818-2829.*
- Cardiology**  
**Synonyms:** heart, cardiography  
**Scopus Search:** Cardi\* OR myocardi\* OR heart OR ECG OR ventricular OR atrial  
**See also:** **echocardiography**
- Costet A, Provost J, Gambhir A, Bobkov Y, Danilo Jr P, Boink GJJ, Rosen MR, Konofagou EE. Electromechanical Wave Imaging of Biologically and Electrically Paced Canine Hearts in Vivo. *40:177-187.*
- Brekke B, Nilsen LCL, Lund J, Torp H, Bjastad T, Amundsen BH, Stoylen A, Aase SA. Ultra-high Frame Rate Tissue Doppler Imaging. *40:222-231.*
- Zhang H, Zheng R, Qian X, Zhang C, Hao B, Huang Z, Wu T. Use of Wave Intensity Analysis of Carotid Arteries in Identifying and Monitoring Left Ventricular Systolic Function Dynamics in Rabbits. *40:611-621.*
- Nestaas E, Fugelseth D, Støylen A. Automated, Objective and Expert-Independent Assessment of the Analyzability of Strain and Strain Rate in Tissue Doppler Images in Term Neonates by Analysis of Beat-to-Beat Variation. *40:637-642.*
- Pica S, Ghio S, Tonti G, Camporotondo R, Turco A, Pazzano AS, Scelsi L, Raineri C, Oltrona Visconti L. Analyses of Longitudinal and of Transverse Right Ventricular Function Provide Different Clinical Information in Patients with Pulmonary Hypertension. *40:1096-1103.*
- Byram B, Kim H, Van Assche L, Wolf PD, Trahey GE. The Feasibility of Myocardial Infarct Visualization Using Atrial Kick Induced Strain (AKIS) Contrast. *40:1104-1117.*
- Ma C, Varghese T. Analysis of 2-D Ultrasound Cardiac Strain Imaging Using Joint Probability Density Functions. *40:1118-1132.*
- Miller DL, Dou C, Owens GE, Kripfgans OD. Optimization of Ultrasound Parameters of Myocardial Cavitation Microlesions for Therapeutic Application. *40:1228-1236.*
- Qin Y, Zhang Y, Zhou X, Wang Y, Sun W, Chen L, Zhao D, Zhan Y, Cai A. Four-Dimensional Echocardiography with Spatiotemporal Image Correlation and Inversion Mode for Detection of Congenital Heart Disease. *40:1434-1441.*
- Belohlavek M, Katayama M, Zarbatany D, Fortuin FD, Fatemi M, Nenadic IZ, McMahon EM. Acoustically Active Injection Catheter Guided by Ultrasound: Navigation Tests in Acutely Ischemic Porcine Hearts. *40:1650-1659.*
- Pislaru C, Urban MW, Pislaru SV, Kinnick RR, Greenleaf JF. Viscoelastic Properties of Normal and Infarcted Myocardium Measured by a Multifrequency Shear Wave Method: Comparison with Pressure-Segment Length Method. *40:1785-1795.*
- Hao N, Liu K, Guo Z-N, Wu X, Yang Y, Xing Y. Comparison of Two Contrast Agents for Right-to-Left Shunt Diagnosis with Contrast-Enhanced Transcranial Doppler. *40:2317-2320.*
- Fadnes S, Nyrnes SA, Torp H, Lovstakken L. Shunt Flow Evaluation in Congenital Heart Disease Based on Two-Dimensional Speckle Tracking. *40:2379-2391.*
- Kruizinga P, Mastik F, van den Oord SCH, Schinkel AFL, Bosch JG, de Jong N, van Soest G, van der Steen AFW. High-Definition Imaging of Carotid Artery Wall Dynamics. *40:2392-2403.*
- Cartilage**  
**Scopus Search:** cartilage OR articular OR chondrogenesis OR chondrocyte OR fibrocartilage OR hyaline OR “elastic cartilage”
- Männicke N, Schöne M, Gottwald M, Göbel F, Oelze ML, Raum K. 3-D High-Frequency Ultrasound Backscatter Analysis of Human Articular Cartilage. *40:244-257.*
- Jang KW, Ding L, Seol D, Lim T-H, Buckwalter JA, Martin JA. Low-Intensity Pulsed Ultrasound Promotes Chondrogenic Progenitor Cell Migration via Focal Adhesion Kinase Pathway. *40:1177-1186.*
- Wang Y, Huang Y-P, Liu A, Wan W, Zheng Y-P. An Ultrasound Biomicroscopic and Water Jet Ultrasound Indentation Method for Detecting the Degenerative Changes of Articular Cartilage in a Rabbit Model of Progressive Osteoarthritis. *40:1296-1306.*
- Cheng K, Xia P, Lin Q, Shen S, Gao M, Ren S, Li X. Effects of Low-Intensity Pulsed Ultrasound on Integrin-FAK-PI3K/Akt Mechanochemical Transduction in Rabbit Osteoarthritis Chondrocytes. *40:1609-1618.*

Liukkonen J, Lehenkari P, Hirvasniemi J, Joukainen A, Virén T, Saarakkala S, Nieminen MT, Jurvelin JS, Töyräs J. Ultrasound Arthroscopy of Human Knee Cartilage and Subchondral Bone in Vivo. *40:2039-2047*.

Inkinen S, Liukkonen J, Ylärinne JH, Puhakka PH, Lammi MJ, Virén T, Jurvelin JS, Töyräs J. Collagen and Chondrocyte Concentrations Control Ultrasound Scattering in Agarose Scaffolds. *40:2162-2171*.

### Cavitation

**Synonyms:** bubble dynamics, acoustic cavitation, bubble collapse

**Scopus Search:** cavitation OR inertial OR transient OR “bubble collapse”

See also: **contrast agents**

Razavi A, Clement D, Fowler RA, Birer A, Chavrier F, Mestas J-I, Romano F, Chapelon J-Y, Béglé A, Lafon C. Contribution of Inertial Cavitation in the Enhancement of In Vitro Transscleral Drug Delivery. *40:1216-1227*.

Miller DL, Dou C, Owens GE, Kripfgans OD. Optimization of Ultrasound Parameters of Myocardial Cavitation Microlesions for Therapeutic Application. *40:1228-1236*.

Fan Z, Chen D, Deng CX. Characterization of the Dynamic Activities of a Population of Microbubbles Driven by Pulsed Ultrasound Exposure in Sonoporation. *40:1260-1272*.

Li T, Chen H, Khokhlova T, Wang Y-N, Kreider W, He X, Hwang JH. Passive Cavitation Detection during Pulsed HIFU Exposures of Ex Vivo Tissues and In Vivo Mouse Pancreatic Tumors. *40:1523-1534*.

Mikula E, Hollman K, Chai D, Jester JV, Juhasz T. Measurement of Corneal Elasticity with an Acoustic Radiation Force Elasticity Microscope. *40:1671-1679*.

### Clinical note

Zhang P, Guo R, Li Z, Xiao D, Ma L, Huang P, Wang C. Effect of Smoking on Common Carotid Artery Wall Elasticity Evaluated by Echo Tracking Technique. *40:643-649*.

Nakashima Y, Sunagawa T, Shinomiya R, Ochi M. High-Resolution Ultrasonographic Evaluation of “Hourglass-like Fascicular Constriction” in Peripheral Nerves: A Preliminary Report. *40:1718-1721*.

Staelens ASE, Tomsin K, Oben J, Mesens T, Grieten L, Gyselaers W. Improving the Reliability of Venous Doppler Flow Measurements: Relevance of Combined ECG, Training and Repeated Measures. *40:1722-1728*.

Zhao T-C, Wu J-Y, Li R-N, Li X. Quantitative Analysis of Four Types of Primary Glomerulopathy by Application of a Decision Forest to Ultrasonic and Laboratory Characteristics. *40:2310-2316*.

Hao N, Liu K, Guo Z-N, Wu X, Yang Y, Xing Y. Comparison of Two Contrast Agents for Right-to-Left Shunt Diagnosis with Contrast-Enhanced Transcranial Doppler. *40:2317-2320*.

Machado P, Eisenbrey JR, Cavanaugh B, Forsberg F. Microcalcifications Versus Artifacts: Initial Evaluation of a New Ultrasound Image Processing Technique to Identify Breast Microcalcifications in a Screening Population. *40:2321-2324*.

Kok AC, Terra MP, Muller S, Askeland C, van Dijk CN, Kerckhoffs GMMJ, Tuijthof GJM. Feasibility of Ultrasound Imaging of Osteochondral Defects in the Ankle: A Clinical Pilot Study. *40:2530-2536*.

Ten Cate DF, Luime JJ, Hazes JMW, Kleinrensink G-J, Jacobs JWG. Is the Frequent Sonographic Anechoic Area Distally in Metacarpophalangeal Joints a Sign of Arthritis? *40:2537-2541*.

### Clinical Applications of Ultrasound

**Synonyms:** Clinical study, clinical trial

**Scopus Search:** Clinical AND study OR trial

Zhang H, Qin D, Yang Z, Wang K, Sun F, Li B, Cui G. Comparison of Diffuse Optical Tomography, Ultrasound Elastography and Mammography in the Diagnosis of Breast Tumors. *40:1-10*.

Cao X-L, Bao W, Zhu S-G, Wang L-H, Sun M-H, Wang L, Men Y-M, Xue J. Contrast-Enhanced Ultrasound Characteristics of Breast Cancer: Correlation with Prognostic Factors. *40:11-17*.

Müller HFG, Viacoz A, Kuzmanovic I, Bonvin C, Burkhardt K, Bochaton-Piallat M-L, Sztajzel R. Contrast-Enhanced Ultrasound Imaging of Carotid Plaque Neo-vascularization: Accuracy of Visual Analysis. *40:18-24*.

Akkus Z, Hoogi A, Renaud G, van den Oord SCH, ten Kate GL, Schinkel AFL, Adam D, de Jong N, van der Steen AFW, Bosch JG. New Quantification Methods for Carotid Intra-plaque Neovascularization Using Contrast-Enhanced Ultrasound. *40:25-36*.

Jasaityte R, D’Hooge J, Herbots L, Daraban AM, Rademakers F, Claus P. Consistent Regional Heterogeneity of Passive Diastolic Stretch and Systolic Deformation in the Healthy Heart: Age-Related Changes in Left Ventricle Contractility. *40:37-44*.

Choi WJ, Kim HH, Cha JH, Shin HJ, Kim H, Chae EY, Hong MJ. Predicting Prognostic Factors of Breast Cancer Using Shear Wave Elastography. *40:269-274*.

Xiao Y, Zeng J, Niu L, Zeng Q, Wu T, Wang C, Zheng R, Zheng H. Computer-Aided Diagnosis Based on Quantitative Elastographic Features with Supersonic Shear Wave Imaging. *40:275-286*.

Liu H, Jiang Y, Dai Q, Zhu Q, Wang L, Lu J. Peripheral Enhancement of Breast Cancers on Contrast-Enhanced Ultrasound: Correlation with Microvessel Density and Vascular Endothelial Growth Factor Expression. *40:293-299*.

Parlak IB, Egi SM, Ademoglu A, Germonpré P, Esen OB, Marroni A, Balestra C. Bubble Stream Reveals Functionality of the Right-to-Left Shunt: Detection of a Potential Source for Air Embolism. *40:330-340*.

- Wang C-Z, Zheng J, Huang Z-P, Xiao Y, Song D, Zeng J, Zheng H-R, Zheng R-Q. Influence of Measurement Depth on the Stiffness Assessment of Healthy Liver with Real-Time Shear Wave Elastography. *40:461-469*.
- Fontanilla T, Cañas T, Macia A, Alfageme M, Gutierrez Junquera C, Malalana A, Luz Cilleruelo M, Roman E, Miralles M. Normal Values of Liver Shear Wave Velocity in Healthy Children Assessed by Acoustic Radiation Force Impulse Imaging Using a Convex Probe and a Linear Probe. *40:470-477*.
- Li Y, Guo A, Tang J, Li Q, Fei X, Zhang Y, Gao J. Evaluation of Sonographic Features for Patients with Urinary Bladder Paraganglioma: A Comparison with Patients with Urothelial Carcinoma. *40:478-484*.
- Sanderson J, Wu L, Mahajan A, Meriki N, Henry A, Welsh AW. Selection of the Sub-noise Gain Level for Acquisition of VOCAL Data Sets: A Reliability Study. *40:562-567*.
- Zhang Z, Xu X, Ye S, Xu L. Ultrasonographic Measurement of the Respiratory Variation in the Inferior Vena Cava Diameter Is Predictive of Fluid Responsiveness in Critically Ill Patients: Systematic Review and Meta-analysis. *40:845-853*.
- Ko SY, Kim E-K, Sung JM, Moon HJ, Kwak JY. Diagnostic Performance of Ultrasound and Ultrasound Elastography with Respect to Physician Experience. *40:854-863*.
- Maurice RL, Vaujois L, Dahdah N, Chibab N, Maurice A, Nuyt A-M, Lévy É, Bigras J-L. Carotid Wall Elastography to Assess Midterm Vascular Dysfunction Secondary to Intrauterine Growth Restriction: Feasibility and Comparison with Standardized Intima-Media Thickness. *40:864-870*.
- Hacıhamdioğlu B, Öçal G, Berberoğlu M, Şıklar Z, Fitöz S, Tutar E, Nergisoğlu G, Erdeve ŞŞ, Çamtosun E. Preperitoneal Fat Tissue May Be Associated with Arterial Stiffness in Obese Adolescents. *40:871-876*.
- Herh SJ, Kim E-K, Sung JM, Yoon JH, Moon HJ, Kwak JY. Heterogeneous Echogenicity of the Thyroid Parenchyma Does Not Influence the Detection of Multi-focality in Papillary Thyroid Carcinoma on Preoperative Ultrasound Staging. *40:884-889*.
- Xu T, Hozan M, Bashford GR. In Vivo Lateral Blood Flow Velocity Measurement Using Speckle Size Estimation. *40:931-937*.
- Ge H-Y, Miao L-Y, Xiong L-L, Yan F, Zheng C-S, Wang J-R, Jia J-W, Cui L-G, Chen W. High-Intensity Focused Ultrasound Treatment of Late-Stage Pancreatic Body Carcinoma: Optimal Tumor Depth for Safe Ablation. *40:947-955*.
- Nakano S, Ando T, Tetsuka R, Fujii K, Yoshida M, Kousaka J, Shiomi-Mouri Y, Imai T, Fukutomi T, Ishiguchi T, Arai O. Reproducible Surveillance Breast Ultrasound Using an Image Fusion Technique in a Short-Interval Follow-up for BI-RADS 3 Lesions: A Pilot Study. *40:1049-1057*.
- Scheidl E, Böhm J, Simó M, Bereznai B, Bereczki D, Arányi Z. Different Patterns of Nerve Enlargement in Polyneuropathy Subtypes as Detected by Ultrasonography. *40:1138-1145*.
- Sato J, Ishii Y, Noguchi H, Takeda M. Sonographic Analyses of Pulley and Flexor Tendon in Idiopathic Trigger Finger with Interphalangeal Joint Contracture. *40:1146-1153*.
- Akiyama H, Hachiya Y, Otsuka H, Kurisuno M, Kawanabe K, Katayama N, Ohura H, Yamamoto K, Sato K, Matsuda S. Low-Intensity Pulsed Ultrasound Therapy Stimulates Callus Formation between Host Femur and Cortical Onlay Strut Allograft. *40:1197-1203*.
- Jiang Y-q, Liu C-c, Li R-y, Wang W-P, Ding H, Qi Q, Ta D, Dong J, Wang W-q. Analysis of Apparent Integrated Backscatter Coefficient and Backscattered Spectral Centroid Shift in Calcaneus in vivo for the Ultrasonic Evaluation of Osteoporosis. *40:1307-1317*.
- Cai Y, Du L, Li F, Gu J, Bai M. Quantification of Enhancement of Renal Parenchymal Masses with Contrast-Enhanced Ultrasound. *40:1387-1393*.
- Tian F, Wang Z-B, Meng D-M, Liu R-G, Zhang H-Y, Li H-Y, Lv F-F. Preliminary Study on the Role of Virtual Touch Tissue Quantification Combined with a Urinary  $\beta$ 2-Microglobulin Test on the Early Diagnosis of Gouty Kidney Damage. *40:1394-1399*.
- Zhang M, Fu S, Zhang Y, Tang J, Zhou Y. Elastic Modulus of the Prostate: A New Non-invasive Feature to Diagnose Bladder Outlet Obstruction in Patients with Benign Prostatic Hyperplasia. *40:1408-1413*.
- Gonçalves EM, Sewaybricker LE, Baptista F, Silva AM, Carvalho WRG, Santos AO, de Mello MP, Lemos-Marini SHV, Guerra-Junior G. Performance of Phalangeal Quantitative Ultrasound Parameters in the Evaluation of Reduced Bone Mineral Density Assessed By DX in Patients with 21 Hydroxylase Deficiency. *40:1414-1419*.
- Zhu Y-S, Mu N-N, Zheng M-J, Zhang Y-C, Feng H, Cong R, Zhou X-D, Chen D-Z. High-Resolution Ultrasonography for the Diagnosis of Brachial Plexus Root Lesions. *40:1420-1426*.
- Hsu H-Y, Lee Y-S, Ou M-C, Chung C-P, Chen S-Y, Ho Y-P, Hu H-H. Severity of Spontaneous Echo Contrast in the Jugular Vein Associated with Ischemic Stroke. *40:1427-1433*.
- Qin Y, Zhang Y, Zhou X, Wang Y, Sun W, Chen L, Zhao D, Zhan Y, Cai A. Four-Dimensional Echocardiography with Spatiotemporal Image Correlation and Inversion Mode for Detection of Congenital Heart Disease. *40:1434-1441*.
- Ryu JH, Kim DW, Kang T. Pre-operative Detection of Thyroid Pyramidal Lobes by Ultrasound and Computed Tomography. *40:1442-1446*.
- Turtulici G, Orlandi D, Corazza A, Sartoris R, Derchi LE, Silvestri E, Baek JH. Percutaneous Radiofrequency Ablation of Benign Thyroid Nodules Assisted by a Virtual Needle Tracking System. *40:1447-1452*.

- Paik WH, Yoon H, Park DH, Jung K, Lee SS, Seo DW, Lee SK, Kim M-H. Utility of Endoscopic Ultrasound (EUS)-Guided Fine-Needle Aspiration for Peri-arterial Soft Tissue Cuffs Without Identifiable Pancreas Mass on CT and EUS: A Prospective Comparative Study. *40:1463-1468.*
- Burkhardt J-K, Serra C, Neidert MC, Woernle CM, Fierstra J, Regli L, Bozinov O. High-Frequency Intra-operative Ultrasound-Guided Surgery of Superficial Intra-cerebral Lesions via a Single-Burr-Hole Approach. *40:1469-1475.*
- Arhami Dolatabadi A, Amini A, Hatamabadi H, Mohammadi P, Faghili-Kashani S, Derakhshanfar H, Tabatabaee SM, Moghimi M, Kabir A. Comparison of the Accuracy and Reproducibility of Focused Abdominal Sonography for Trauma Performed by Emergency Medicine and Radiology Residents. *40:1476-1482.*
- Piyarom P, Kaewlai R. False-Negative Appendicitis at Ultrasound: Nature and Association. *40:1483-1489.*
- Ekröll IK, Dahl T, Torp H, Løvstakken L. Combined Vector Velocity and Spectral Doppler Imaging for Improved Imaging of Complex Blood Flow in the Carotid Arteries. *40:1629-1640.*
- Nakashima Y, Sunagawa T, Shinomiya R, Ochi M. High-Resolution Ultrasonographic Evaluation of "Hourglass-like Fascicular Constriction" in Peripheral Nerves: A Preliminary Report. *40:1718-1721.*
- Staelens ASE, Tomsin K, Oben J, Mesens T, Grieten L, Gyselaers W. Improving the Reliability of Venous Doppler Flow Measurements: Relevance of Combined ECG, Training and Repeated Measures. *40:1722-1728.*
- Umemoto T, Ueno E, Matsumura T, Yamakawa M, Bando H, Mitake T, Shiina T. Ex Vivo and In Vivo Assessment of the Non-linearity of Elasticity Properties of Breast Tissues for Quantitative Strain Elastography. *40:1755-1768.*
- Jin Z-Q, Lin M-Y, Hu W-H, Li W-Y, Bai S-J. Gray-Scale Ultrasonography Combined with Elastography Imaging for the Evaluation of Papillary Thyroid Microcarcinoma: As a Prognostic Clinicopathology Factor. *40:1769-1777.*
- Kim DW, Jung SJ, Ha TK, Park HK, Kang T. Comparative Study of Ultrasound and Computed Tomography for Incidentally Detecting Diffuse Thyroid Disease. *40:1778-1784.*
- Reus AD, Klop-van der Aa J, Rifouna MS, Koning AHJ, Exalto N, van der Spek PJ, Steegers EAP. Early Pregnancy Placental Bed and Fetal Vascular Volume Measurements Using 3-D Virtual Reality. *40:1796-1803.*
- Romero JM, Madan N, Betancur I, Ciobanu A, Murphy E, McCullough D, Grant PE. Time Efficiency and Diagnostic Agreement of 2-D Versus 3-D Ultrasound Acquisition of the Neonatal Brain. *40:1804-1809.*
- Liong K, Lahiri A, Lee S, Chia D, Biswas A, Lee HP. Predominant Patterns of Median Nerve Displacement and Deformation during Individual Finger Motion in Early Carpal Tunnel Syndrome. *40:1810-1818.*
- Galjaard S, Pasman SA, Ameye L, Timmerman D, Devlieger R. Intima-Media Thickness Measurements in the Fetus and Mother During Pregnancy: A Feasibility Study. *40:1949-1957.*
- Ruiz-Ares G, Fuentes B, Martínez-Sánchez P, Díez-Tejedor E. A Prediction Model for Unstable Carotid Atheromatous Plaque in Acute Ischemic Stroke Patients: Proposal and Internal Validation. *40:1958-1965.*
- Fang L, Chen L, Wang W-P, Chen Y, Pang Y, Qiu Z-Y, Tang J-X. Diagnostic Value of Automated 3D Ultrasound for Incisional Hernia. *40:1966-1972.*
- Melvin MN, Smith-Ryan AE, Wingfield HL, Fultz SN, Roelofs EJ. Evaluation of Muscle Quality Reliability and Racial Differences in Body Composition of Overweight Individuals. *40:1973-1979.*
- Nakamura M, Ikezoe T, Kobayashi T, Umegaki H, Takeno Y, Nishishita S, Ichihashi N. Acute Effects of Static Stretching on Muscle Hardness of the Medial Gastrocnemius Muscle Belly in Humans: An Ultrasonic Shear-Wave Elastography Study. *40:1991-1997.*
- Shen H-L, Yang S-P, Hong L-W, Lin L-Q, Wang K-J, Cai X-H, Lv G-R. Evaluation of Gastric Emptying in Diabetic Gastropathy by an Ultrasonic Whole Stomach Cylinder Method. *40:1998-2003.*
- Yoon JH, Yoo J, Kim E-K, Moon HJ, Lee HS, Seo JY, Park HY, Park W-J, Kwak JY. Real-Time Elastography in the Evaluation of Diffuse Thyroid Disease: A Study Based on Elastography Histogram Parameters. *40:2012-2019.*
- Xu J-M, Xu H-X, Xu X-H, Liu C, Zhang Y-F, Guo L-H, Liu L-N, Zhang J. Solid Hypo-echoic Thyroid Nodules on Ultrasound: The Diagnostic Value of Acoustic Radiation Force Impulse Elastography. *40:2020-2030.*
- Nieuwoudt M, Lameris R, Corcoran C, Rossouw TM, Slavik T, Du Plessis J, Omoshoro-Jones JAO, Stivaktas P, Potgieter F, Van der Merwe SW. Polymerase Chain Reaction Amplifying Mycobacterial DNA from Aspirates Obtained by Endoscopic Ultrasound Allows Accurate Diagnosis of Mycobacterial Disease in HIV-Positive Patients with Abdominal Lymphadenopathy. *40:2031-2038.*
- Liukkonen J, Lehenkari P, Hirvasniemi J, Joukainen A, Virén T, Saarakkala S, Nieminen MT, Jurvelin JS, Töyräs J. Ultrasound Arthroscopy of Human Knee Cartilage and Subchondral Bone in Vivo. *40:2039-2047.*
- Gao J, Rubin JM. Ultrasound Strain Zero-Crossing Elasticity Measurement in Assessment of Renal Allograft Cortical Hardness: A Preliminary Observation. *40:2048-2057.*
- Zhang C-X, Xu X-Y, Wang L, Huang M, Li L. Esophageal Varix Predictive Performance of Lower Esophageal Doppler Signals During the Swallowing Process. *40:2058-2063.*



- Liu S, Li L, Yao K, Li W, Wang N, Cui L, Zou Z, Ma Z. Application of Vertebral Artery Ultrasonography in Enlistment-Age Male Student Pilots. 40:2064-2068.
- Abe T, Thiebaud RS, Loenneke JP, Ogawa M, Mitsukawa N. Association Between Forearm Muscle Thickness and Age-related Loss of Skeletal Muscle Mass, Handgrip and Knee Extension Strength and Walking Performance in Old Men and Women: A Pilot Study. 40:2069-2075.
- Meng X, Xie L. Quantitative Evaluation of Fetal Brainstem–Vermis and Brainstem–Tentorium Angles by Three-Dimensional Ultrasound. 40:2076-2081.
- Sekimoto T, Maruyama H, Kiyono S, Kondo T, Shimada T, Ishibashi H, Takahashi M, Yokosuka O, Yamaguchi T. Hepatic Filling Rate of a Microbubble Agent: A Novel Predictor of Long-Term Outcomes in Patients With Cirrhosis. 40:2082-2088.
- Ruiz-Molinero C, Jimenez-Rejano JJ, Chillón-Martínez R, Suarez-Serrano C, Rebollo-Roldán J, Perez-Cabezas V. Efficacy of Therapeutic Ultrasound in Pain and Joint Mobility in Whiplash Traumatic Acute and Subacute Phases. 40:2089-2095.
- Katz-Hanani I, Rothstein T, Gaitini D, Gallimidi Z, Azhari H. Age-Related Ultrasonic Properties of Breast Tissue In Vivo. 40:2265-2271.
- Tenorio V, Bonet-Carne E, Figueras F, Botet F, Arranz A, Amat-Roldán I, Gratacos E. Correlation of Quantitative Texture Analysis of Cranial Ultrasound With Later Neurobehavior in Preterm Infants. 40:2285-2294.
- Zhao T-C, Wu J-Y, Li R-N, Li X. Quantitative Analysis of Four Types of Primary Glomerulopathy by Application of a Decision Forest to Ultrasonic and Laboratory Characteristics. 40:2310-2316.
- Hao N, Liu K, Guo Z-N, Wu X, Yang Y, Xing Y. Comparison of Two Contrast Agents for Right-to-Left Shunt Diagnosis with Contrast-Enhanced Transcranial Doppler. 40:2317-2320.
- Machado P, Eisenbrey JR, Cavanaugh B, Forsberg F. Microcalcifications Versus Artifacts: Initial Evaluation of a New Ultrasound Image Processing Technique to Identify Breast Microcalcifications in a Screening Population. 40:2321-2324.
- Kim M-H, Luo S, Ko SH, Jung S-L, Lim D-J, Kim Y. Elastography Can Effectively Decrease the Number of Fine-Needle Aspiration Biopsies in Patients with Calcified Thyroid Nodules. 40:2329-2335.
- Youk JH, Son EJ, Gweon HM, Kim H, Park YJ, Kim J-A. Comparison of Strain and Shear Wave Elastography for the Differentiation of Benign From Malignant Breast Lesions, Combined With B-mode Ultrasonography: Qualitative and Quantitative Assessments. 40:2336-2344.
- Brandsma R, Verbeek RJ, Maurits NM, van der Hoeven JH, Brouwer OF, den Dunnen WFA, Burger H, Sival DA. Visual Screening of Muscle Ultrasound Images in Children. 40:2345-2351.
- Sugioka K, Fujita S, Iwata S, Ito A, Matsumura Y, Hanatani A, Doi A, Takagi M, Naruko T, Ueda M, Yoshiyama M. Relationship between CHADS2 Score and Complex Aortic Plaques by Transesophageal Echocardiography in Patients with Nonvalvular Atrial Fibrillation. 40:2358-2364.
- Bártová P, Kraft O, Bernátek J, Havel M, Rössner P, Langová K, Herzig R, Školoudík D. Transcranial Sonography and 123I-FP-CIT Single Photon Emission Computed Tomography in Movement Disorders. 40:2365-2371.
- Liu X, Yang YL, Sun SG, Yang RJ, Wang J, Li Y, Zhang L, Duan YY. A New Method of Measurement of Cerebral Circulation Time: Contrast-Enhanced Ultrasonography in Healthy Adults and Patients with Intracranial Shunts. 40:2372-2378.
- Fadnes S, Nyrnes SA, Torp H, Lovstakken L. Shunt Flow Evaluation in Congenital Heart Disease Based on Two-Dimensional Speckle Tracking. 40:2379-2391.
- Kruizinga P, Mastik F, van den Oord SCH, Schinkel AFL, Bosch JG, de Jong N, van Soest G, van der Steen AFW. High-Definition Imaging of Carotid Artery Wall Dynamics. 40:2392-2403.
- Wei H, Shi L, Zhang J, Xia Y, Cuan J, Zhang Y, Li W, Yan A, Jiang X, Lang M-F, Sun J. High-Intensity Focused Ultrasound Leads to Histopathologic Changes of the Inferior Turbinate Mucosa with Allergic Inflammation. 40:2425-2430.
- Arbeille P, Provost R, Zuj K, Dimouro D, Georgescu M. Teles-operated Echocardiography Using a Robotic Arm and an Internet Connection. 40:2521-2529.
- Kok AC, Terra MP, Muller S, Askeland C, van Dijk CN, Kerckhoffs GMMJ, Tuijthof GJM. Feasibility of Ultrasound Imaging of Osteochondral Defects in the Ankle: A Clinical Pilot Study. 40:2530-2536.
- Ten Cate DF, Luime JJ, Hazes JMW, Kleinrensink G-J, Jacobs JWG. Is the Frequent Sonographic Anechoic Area Distally in Metacarpophalangeal Joints a Sign of Arthritis? 40:2537-2541.
- Huang Z, Zheng J, Zeng J, Wang X, Wu T, Zheng R. Normal Liver Stiffness in Healthy Adults Assessed By Real-Time Shear Wave Elastography and Factors That Influence This Method. 40:2549-2555.
- Liu D, Qian L, Wang J, Hu X, Qiu L. Hepatic Perfusion Parameters of Contrast-Enhanced Ultrasonography Correlate With the Severity of Chronic Liver Disease. 40:2556-2563.
- Orlacchio A, Chegai F, Del Giudice C, Anselmo A, Iaria G, Palmieri G, Di Caprera E, Tosti D, Costanzo E, Tisone G, Simonetti G. Kidney Transplant: Usefulness of Real-Time Elastography (RTE) in the Diagnosis of Graft Interstitial Fibrosis. 40:2564-2572.

- Conti F, Ceccarelli F, Gigante A, Barbano B, Perricone C, Massaro L, Martinelli F, Spinelli FR, Giannakakis K, Valesini G, Cianci R. Ultrasonographic Evaluation of Renal Resistive Index in Patients with Lupus Nephritis: Correlation with Histologic Findings. *40:2573-2580.*
- Chen K-Y, Chen C-N, Wu M-H, Ho M-C, Tai H-C, Kuo W-H, Huang W-C, Wang Y-H, Chen A, Chang K-J. Computerized Quantification of Ultrasonic Heterogeneity in Thyroid Nodules. *40:2581-2589.*
- Chen J-W, Chang C-H, Wang S-J, Chang Y-T, Huang C-C. Submental Ultrasound Measurement of Dynamic Tongue Base Thickness in Patients with Obstructive Sleep Apnea. *40:2590-2598.*
- Choi SH, Jo S, Kim D-H, Park JS, Choi Y, Kook S-H, Chung EC, Lee S-Y. Clinical and Imaging Characteristics of Papillary Neoplasms of the Breast Associated with Malignancy: A Retrospective Cohort Study. *40:2599-2608.*
- Shi H, Song H, Wang J, Xia L, Yang J, Shang Y, Zhou H. Ultrasound in Assessing the Efficacy of Propranolol Therapy for Infantile Hemangiomas. *40:2622-2629.*
- Shin S, Kim JY, Kim WO, Kim SH, Kil HK. Ultrasound Visibility of Spinal Structures and Local Anesthetic Spread in Children Undergoing Caudal Block. *40:2630-2636.*
- Gentile M, De Vito A, Azzini C, Tamborino C, Casetta I. Adding Blood to Agitated Saline Significantly Improves Detection of Right-to-Left Shunt by Contrast-Transcranial Color-Coded Duplex Sonography. *40:2637-2641.*
- Banahan C, Rogerson Z, Rousseau C, Ramnarine KV, Evans DH, Chung EML. An In Vitro Comparison of Embolus Differentiation Techniques for Clinically Significant Macroemboli: Dual-Frequency Technique versus Frequency Modulation Method. *40:2642-2654.*
- Dejaco C, De Zordo T, Heber D, Hartung W, Lipp R, Lutfi A, Magyar M, Zauner D, Lackner A, Duftner C, Horwath-Winter J, Graninger WB, Hermann J. Real-Time Sonoelastography of Salivary Glands for Diagnosis and Functional Assessment of Primary Sjögrens Syndrome. *40:2759-2767.*
- Chen H-J, Liao W-C, Liang S-J, Li C-H, Tu C-Y, Hsu W-H. Diagnostic Impact of Color Doppler Ultrasound-Guided Core Biopsy on Fine-Needle Aspiration of Anterior Mediastinal Masses. *40:2768-2776.*
- Giglio V, Puddu PE, Holland MR, Camastra G, Ansalone G, Ricci E, Mela J, Sciarra F, Di Gennaro M. Ultrasound Tissue Characterization Does Not Differentiate Genotype, But Indexes Ejection Fraction Deterioration in Becker Muscular Dystrophy. *40:2777-2785.*
- Voiculescu A, Heusch A, Düppers P, Pourhassan S, Klee D, Rump LC, Sandmann W. Duplex Ultrasound Findings Before and After Surgery in Children and Adolescents with Renovascular Hypertension. *40:2786-2793.*
- Xu J-MG, Le-Han; Xu, Hui-Xiong; Zheng, Shu-Guang; Liu, Lin-Na; Sun, Li-Ping; Lu, Ming-De; Xie, Xiao-Yan; Wang, Wen-Ping; Hu, Bing; Yan, Kun; Ding, Hong; Tang, Shao-Shan; Qian, Lin-Xue; Luo, Bao-Ming. Differential diagnosis of gallbladder wall thickening: the usefulness of contrast enhanced ultrasound. *40:2794-2804.*
- Hansen PM, Hemmsen M, Brandt A, Rasmussen J, Lange T, Krohn PS, Lönn L, Jensen JA, Nielsen MB. Clinical Evaluation of Synthetic Aperture Sequential Beamforming Ultrasound in Patients with Liver Tumors. *40:2805-2810.*
- Notarnicola A, Quagliarella L, Sasanelli N, Maccagnano G, Fracella MR, Forcignanò MI, Moretti B. Effects of Extracorporeal Shock Wave Therapy on Functional and Strength Recovery of Handgrip in Patients Affected by Epicondylitis. *40:2830-2840.*
- Computer aided diagnosis (CAD) system**  
**Synonyms:** CAD, automated analysis, automatic classification, automatic thresholding, artificial intelligence  
**Scopus Search:** “Computer-Aided Diagnosis” OR CAD OR “automa\* analysis” OR “automa\* classification” OR “automa\* thresholding”  
*See also:* **Ultrasound guided surgery**
- Xiao Y, Zeng J, Niu L, Zeng Q, Wu T, Wang C, Zheng R, Zheng H. Computer-Aided Diagnosis Based on Quantitative Elastographic Features with Supersonic Shear Wave Imaging. *40:275-286.*
- Sanderson J, Wu L, Mahajan A, Meriki N, Henry A, Welsh AW. Selection of the Sub-noise Gain Level for Acquisition of VOCAL Data Sets: A Reliability Study. *40:562-567.*
- Papastefanou I, Kappou D, Souka AP, Pilalis A, Chrelias C, Siristatidis C, Kassanos D. Reproducibility Study of Fetal 3-D Volumetry in the First Trimester: Effect of Fetal Size and Rotational Angle of VOCAL Software. *40:877-883.*
- Nakano S, Ando T, Tetsuka R, Fujii K, Yoshida M, Kousaka J, Shiomi-Mouri Y, Imai T, Fukutomi T, Ishiguchi T, Arai O. Reproducible Surveillance Breast Ultrasound Using an Image Fusion Technique in a Short-Interval Follow-up for BI-RADS 3 Lesions: A Pilot Study. *40:1049-1057.*
- Pons G, Martí R, Ganau S, Sentís M, Martí J. Computerized Detection of Breast Lesions Using Deformable Part Models in Ultrasound Images. *40:2252-2264.*
- Chen K-Y, Chen C-N, Wu M-H, Ho M-C, Tai H-C, Kuo W-H, Huang W-C, Wang Y-H, Chen A, Chang K-J. Computerized Quantification of Ultrasonic Heterogeneity in Thyroid Nodules. *40:2581-2589.*
- Ni D, Yang X, Chen X, Chin C-T, Chen S, Heng PA, Li S, Qin J, Wang T. Standard Plane Localization in Ultrasound by Radial Component Model and Selective Search. *40:2728-2742.*
- Curiale AH, Haak A, Vegas-Sánchez-Ferrero G, Ren B, Aja-Fernández S, Bosch JG. Fully Automatic Detection of Salient Features in 3-D Transesophageal Images. *40:2868-2884.*

**Contrast agents**

**Synonyms:** Contrast media, microbubbles

**Scopus Search:** Contrast AND agent\* OR medi\* OR microbubble\* OR “micro-bubble\*” OR Optison OR Sonovue OR Levovist OR Quantison OR Definity

*See also:* **cavitation, contrast enhanced ultrasound**

Yan F, Li X, Jiang C, Jin Q, Zhang Z, Shandas R, Wu J, Liu X, Zheng H. A Novel Microfluidic Chip for Assessing Dynamic Adhesion Behavior of Cell-Targeting Microbubbles. *40:148-157.*

Chen X, Leeman JE, Wang J, Pacella JJ, Villanueva FS. New Insights into Mechanisms of Sonothrombolysis Using Ultra-High-Speed Imaging. *40:258-262.*

Chen JL, Dhanaliwala AH, Dixon AJ, Klibanov AL, Hossack JA. Synthesis and Characterization of Transiently Stable Albumin-Coated Microbubbles via a Flow-Focusing Microfluidic Device. *40:400-409.*

Raymond JL, Haworth KJ, Bader KB, Radhakrishnan K, Griffin JK, Huang S-L, McPherson DD, Holland CK. Broadband Attenuation Measurements of Phospholipid-Shelled Ultrasound Contrast Agents. *40:410-421.*

Azarpeyvand M, Azarpeyvand M. Application of Acoustic Bessel Beams for Handling of Hollow Porous Spheres. *40:422-433.*

Sehgal CM, Wood AKW. Re “Disruption of Tumor Neovasculature by Microbubble Enhanced Ultrasound: A Potential New Physical Therapy of Anti-angiogenesis”. *40:455-456.*

Gao S, Liu Z, Xie F. Reply to the Letter to the Editor re “Disruption of Tumor Neovasculature by Microbubble Enhanced Ultrasound: A Potential New Physical Therapy of Anti-angiogenesis”. *40:456.*

Juffermans LJM, Meijering BDM, Henning RH, Deelman LE. Ultrasound and Microbubble-Targeted Delivery of Small Interfering RNA Into Primary Endothelial Cells Is More Effective Than Delivery of Plasmid DNA. *40:532-540.*

Sun C, Sboros V, Butler MB, Moran CM. In Vitro Acoustic Characterization of Three Phospholipid Ultrasound Contrast Agents from 12 to 43 MHz. *40:541-550.*

Kang S-T, Huang Y-L, Yeh C-K. Characterization of Acoustic Droplet Vaporization for Control of Bubble Generation Under Flow Conditions. *40:551-561.*

Shekhar H, Awuor I, Thomas K, Rychak JJ, Doyley MM. The Delayed Onset of Subharmonic and Ultraharmonic Emissions from a Phospholipid-Shelled Microbubble Contrast Agent. *40:727-738.*

Chuang Y-H, Wang Y-H, Chang T-K, Lin C-J, Li P-C. Albumin Acts Like Transforming Growth Factor  $\beta$ 1 in Microbubble-Based Drug Delivery. *40:765-774.*

Tremblay-Darveau C, Williams R, Burns PN. Measuring Absolute Blood Pressure Using Microbubbles. *40:775-787.*

Elbes D, Denost Q, Robert B, Köhler MO, Tanter M, Bruno Q. Magnetic Resonance Imaging for the Exploitation of Bubble-Enhanced Heating by High-Intensity Focused Ultrasound: A Feasibility Study in ex Vivo Liver. *40:956-964.*

Qin P, Xu L, Hu Y, Zhong W, Cai P, Du L, Jin L, Yu ACH. Sonoporation-Induced Depolarization of Plasma Membrane Potential: Analysis of Heterogeneous Impact. *40:979-989.*

Muramoto T, Shimoya R, Yoshida K, Watanabe Y. Evaluation of the Specific Adsorption of Biotinylated Microbubbles Using a Quartz Crystal Microbalance. *40:1027-1033.*

Sato T, Mori S, Arai Y, Kodama T. The Combination of Intralymphatic Chemotherapy with Ultrasound and Nano-Microbubbles Is Efficient in the Treatment of Experimental Tumors in Mouse Lymph Nodes. *40:1237-1249.*

Wei S, Fu N, Sun Y, Yang Z, Lei L, Huang P, Yang B. Targeted Contrast-Enhanced Ultrasound Imaging of Angiogenesis in an Orthotopic Mouse Tumor Model of Renal Carcinoma. *40:1250-1259.*

Fan Z, Chen D, Deng CX. Characterization of the Dynamic Activities of a Population of Microbubbles Driven by Pulsed Ultrasound Exposure in Sonoporation. *40:1260-1272.*

Zhang Y, Ye C, Xu Y, Dong X, Li J, Liu R, Gao Y. Ultrasound-Mediated Microbubble Destruction Increases Renal Interstitial Capillary Permeability in Early Diabetic Nephropathy Rats. *40:1273-1281.*

Renaud G, Bosch JG, Van Der Steen AFW, De Jong N. Low-Amplitude Non-linear Volume Vibrations of Single Microbubbles Measured with an “Acoustical Camera”. *40:1282-1295.*

Reznik N, Lajoine G, Shpak O, Gelderblom EC, Williams R, de Jong N, Versluis M, Burns PN. On the Acoustic Properties of Vaporized Submicron Perfluorocarbon Droplets. *40:1379-1384.*

Luan Y, Lajoine G, Gelderblom E, Skachkov I, van der Steen AFW, Vos HJ, Versluis M, De Jong N. Lipid Shedding from Single Oscillating Microbubbles. *40:1834-1846.*

Paproski RJ, Forbrich A, Hitt M, Zemp R. RNA Biomarker Release with Ultrasound and Phase-Change Nanodroplets. *40:1847-1856.*

Acconcia C, Leung BYC, Manjunath A, Goertz DE. Interactions between Individual Ultrasound-Stimulated Microbubbles and Fibrin Clots. *40:2134-2150.*

Forbrich A, Paproski R, Hitt M, Zemp R. Comparing Efficiency of micro-RNA and mRNA Biomarker Liberation with Microbubble-Enhanced Ultrasound Exposure. *40:2207-2216.*

- Sennoga CA, Seddon JM, Frueh JA, Zhang D, Haskard DO, Eckersley RJ, Tang M-X. Dynamics of Targeted Microbubble Adhesion Under Pulsatile Compared with Steady Flow. *40:2445-2457.*
- Kilroy JP, Klibanov AL, Wamhoff BR, Bowles DK, Hossack JA. Localized in Vivo Model Drug Delivery with Intravascular Ultrasound and Microbubbles. *40:2458-2467.*
- Kothapalli SVVN, Oddo L, Paradossi G, Brodin L-Å, Grishenkov D. Assessment of the Viscoelastic and Oscillation Properties of a Nano-engineered Multimodality Contrast Agent. *40:2476-2487.*
- Gao R, Zhou X, Yang Y, Wang Z. Transfection of wtp53 and Rb94 Genes Into Retinoblastomas of Nude Mice by Ultrasound-Targeted Microbubble Destruction. *40:2662-2670.*
- Contrast enhanced ultrasound**  
**Synonyms:** contrast echocardiography, contrast ultrasound, contrast sonography, contrast-enhanced, CEUS  
**Scopus Search:** "contrast enhanc\*"
- See also:* **Doppler, contrast agents, harmonic imaging**
- Cao X-L, Bao W, Zhu S-G, Wang L-H, Sun M-H, Wang L, Men Y-M, Xue J. Contrast-Enhanced Ultrasound Characteristics of Breast Cancer: Correlation with Prognostic Factors. *40:11-17.*
- Müller HFG, Viacoz A, Kuzmanovic I, Bonvin C, Burkhardt K, Bochaton-Piallat M-L, Sztajzel R. Contrast-Enhanced Ultrasound Imaging of Carotid Plaque Neo-vascularization: Accuracy of Visual Analysis. *40:18-24.*
- Akkus Z, Hoogi A, Renaud G, van den Oord SCH, ten Kate GL, Schinkel AFL, Adam D, de Jong N, van der Steen AFW, Bosch JG. New Quantification Methods for Carotid Intra-plaque Neovascularization Using Contrast-Enhanced Ultrasound. *40:25-36.*
- Liu H, Jiang Y, Dai Q, Zhu Q, Wang L, Lu J. Peripheral Enhancement of Breast Cancers on Contrast-Enhanced Ultrasound: Correlation with Microvessel Density and Vascular Endothelial Growth Factor Expression. *40:293-299.*
- Paltiel HJ, Estrada Jr CR, Alomari AI, Stamoulis C, Passerotti CC, Meral FC, Lee RS, Clement GT. Multi-planar Dynamic Contrast-Enhanced Ultrasound Assessment of Blood Flow in a Rabbit Model of Testicular Torsion. *40:361-370.*
- Denbeigh JM, Nixon BA, Hudson JM, Puri MC, Foster FS. VEGFR2-Targeted Molecular Imaging in the Mouse Embryo: An Alternative to the Tumor Model. *40:389-399.*
- Li Y, Guo A, Tang J, Li Q, Fei X, Zhang Y, Gao J. Evaluation of Sonographic Features for Patients with Urinary Bladder Paraganglioma: A Comparison with Patients with Urothelial Carcinoma. *40:478-484.*
- Ling W, Lu Q, Lu C, Quan J, Ma L, Li J, He D, Liu J, Yang J, Wen T, Wu H, Zhu H, Luo Y. Effects of Vascularity and Differentiation of Hepatocellular Carcinoma on Tumor and Liver Stiffness: In Vivo and in Vitro Studies. *40:739-746.*
- Dudau C, Hameed S, Gibson D, Muthu S, Sandison A, Eckersley RJ, Clarke P, Cosgrove DO, Lim AK. Can Contrast-Enhanced Ultrasound Distinguish Malignant from Reactive Lymph Nodes in Patients with Head and Neck Cancers? *40:747-754.*
- Sugimoto K, Moriyasu F, Saito K, Yoshiara H, Imai Y. Kupffer-Phase Findings of Hepatic Hemangiomas in Contrast-Enhanced Ultrasound with Sonazoid. *40:1089-1095.*
- Kee PH, Kim H, Huang S, Laing ST, Moody MR, Vela D, Klegerman ME, McPherson DD. Nitric Oxide Pretreatment Enhances Atheroma Component Highlighting in Vivo with Intercellular Adhesion Molecule-1-Targeted Echogenic Liposomes. *40:1167-1176.*
- Maresca D, Skachkov I, Renaud G, Jansen K, van Soest G, de Jong N, van der Steen AFW. Imaging Microvasculature with Contrast-Enhanced Ultraharmonic Ultrasound. *40:1318-1328.*
- Cai Y, Du L, Li F, Gu J, Bai M. Quantification of Enhancement of Renal Parenchymal Masses with Contrast-Enhanced Ultrasound. *40:1387-1393.*
- Li C, He W, Guo D, Chen L, Jin X, Wang W, Huang B, Wang W. Quantification of Carotid Plaque Neovascularization Using Contrast-Enhanced Ultrasound With Histopathologic Validation. *40:1827-1833.*
- Sekimoto T, Maruyama H, Kiyono S, Kondo T, Shimada T, Ishibashi H, Takahashi M, Yokosuka O, Yamaguchi T. Hepatic Filling Rate of a Microbubble Agent: A Novel Predictor of Long-Term Outcomes in Patients With Cirrhosis. *40:2082-2088.*
- Izamis M-L, Efstathiades A, Keravnou C, Leen EL, Averkiou MA. Dynamic Contrast-Enhanced Ultrasound of Slaughterhouse Porcine Livers in Machine Perfusion. *40:2217-2230.*
- Hao N, Liu K, Guo Z-N, Wu X, Yang Y, Xing Y. Comparison of Two Contrast Agents for Right-to-Left Shunt Diagnosis with Contrast-Enhanced Transcranial Doppler. *40:2317-2320.*
- Liu X, Yang YL, Sun SG, Yang RJ, Wang J, Li Y, Zhang L, Duan YY. A New Method of Measurement of Cerebral Circulation Time: Contrast-Enhanced Ultrasonography in Healthy Adults and Patients with Intracranial Shunts. *40:2372-2378.*
- Rix A, Palmowski M, Gremse F, Palmowski K, Lederle W, Kiessling F, Bzyl J. Influence of Repetitive Contrast Agent Injections on Functional and Molecular Ultrasound Measurements. *40:2468-2475.*
- Liu D, Qian L, Wang J, Hu X, Qiu L. Hepatic Perfusion Parameters of Contrast-Enhanced Ultrasonography Correlate With the Severity of Chronic Liver Disease. *40:2556-2563.*



Gentile M, De Vito A, Azzini C, Tamborino C, Casetta I. Adding Blood to Agitated Saline Significantly Improves Detection of Right-to-Left Shunt by Contrast-Transcranial Color-Coded Duplex Sonography. *40:2637-2641.*

Sun J, Deng Y-B, Liu K, Wang Y-B. Effects of Noradrenaline and Adenosine Triphosphate on the Degree on Contrast Enhancement in a Rabbit Model of Atherosclerosis during Contrast-Enhanced Ultrasonography. *40:2655-2661.*

Xu J-MG, Le-Han; Xu, Hui-Xiong; Zheng, Shu-Guang; Liu, Lin-Na; Sun, Li-Ping; Lu, Ming-De; Xie, Xiao-Yan; Wang, Wen-Ping; Hu, Bing; Yan, Kun; Ding, Hong; Tang, Shao-Shan; Qian, Lin-Xue; Luo, Bao-Ming. Differential diagnosis of gallbladder wall thickening: the usefulness of contrast enhanced ultrasound. *40:2794-2804.*

## D

### Dental

**Synonyms:** teeth

**Scopus Search:** Dent\* OR t\*th OR enamel

Al-Daghreer S, Doschak M, Sloan AJ, Major PW, Heo G, Scurtescu C, Tsui YY, El-Bialy T. Effect of Low-Intensity Pulsed Ultrasound on Orthodontically Induced Root Resorption in Beagle Dogs. *40:1187-1196.*

Vayron R, Mathieu V, Michel A, Haïat G. Assessment of In Vitro Dental Implant Primary Stability Using an Ultrasonic Method. *40:2885-2894.*

### Doppler ultrasound

**Scopus Search:** Doppler

Mehregan F, Tournoux F, Muth S, Pibarot P, Rieu R, Cloutier G, Garcia D. Doppler Vortography: A Color Doppler Approach to Quantification of Intraventricular Blood Flow Vortices. *40:210-221.*

Brekke B, Nilsen LCL, Lund J, Torp H, Bjastad T, Amundsen BH, Stoylen A, Aase SA. Ultra-high Frame Rate Tissue Doppler Imaging. *40:222-231.*

Hernandez-Andrade E, Ahn H, Szalai G, Korzeniewski SJ, Wang B, King M, Chaiworapongsa T, Than NG, Romero R. Evaluation of Utero-placental and Fetal Hemodynamic Parameters Throughout Gestation in Pregnant Mice Using High-Frequency Ultrasound. *40:351-360.*

Li Y, Guo A, Tang J, Li Q, Fei X, Zhang Y, Gao J. Evaluation of Sonographic Features for Patients with Urinary Bladder Paraganglioma: A Comparison with Patients with Urothelial Carcinoma. *40:478-484.*

Sanderson J, Wu L, Mahajan A, Meriki N, Henry A, Welsh AW. Selection of the Sub-noise Gain Level for Acquisition of VOCAL Data Sets: A Reliability Study. *40:562-567.*

Nestaas E, Fugelseth D, Støylen A. Automated, Objective and Expert-Independent Assessment of the Analyzability of Strain and Strain Rate in Tissue Doppler Images in Term

Neonates by Analysis of Beat-to-Beat Variation. *40:637-642.*

Barry CT, Hah Z, Partin A, Mooney RA, Chuang K-H, Augustine A, Almudevar A, Cao W, Rubens DJ, Parker KJ. Mouse Liver Dispersion for the Diagnosis of Early-Stage Fatty Liver Disease: A 70-Sample Study. *40:704-713.*

Wallace S, Logallo N, Faiz KW, Lund C, Brucher R, Russell D. Relative Blood Flow Changes Measured Using Calibrated Frequency-Weighted Doppler Power at Different Hematocrit Levels. *40:828-836.*

Xu T, Hozan M, Bashford GR. In Vivo Lateral Blood Flow Velocity Measurement Using Speckle Size Estimation. *40:931-937.*

Ekröll IK, Dahl T, Torp H, Løvestakken L. Combined Vector Velocity and Spectral Doppler Imaging for Improved Imaging of Complex Blood Flow in the Carotid Arteries. *40:1629-1640.*

Staelens ASE, Tomsin K, Oben J, Mesens T, Grieten L, Gyselaers W. Improving the Reliability of Venous Doppler Flow Measurements: Relevance of Combined ECG, Training and Repeated Measures. *40:1722-1728.*

Pinter SZ, Kim D-R, Hague MN, Chambers AF, MacDonald IC, Lacefield JC. A Method to Validate Quantitative High-Frequency Power Doppler Ultrasound With Fluorescence in Vivo Video Microscopy. *40:1908-1917.*

Zhang C-X, Xu X-Y, Wang L, Huang M, Li L. Esophageal Varix Predictive Performance of Lower Esophageal Doppler Signals During the Swallowing Process. *40:2058-2063.*

Yiu BYS, Lai SSM, Yu ACH. Vector Projectile Imaging: Time-Resolved Dynamic Visualization of Complex Flow Patterns. *40:2295-2309.*

Gentile M, De Vito A, Azzini C, Tamborino C, Casetta I. Adding Blood to Agitated Saline Significantly Improves Detection of Right-to-Left Shunt by Contrast-Transcranial Color-Coded Duplex Sonography. *40:2637-2641.*

Yonan KA, Greene ER, Sharrar JM, Caprihan A, Qualls C, Roldan CA. Middle Cerebral Artery Blood Flows by Combining TCD Velocities and MRA Diameters: In Vitro and In Vivo Validations. *40:2692-2699.*

Pedersen MM, Pihl MJ, Haugaard P, Hansen KL, Lange T, Lönn L, Nielsen MB, Jensen JA. Novel Flow Quantification of the Carotid Bulb and the Common Carotid Artery with Vector Flow Ultrasound. *40:2700-2706.*

Hansen PM, Olesen JB, Pihl MJ, Lange T, Heerwagen S, Pedersen MM, Rix M, Lönn L, Jensen JA, Nielsen MB. Volume Flow in Arteriovenous Fistulas Using Vector Velocity Ultrasound. *40:2707-2714.*

Chen H-J, Liao W-C, Liang S-J, Li C-H, Tu C-Y, Hsu W-H. Diagnostic Impact of Color Doppler Ultrasound-Guided Core Biopsy on Fine-Needle Aspiration of Anterior Mediastinal Masses. *40:2768-2776.*

**Drug delivery**

**Synonyms:** controlled release, targeted delivery, site-specific delivery, sonodynamic

**Scopus Search:** “controlled release” OR “drug delivery” OR “targeted delivery” OR “Site Specific delivery”

*See also:* **sonoporation**

Sorace AG, Korb M, Warram JM, Umphrey H, Zinn KR, Rosenthal E, Hoyt K. Ultrasound-Stimulated Drug Delivery for Treatment of Residual Disease after Incomplete Resection of Head and Neck Cancer. *40:755-764.*

Chuang Y-H, Wang Y-H, Chang T-K, Lin C-J, Li P-C. Albumin Acts Like Transforming Growth Factor  $\beta$ 1 in Microbubble-Based Drug Delivery. *40:765-774.*

Kee PH, Kim H, Huang S, Laing ST, Moody MR, Vela D, Klegerman ME, McPherson DD. Nitric Oxide Pretreatment Enhances Atheroma Component Highlighting in Vivo with Intercellular Adhesion Molecule-1-Targeted Echogenic Liposomes. *40:1167-1176.*

Razavi A, Clement D, Fowler RA, Birer A, Chavier F, Mestas J-I, Romano F, Chapelon J-Y, Béglé A, Lafon C. Contribution of Inertial Cavitation in the Enhancement of In Vitro Transscleral Drug Delivery. *40:1216-1227.*

Sato T, Mori S, Arai Y, Kodama T. The Combination of Intralymphatic Chemotherapy with Ultrasound and Nano-/Microbubbles Is Efficient in the Treatment of Experimental Tumors in Mouse Lymph Nodes. *40:1237-1249.*

Chae SY, Kim Y-s, Park MJ, Yang J, Park H, Namgung M-S, Rhim H, Lim HK. High-Intensity Focused Ultrasound-Induced, Localized Mild Hyperthermia to Enhance Anticancer Efficacy of Systemic Doxorubicin: An Experimental Study. *40:1554-1563.*

Kilroy JP, Klivanov AL, Wamhoff BR, Bowles DK, Hossack JA. Localized in Vivo Model Drug Delivery with Intravascular Ultrasound and Microbubbles. *40:2458-2467.*

**E****Echocardiography**

**Synonyms:** cardiac imaging, sonocardiography

**Scopus Search:** echocard\* OR “card\* imaging” OR “card\* ultraso\*” OR sonocard\*

*See also:* **cardiology, contrast enhanced ultrasound**

Nanna M. Echocardiography (Second Edition), Paul Leeson, Daniel Augustine, Andrew R.J. Mitchell, Harald Becher (Eds.). Oxford University Press, Oxford, United Kingdom (2012), 672, ISBN: 978-0-19-959179-4. *40:265.*

Parlak IB, Egi SM, Ademoglu A, Germonpré P, Esen OB, Marroni A, Balestra C. Bubble Stream Reveals Functionality of the Right-to-Left Shunt: Detection of a Potential Source for Air Embolism. *40:330-340.*

van Slochteren FJ, van der Spoel TIG, Hansen HHG, Bovendeerd PHM, Doevendans PA, Sluijter JPG, Chamuleau SAJ, de Korte CL. Layer-Specific Radiofrequency Ultrasound-Based Strain Analysis in a Porcine Model of Ischemic Cardiomyopathy Validated by a Geometric Model. *40:378-388.*

Saris AECM, Nillesen MM, Lopata RGP, de Korte CL. Correlation-Based Discrimination Between Cardiac Tissue and Blood for Segmentation of the Left Ventricle in 3-D Echocardiographic Images. *40:596-610.*

Xu Z-X, Zhong J-Q, Zhang W, Yue X, Rong B, Zhu Q, Zheng Z, Zhang Y. Atrial Conduction Delay Predicts Atrial Fibrillation in Paroxysmal Supraventricular Tachycardia Patients after Radiofrequency Catheter Ablation. *40:1133-1137.*

Sugioka K, Fujita S, Iwata S, Ito A, Matsumura Y, Hanatani A, Doi A, Takagi M, Naruko T, Ueda M, Yoshiyama M. Relationship between CHADS2 Score and Complex Aortic Plaques by Transesophageal Echocardiography in Patients with Nonvalvular Atrial Fibrillation. *40:2358-2364.*

Arbeille P, Provost R, Zuj K, Dimouro D, Georgescu M. Teles-operated Echocardiography Using a Robotic Arm and an Internet Connection. *40:2521-2529.*

Bondoc AB, Detombe S, Dunmore-Buyze J, Guppell KM, Liu L, Kaszuba A, Han S, McGirr R, Hadway J, Drangova M, Hoffman LM. Application of 3-D Echocardiography and Gated Micro-Computed Tomography to Assess Cardiomyopathy in a Mouse Model of Duchenne Muscular Dystrophy. *40:2857-2867.*

**Editorial**

Kremkau FW. Introduction to the Festschrift for Robert C. Waag. *40:653-654.*

**Elastography**

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

**Scopus Search:** \*elastography OR “elastic\* imaging” OR “strain imaging” OR “vibro\*acoustography” OR “Modulus Contrast”

*See also:* **Tissue elasticity**

Zhang H, Qin D, Yang Z, Wang K, Sun F, Li B, Cui G. Comparison of Diffuse Optical Tomography, Ultrasound Elastography and Mammography in the Diagnosis of Breast Tumors. *40:1-10.*

DeWall RJ, Jiang J, Wilson JJ, Lee KS. Visualizing Tendon Elasticity in an ex Vivo Partial Tear Model. *40:158-167.*

Nguyen MM, Zhou S, Robert J-I, Shamdasani V, Xie H. Development of Oil-in-Gelatin Phantoms for Viscoelasticity Measurement in Ultrasound Shear Wave Elastography. *40:168-176.*

- Nabavizadeh A, Greenleaf JF, Fatemi M, Urban MW. Optimized Shear Wave Generation Using Hybrid Beamforming Methods. 40:188-199.
- Ramnarine KV, Garrard JW, Dexter K, Nduwayo S, Panerai RB, Robinson TG. Shear Wave Elastography Assessment of Carotid Plaque Stiffness: In Vitro Reproducibility Study. 40:200-209.
- Wang C-Z, Zheng J, Huang Z-P, Xiao Y, Song D, Zeng J, Zheng H-R, Zheng R-Q. Influence of Measurement Depth on the Stiffness Assessment of Healthy Liver with Real-Time Shear Wave Elastography. 40:461-469.
- Fontanilla T, Cañas T, Macia A, Alfageme M, Gutierrez Junquera C, Malalana A, Luz Cilleruelo M, Roman E, Miralles M. Normal Values of Liver Shear Wave Velocity in Healthy Children Assessed by Acoustic Radiation Force Impulse Imaging Using a Convex Probe and a Linear Probe. 40:470-477.
- Xia R, Thittai AK. Real-Time Monitoring of High-Intensity Focused Ultrasound Treatment Using Axial Strain and Axial-Shear Strain Elastograms. 40:485-495.
- Holm S, Näsholm SP. Comparison of Fractional Wave Equations for Power Law Attenuation in Ultrasound and Elastography. 40:695-703.
- Ko SY, Kim E-K, Sung JM, Moon HJ, Kwak JY. Diagnostic Performance of Ultrasound and Ultrasound Elastography with Respect to Physician Experience. 40:854-863.
- Maurice RL, Vaujois L, Dahdah N, Chibab N, Maurice A, Nuyt A-M, Lévy É, Bigras J-L. Carotid Wall Elastography to Assess Midterm Vascular Dysfunction Secondary to Intrauterine Growth Restriction: Feasibility and Comparison with Standardized Intima-Media Thickness. 40:864-870.
- Majdouline Y, Ohayon J, Keshavarz-Motamed Z, Roy Cardinal M-H, Garcia D, Allard L, Lerouge S, Arsenault F, Soulez G, Cloutier G. Endovascular Shear Strain Elastography for the Detection and Characterization of the Severity of Atherosclerotic Plaques: In Vitro Validation and In Vivo Evaluation. 40:890-903.
- Liu Y, Herman BA, Sonesson JE, Harris GR. Thermal Safety Simulations of Transient Temperature Rise during Acoustic Radiation Force-Based Ultrasound Elastography. 40:1001-1014.
- Park HY, Han KH, Yoon JH, Moon HJ, Kim MJ, Kim E-K. Intra-observer Reproducibility and Diagnostic Performance of Breast Shear-Wave Elastography in Asian Women. 40:1058-1064.
- Zhang B, Ma X, Zhan W, Zhu F, Li M, Huang J, Li Y, Xue L, Liu L, Wei Y. Real-Time Elastography in the Diagnosis of Patients Suspected of Having Prostate Cancer: A Meta-analysis. 40:1400-1407.
- Sayed A, Layne G, Abraham J, Mukdadi OM. 3-D Visualization and Non-linear Tissue Classification of Breast Tumors Using Ultrasound Elastography In Vivo. 40:1490-1502.
- Umemoto T, Ueno E, Matsumura T, Yamakawa M, Bando H, Mitake T, Shiina T. Ex Vivo and In Vivo Assessment of the Non-linearity of Elasticity Properties of Breast Tissues for Quantitative Strain Elastography. 40:1755-1768.
- Jin Z-Q, Lin M-Y, Hu W-H, Li W-Y, Bai S-J. Gray-Scale Ultrasonography Combined with Elastography Imaging for the Evaluation of Papillary Thyroid Microcarcinoma: As a Prognostic Clinicopathology Factor. 40:1769-1777.
- Lopata RGP, Peters MFJ, Nijs J, Oomens CWJ, Rutten MCM, van de Vosse FN. Vascular Elastography: A Validation Study. 40:1882-1895.
- Yoneda M, Thomas E, Schiff ER. Re: “Acoustic Radiation Force Impulse and Supersonic Shear Imaging Versus Transient Elastography for Liver Fibrosis Assessment”. 40:1918.
- Sporea I, Şirli R. Reply to Letter to the Editor re: “Acoustic Radiation Force Impulse and Supersonic Shear Imaging versus Transient Elastography for Liver Fibrosis Assessment”. 40:1918-1919.
- Paparo F, Corradi F, Cevasco L, Revelli M, Marziano A, Molini L, Cenderello G, Cassola G, Rollandi GA. Real-Time Elastography in the Assessment of Liver Fibrosis: A Review of Qualitative and Semi-quantitative Methods for Elastogram Analysis. 40:1923-1933.
- Nakamura M, Ikezoe T, Kobayashi T, Umegaki H, Takeno Y, Nishishita S, Ichihashi N. Acute Effects of Static Stretching on Muscle Hardness of the Medial Gastrocnemius Muscle Belly in Humans: An Ultrasonic Shear-Wave Elastography Study. 40:1991-1997.
- Yoon JH, Yoo J, Kim E-K, Moon HJ, Lee HS, Seo JY, Park HY, Park W-J, Kwak JY. Real-Time Elastography in the Evaluation of Diffuse Thyroid Disease: A Study Based on Elastography Histogram Parameters. 40:2012-2019.
- Kim M-H, Luo S, Ko SH, Jung S-L, Lim D-J, Kim Y. Elastography Can Effectively Decrease the Number of Fine-Needle Aspiration Biopsies in Patients with Calcified Thyroid Nodules. 40:2329-2335.
- Youk JH, Son EJ, Gweon HM, Kim H, Park YJ, Kim J-A. Comparison of Strain and Shear Wave Elastography for the Differentiation of Benign From Malignant Breast Lesions, Combined With B-mode Ultrasonography: Qualitative and Quantitative Assessments. 40:2336-2344.
- Huang Z, Zheng J, Zeng J, Wang X, Wu T, Zheng R. Normal Liver Stiffness in Healthy Adults Assessed By Real-Time Shear Wave Elastography and Factors That Influence This Method. 40:2549-2555.
- Orlacchio A, Chegai F, Del Giudice C, Anselmo A, Iaria G, Palmieri G, Di Caprera E, Tosti D, Costanzo E, Tisone G,

Simonetti G. Kidney Transplant: Usefulness of Real-Time Elastography (RTE) in the Diagnosis of Graft Interstitial Fibrosis. *40:2564-2572.*

Dejaco C, De Zordo T, Heber D, Hartung W, Lipp R, Lutfi A, Magyar M, Zauner D, Lackner A, Duftner C, Horwath-Winter J, Graninger WB, Hermann J. Real-Time Sonoelastography of Salivary Glands for Diagnosis and Functional Assessment of Primary Sjögrens Syndrome. *40:2759-2767.*

### Emboli detection

**Synonyms:** embolic signal, microembolic signal, embolus, embolism

**Scopus Search:** embol\* OR occlusion OR clot

See also: **thrombolysis**

Parlak IB, Egi SM, Ademoglu A, Germonpré P, Esen OB, Marroni A, Balestra C. Bubble Stream Reveals Functionality of the Right-to-Left Shunt: Detection of a Potential Source for Air Embolism. *40:330-340.*

Banahan C, Rogerson Z, Rousseau C, Ramnarine KV, Evans DH, Chung EML. An In Vitro Comparison of Embolus Differentiation Techniques for Clinically Significant Macroemboli: Dual-Frequency Technique versus Frequency Modulation Method. *40:2642-2654.*

### Endoscopic ultrasonography

**Synonyms:** EUS

**Scopus Search:** "Endoscopic" OR "EUS"

Inglis S, Janeczko A, Ellis W, Plevris JN, Pye SD. Assessing the Imaging Capabilities of Radial Mechanical and Electronic Echo-endoscopes Using the Resolution Integral. *40:1896-1907.*

### Errata

Erratum to: Stasinopoulou M, Mantziaras G, Paronis E, Balafas E, Lelovas P, Samara A, Kostomitsopoulos N. Use of Real-Time Ultrasonography as an Alternative Method for Early Detection, Confirmation and Evaluation of Rat Pregnancy. *Ultrasound Med Biol* 2014; *40(6):1372-1378.* Erratum. *40:650.*

Erratum to: Deleaval F, Bouvier A, Finet G, Cloutier G, Yazdani SK, Le Floc'h S, Clarysse P, Pettigrew RI, Ohayon J. The Intravascular Ultrasound Elasticity-Palpography Technique Revisited: A Reliable Tool for the In Vivo Detection of Vulnerable Coronary Atherosclerotic Plaques. *Ultrasound Med Biol* 2013; *39:1469-1481.* Erratum. *40:1034.*

Erratum to: Thakkar D, Gupta R, Monson K, Rapoport N. Effect of Ultrasound on the Permeability of Vascular Wall to Nanomulsion Droplets. *Ultrasound Med Biol* 2013; *39(10):1804-1811.* Erratum. *40:2545.*

### Eyes

**Synonyms:** ocular, retinal, cornea

**Scopus Search:** eye\* OR ocular OR retin\* OR cornea\*

Razavi A, Clement D, Fowler RA, Birer A, Chavrier F, Mestas J-I, Romano F, Chapelon J-Y, Béglé A, Lafon C. Contribution

of Inertial Cavitation in the Enhancement of In Vitro Transscleral Drug Delivery. *40:1216-1227.*

Mikula E, Hollman K, Chai D, Jester JV, Juhasz T. Measurement of Corneal Elasticity with an Acoustic Radiation Force Elasticity Microscope. *40:1671-1679.*

Aptel F, Béglé A, Razavi A, Romano F, Charrel T, Chapelon J-Y, Denis P, Lafon C. Short- and Long-Term Effects on the Ciliary Body and the Aqueous Outflow Pathways of High-Intensity Focused Ultrasound Cyclocoagulation. *40:2096-2106.*

Buschschlüter S, Koch C, von Eicken J, Höh H. Computation of the Temperature Rise at the Corneal Endothelium during Cataract Surgery by Modeling of Heat Generation Inside the Anterior Chamber. *40:2431-2444.*

Gao R, Zhou X, Yang Y, Wang Z. Transfection of wtp53 and Rb94 Genes Into Retinoblastomas of Nude Mice by Ultrasound-Targeted Microbubble Destruction. *40:2662-2670.*

### G

#### Gastroenterology

**Synonyms:** Gastrointestinal Tract, gastric, digestive system, oesophageal

**Scopus Search:** Gastr\* AND digestive OR oesophag\* OR esophag\*

See also: **liver, pancreas**

Arhami Dolatabadi A, Amini A, Hatamabadi H, Mohammadi P, Faghihi-Kashani S, Derakhshanfar H, Tabatabaee SM, Moghimi M, Kabir A. Comparison of the Accuracy and Reproducibility of Focused Abdominal Sonography for Trauma Performed by Emergency Medicine and Radiology Residents. *40:1476-1482.*

Piyarom P, Kaewlai R. False-Negative Appendicitis at Ultrasound: Nature and Association. *40:1483-1489.*

Shen H-L, Yang S-P, Hong L-W, Lin L-Q, Wang K-J, Cai X-H, Lv G-R. Evaluation of Gastric Emptying in Diabetic Gastropathy by an Ultrasonic Whole Stomach Cylinder Method. *40:1998-2003.*

Zhang C-X, Xu X-Y, Wang L, Huang M, Li L. Esophageal Varix Predictive Performance of Lower Esophageal Doppler Signals During the Swallowing Process. *40:2058-2063.*

Xu J-MG, Le-Han; Xu, Hui-Xiong; Zheng, Shu-Guang; Liu, Lin-Na; Sun, Li-Ping; Lu, Ming-De; Xie, Xiao-Yan; Wang, Wen-Ping; Hu, Bing; Yan, Kun; Ding, Hong; Tang, Shao-Shan; Qian, Lin-Xue; Luo, Bao-Ming. Differential diagnosis of gallbladder wall thickening: the usefulness of contrast enhanced ultrasound. *40:2794-2804.*

#### Gene therapy

**Synonyms:** gene delivery, Gene transfection, Gene transfer

**Scopus Search:** gene AND therapy OR transfection OR transfer



Juffermans LJM, Meijering BDM, Henning RH, Deelman LE. Ultrasound and Microbubble-Targeted Delivery of Small Interfering RNA Into Primary Endothelial Cells Is More Effective Than Delivery of Plasmid DNA. 40:532-540.

Millán-Chiu B, Camacho G, Varela-Echavarría A, Tamariz E, Fernández F, López-Marín LM, Loske AM. Shock Waves and DNA-Cationic Lipid Assemblies: A Synergistic Approach to Express Exogenous Genes in Human Cells. 40:1599-1608.

Gao R, Zhou X, Yang Y, Wang Z. Transfection of wtp53 and Rb94 Genes Into Retinoblastomas of Nude Mice by Ultrasound-Targeted Microbubble Destruction. 40:2662-2670.

### Genitourinary

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

**Scopus Search:** Genitourinary OR urin\* OR urodynamic\* OR bladder OR reproduc\* OR pelvi\*

See also: **prostate**

Paltiel HJ, Estrada Jr CR, Alomari AI, Stamoulis C, Passerotti CC, Meral FC, Lee RS, Clement GT. Multi-planar Dynamic Contrast-Enhanced Ultrasound Assessment of Blood Flow in a Rabbit Model of Testicular Torsion. 40:361-370.

Li Y, Guo A, Tang J, Li Q, Fei X, Zhang Y, Gao J. Evaluation of Sonographic Features for Patients with Urinary Bladder Paraganglioma: A Comparison with Patients with Urothelial Carcinoma. 40:478-484.

Dahl JJ, Sheth NM. Reverberation Clutter from Subcutaneous Tissue Layers: Simulation and in Vivo Demonstrations. 40:714-726.

Arif M, Idzenga T, van Mastrigt R, de Korte CL. Estimation of Urinary Flow Velocity in Models of Obstructed and Unobstructed Urethras by Decorrelation of Ultrasound Radiofrequency Signals. 40:938-946.

Zhang M, Fu S, Zhang Y, Tang J, Zhou Y. Elastic Modulus of the Prostate: A New Non-invasive Feature to Diagnose Bladder Outlet Obstruction in Patients with Benign Prostatic Hyperplasia. 40:1408-1413.

## H

### Harmonic Imaging

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

**Scopus Search:** "Harmonic" OR "TIH" OR "PIHI" OR

"phase inversion" OR "pulse inversion" OR "Nonlinear imaging" OR "sub\*harmonic"

See also: **contrast enhanced imaging**

Shahmirzadi D, Hou GY, Chen J, Konofagou EE. Ex Vivo Characterization of Canine Liver Tissue Viscoelasticity after High-Intensity Focused Ultrasound Ablation. 40:341-350.

Nguyen MM, Shin J, Yen J. Harmonic Imaging with Fresnel Beamforming in the Presence of Phase Aberration. 40:2488-2498.

### Healing

**Synonyms:** regeneration, regenerative

**Scopus Search:** healing OR regener\*

See also: **therapeutic applications of ultrasound**

Jang KW, Ding L, Seol D, Lim T-H, Buckwalter JA, Martin JA. Low-Intensity Pulsed Ultrasound Promotes Chondrogenic Progenitor Cell Migration via Focal Adhesion Kinase Pathway. 40:1177-1186.

Akiyama H, Hachiya Y, Otsuka H, Kurisuno M, Kawanabe K, Katayama N, Ohura H, Yamamoto K, Sato K, Matsuda S. Low-Intensity Pulsed Ultrasound Therapy Stimulates Callus Formation between Host Femur and Cortical Onlay Strut Allograft. 40:1197-1203.

de Girolamo L, Stanco D, Galliera E, Viganò M, Lovati AB, Marazzi MG, Romeo P, Sansone V. Soft-Focused Extracorporeal Shock Waves Increase the Expression of Tendon-Specific Markers and the Release of Anti-inflammatory Cytokines in an Adherent Culture Model of Primary Human Tendon Cells. 40:1204-1215.

Notarnicola A, Quagliarella L, Sasanelli N, Maccagnano G, Fracella MR, Forcignanò MI, Moretti B. Effects of Extracorporeal Shock Wave Therapy on Functional and Strength Recovery of Handgrip in Patients Affected by Epicondylitis. 40:2830-2840.

### High frequency ultrasound

**Synonyms:** high resolution

**Scopus Search:** "high frequency" OR "high resolution"

Männicke N, Schöne M, Gottwald M, Göbel F, Oelze ML, Raum K. 3-D High-Frequency Ultrasound Backscatter Analysis of Human Articular Cartilage. 40:244-257.

Hernandez-Andrade E, Ahn H, Szalai G, Korzeniewski SJ, Wang B, King M, Chaiworapongsa T, Than NG, Romero R. Evaluation of Utero-placental and Fetal Hemodynamic Parameters Throughout Gestation in Pregnant Mice Using High-Frequency Ultrasound. 40:351-360.

Nilsson T, Segstedt S, Milton P, Sveinsdottir S, Jansson T, Persson HW, Ley D, Cinthio M. Automatic Measurements of Diameter, Distension and Intima Media Thickness of the Aorta in Premature Rabbit Pups Using B-Mode Images. 40:371-377.

Wang H, Han P, Sun X, Cai J, Fan X, Luo Y. Detection of Hepatic Hemodynamics in Normal Rhesus Monkeys Using High-Frequency Ultrasound. 40:837-842.

Hwang JY, Lim HG, Yoon CW, Lam KH, Yoon S, Lee C, Chiu CT, Kang BJ, Kim HH, Shung KK. Non-contact High-Frequency Ultrasound Microbeam Stimulation for Studying

Mechanotransduction in Human Umbilical Vein Endothelial Cells. 40:2172-2182.

Winterroth F, Kato H, Kuo S, Feinberg SE, Hollister SJ, Fowlkes JB, Hollman KW. High-Frequency Ultrasonic Imaging of Growth and Development in Manufactured Engineered Oral Mucosal Tissue Surfaces. 40:2244-2251.

### High intensity focused ultrasound

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

**Scopus Search:** “high intensity focused ultrasound” OR “Focused ultrasound surgery” OR HIFU OR FUS OR ablat\*

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

Shahmirzadi D, Hou GY, Chen J, Konofagou EE. Ex Vivo Characterization of Canine Liver Tissue Viscoelasticity after High-Intensity Focused Ultrasound Ablation. 40:341-350.

Xia R, Thittai AK. Real-Time Monitoring of High-Intensity Focused Ultrasound Treatment Using Axial Strain and Axial-Shear Strain Elastograms. 40:485-495.

Wolfram F, Reichenbach JR, Lesser TG. An ex Vivo Human Lung Model for Ultrasound-Guided High-Intensity Focused Ultrasound Therapy Using Lung Flooding. 40:496-503.

Ge H-Y, Miao L-Y, Xiong L-L, Yan F, Zheng C-S, Wang J-R, Jia J-W, Cui L-G, Chen W. High-Intensity Focused Ultrasound Treatment of Late-Stage Pancreatic Body Carcinoma: Optimal Tumor Depth for Safe Ablation. 40:947-955.

Elbes D, Denost Q, Robert B, Köhler MO, Tanter M, Bruno Q. Magnetic Resonance Imaging for the Exploitation of Bubble-Enhanced Heating by High-Intensity Focused Ultrasound: A Feasibility Study in ex Vivo Liver. 40:956-964.

McCabe JT, Moratz C, Liu Y, Burton E, Morgan A, Budinich C, Lowe D, Rosenberger J, Chen H, Liu J, Myers M. Application of High-Intensity Focused Ultrasound to the Study of Mild Traumatic Brain Injury. 40:965-978.

Zhu Y-S, Mu N-N, Zheng M-J, Zhang Y-C, Feng H, Cong R, Zhou X-D, Chen D-Z. High-Resolution Ultrasonography for the Diagnosis of Brachial Plexus Root Lesions. 40:1420-1426.

Chae SY, Kim Y-s, Park MJ, Yang J, Park H, Namgung M-S, Rhim H, Lim HK. High-Intensity Focused Ultrasound-Induced, Localized Mild Hyperthermia to Enhance Anti-cancer Efficacy of Systemic Doxorubicin: An Experimental Study. 40:1554-1563.

Courivaud F, Kazaryan AM, Lund A, Orszagh VC, Svindland A, Marangos IP, Halvorsen PS, Jebsen P, Fosse E, Hol PK, Edwin B. Thermal Fixation of Swine Liver Tissue after Magnetic Resonance-Guided High-Intensity Focused Ultrasound Ablation. 40:1564-1577.

Liu Z, Guo X, Tu J, Zhang D. Variations in Temperature Distribution and Tissue Lesion Formation Induced by Tissue Inhomogeneity for Therapeutic Ultrasound. 40:1857-1868.

Hoang NH, Murad HY, Ratnayaka SH, Chen C, Khismatullin DB. Synergistic Ablation of Liver Tissue and Liver Cancer Cells with High-Intensity Focused Ultrasound and Ethanol. 40:1869-1881.

Aptel F, Béglé A, Razavi A, Romano F, Charrel T, Chapelon J-Y, Denis P, Lafon C. Short- and Long-Term Effects on the Ciliary Body and the Aqueous Outflow Pathways of High-Intensity Focused Ultrasound Cyclocoagulation. 40:2096-2106.

Luo D, Yu H, Garfield RE, Shi S-Q, Towe B. Treatment with Focused Ultrasound Waves Softens the Rat Cervix During Pregnancy. 40:2107-2112.

Wei H, Shi L, Zhang J, Xia Y, Cuan J, Zhang Y, Li W, Yan A, Jiang X, Lang M-F, Sun J. High-Intensity Focused Ultrasound Leads to Histopathologic Changes of the Inferior Turbinate Mucosa with Allergic Inflammation. 40:2425-2430.

Guntur SR, Choi MJ. An Improved Tissue-Mimicking Polyacrylamide Hydrogel Phantom for Visualizing Thermal Lesions with High-Intensity Focused Ultrasound. 40:2680-2691.

Rangraz P, Behnam H, Sobhebidari P, Tavakkoli J. Real-Time Monitoring of High-Intensity Focused Ultrasound Thermal Therapy Using the Manifold Learning Method. 40:2841-2850.

Kang KM, Lee JY, Kim H, Han JK, Choi B-I. Gel Phantom Study with High-Intensity Focused Ultrasound: Influence of Metallic Stent Containing Either Air or Fluid. 40:2851-2856.

## I

### Image artifacts

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

**Scopus Search:** artifacts OR artefacts OR shadow\*

**See also:** image processing

Machado P, Eisenbrey JR, Cavanaugh B, Forsberg F. Microcalcifications Versus Artifacts: Initial Evaluation of a New Ultrasound Image Processing Technique to Identify Breast Microcalcifications in a Screening Population. 40:2321-2324.

### Image processing

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

**Scopus Search:** “image processing” OR Filter\* OR averag\* OR denois\* OR \*clutter OR “image enhance\*” OR “attenuation correction”

**See also:** computer aided diagnosis

- Saris AECM, Nillesen MM, Lopata RGP, de Korte CL. Correlation-Based Discrimination Between Cardiac Tissue and Blood for Segmentation of the Left Ventricle in 3-D Echocardiographic Images. *40:596-610.*
- Pheiffer TS, Thompson RC, Rucker DC, Simpson AL, Miga MI. Model-Based Correction of Tissue Compression for Tracked Ultrasound in Soft Tissue Image-Guided Surgery. *40:788-803.*
- Larrue A, Noble JA. Modeling of Errors in Nakagami Imaging: Illustration on Breast Mass Characterization. *40:917-930.*
- Song P, Manduca A, Zhao H, Urban MW, Greenleaf JF, Chen S. Fast Shear Compounding Using Robust 2-D Shear Wave Speed Calculation and Multi-directional Filtering. *40:1343-1355.*
- Eckersley RJ. Biomedical Signal and Imaging Processing (Second Edition). *40:1920.*
- Albinsson J, Brorsson S, Ahlgren ÅR, Cinthio M. Improved Tracking Performance of Lagrangian Block-Matching Methodologies Using Block Expansion in the Time Domain: In Silico, Phantom and in Vivo Evaluations. *40:2508-2520.*

### Instrumentation

- Synonyms:** scanning systems, imaging hardware  
**Scopus Search:** instrument\* OR scann\* OR hardware  
*See also:* **transducers**
- Filipiak-Strzecka D, Michalski B, Kasprzak JD, Lipiec P. Pocket-Size Imaging Devices Allow for Reliable Bedside Screening for Femoral Artery Access Site Complications. *40:2753-2758.*

### Intravascular ultrasound

- Synonyms:** IVUS  
**Scopus Search:** intravascular OR IVUS  
*See also:* **blood vessels**
- Mehregan F, Tournoux F, Muth S, Pibarot P, Rieu R, Cloutier G, Garcia D. Doppler Vortography: A Color Doppler Approach to Quantification of Intraventricular Blood Flow Vortices. *40:210-221.*
- Jansen K, van Soest G, van der Steen AFW. Intravascular Photoacoustic Imaging: A New Tool for Vulnerable Plaque Identification. *40:1037-1048.*
- Maresca D, Skachkov I, Renaud G, Jansen K, van Soest G, de Jong N, van der Steen AFW. Imaging Microvasculature with Contrast-Enhanced Ultraharmonic Ultrasound. *40:1318-1328.*
- Kilroy JP, Klibanov AL, Wamhoff BR, Bowles DK, Hossack JA. Localized in Vivo Model Drug Delivery with Intravascular Ultrasound and Microbubbles. *40:2458-2467.*

## K

### Kidney

- Synonyms:** nephrology, renal  
**Scopus Search:** kidney OR nephr\* OR renal
- Wei S, Fu N, Sun Y, Yang Z, Lei L, Huang P, Yang B. Targeted Contrast-Enhanced Ultrasound Imaging of Angiogenesis in an Orthotopic Mouse Tumor Model of Renal Carcinoma. *40:1250-1259.*
- Zhang Y, Ye C, Xu Y, Dong X, Li J, Liu R, Gao Y. Ultrasound-Mediated Microbubble Destruction Increases Renal Interstitial Capillary Permeability in Early Diabetic Nephropathy Rats. *40:1273-1281.*
- Cai Y, Du L, Li F, Gu J, Bai M. Quantification of Enhancement of Renal Parenchymal Masses with Contrast-Enhanced Ultrasound. *40:1387-1393.*
- Tian F, Wang Z-B, Meng D-M, Liu R-G, Zhang H-Y, Li H-Y, Lv F-F. Preliminary Study on the Role of Virtual Touch Tissue Quantification Combined with a Urinary  $\beta$ -Microglobulin Test on the Early Diagnosis of Gouty Kidney Damage. *40:1394-1399.*
- Gao J, Rubin JM. Ultrasound Strain Zero-Crossing Elasticity Measurement in Assessment of Renal Allograft Cortical Hardness: A Preliminary Observation. *40:2048-2057.*
- Zhao T-C, Wu J-Y, Li R-N, Li X. Quantitative Analysis of Four Types of Primary Glomerulopathy by Application of a Decision Forest to Ultrasonic and Laboratory Characteristics. *40:2310-2316.*
- Orlacchio A, Chegai F, Del Giudice C, Anselmo A, Iaria G, Palmieri G, Di Caprera E, Tosti D, Costanzo E, Tisone G, Simonetti G. Kidney Transplant: Usefulness of Real-Time Elastography (RTE) in the Diagnosis of Graft Interstitial Fibrosis. *40:2564-2572.*
- Conti F, Ceccarelli F, Gigante A, Barbano B, Perricone C, Massaro L, Martinelli F, Spinelli FR, Giannakakis K, Valesini G, Cianci R. Ultrasonographic Evaluation of Renal Resistive Index in Patients with Lupus Nephritis: Correlation with Histologic Findings. *40:2573-2580.*

## L

### Letters to the editor

- Sehgal CM, Wood AKW. Re “Disruption of Tumor Neovasculature by Microbubble Enhanced Ultrasound: A Potential New Physical Therapy of Anti-angiogenesis”. *40:455-456.*
- Gao S, Liu Z, Xie F. Reply to the Letter to the Editor re “Disruption of Tumor Neovasculature by Microbubble Enhanced Ultrasound: A Potential New Physical Therapy of Anti-angiogenesis”. *40:456.*
- Yoneda M, Thomas E, Schiff ER. Re: “Acoustic Radiation Force Impulse and Supersonic Shear Imaging Versus

Transient Elastography for Liver Fibrosis Assessment". 40:1918.

Sporea I, Şirli R. Reply to Letter to the Editor re: "Acoustic Radiation Force Impulse and Supersonic Shear Imaging versus Transient Elastography for Liver Fibrosis Assessment". 40:1918-1919.

## Liver

**Synonyms:** hepatic

**Scopus Search:** Liver OR hepat\*

Shahmirzadi D, Hou GY, Chen J, Konofagou EE. Ex Vivo Characterization of Canine Liver Tissue Viscoelasticity after High-Intensity Focused Ultrasound Ablation. 40:341-350.

Wang C-Z, Zheng J, Huang Z-P, Xiao Y, Song D, Zeng J, Zheng H-R, Zheng R-Q. Influence of Measurement Depth on the Stiffness Assessment of Healthy Liver with Real-Time Shear Wave Elastography. 40:461-469.

Fontanilla T, Cañas T, Macia A, Alfageme M, Gutierrez Junquera C, Malalana A, Luz Cilleruelo M, Roman E, Miralles M. Normal Values of Liver Shear Wave Velocity in Healthy Children Assessed by Acoustic Radiation Force Impulse Imaging Using a Convex Probe and a Linear Probe. 40:470-477.

Wolfram F, Reichenbach JR, Lesser TG. An ex Vivo Human Lung Model for Ultrasound-Guided High-Intensity Focused Ultrasound Therapy Using Lung Flooding. 40:496-503.

Barry CT, Hah Z, Partin A, Mooney RA, Chuang K-H, Augustine A, Almudevar A, Cao W, Rubens DJ, Parker KJ. Mouse Liver Dispersion for the Diagnosis of Early-Stage Fatty Liver Disease: A 70-Sample Study. 40:704-713.

Ling W, Lu Q, Lu C, Quan J, Ma L, Li J, He D, Liu J, Yang J, Wen T, Wu H, Zhu H, Luo Y. Effects of Vascularity and Differentiation of Hepatocellular Carcinoma on Tumor and Liver Stiffness: In Vivo and in Vitro Studies. 40:739-746.

Wang H, Han P, Sun X, Cai J, Fan X, Luo Y. Detection of Hepatic Hemodynamics in Normal Rhesus Monkeys Using High-Frequency Ultrasound. 40:837-842.

Sugimoto K, Moriyasu F, Saito K, Yoshiara H, Imai Y. Kupffer-Phase Findings of Hepatic Hemangiomas in Contrast-Enhanced Ultrasound with Sonazoid. 40:1089-1095.

Courivaud F, Kazaryan AM, Lund A, Orszagh VC, Svindland A, Marangos IP, Halvorsen PS, Jebsen P, Fosse E, Hol PK, Edwin B. Thermal Fixation of Swine Liver Tissue after Magnetic Resonance-Guided High-Intensity Focused Ultrasound Ablation. 40:1564-1577.

Hoang NH, Murad HY, Ratnayaka SH, Chen C, Khismatullin DB. Synergistic Ablation of Liver Tissue and Liver Cancer Cells with High-Intensity Focused Ultrasound and Ethanol. 40:1869-1881.

Yoneda M, Thomas E, Schiff ER. Re: "Acoustic Radiation Force Impulse and Supersonic Shear Imaging Versus

Transient Elastography for Liver Fibrosis Assessment". 40:1918.

Sporea I, Şirli R. Reply to Letter to the Editor re: "Acoustic Radiation Force Impulse and Supersonic Shear Imaging versus Transient Elastography for Liver Fibrosis Assessment". 40:1918-1919.

Paparo F, Corradi F, Cevasco L, Revelli M, Marziano A, Molini L, Cenderello G, Cassola G, Rollandi GA. Real-Time Elastography in the Assessment of Liver Fibrosis: A Review of Qualitative and Semi-quantitative Methods for Elastogram Analysis. 40:1923-1933.

Sekimoto T, Maruyama H, Kiyono S, Kondo T, Shimada T, Ishibashi H, Takahashi M, Yokosuka O, Yamaguchi T. Hepatic Filling Rate of a Microbubble Agent: A Novel Predictor of Long-Term Outcomes in Patients With Cirrhosis. 40:2082-2088.

Izamis M-L, Efstathiades A, Keravnou C, Leen EL, Averkiou MA. Dynamic Contrast-Enhanced Ultrasound of Slaughterhouse Porcine Livers in Machine Perfusion. 40:2217-2230.

Ho M-C, Tsui P-H, Lee Y-H, Chen Y-S, Chen C-N, Lin J-J, Chang C-C. Early Detection of Liver Fibrosis in Rats Using 3-D Ultrasound Nakagami Imaging: A Feasibility Evaluation. 40:2272-2284.

Kumagai H, Yokoyama K, Katsuyama K, Hara S, Yamamoto H, Yamagata T, Taniguchi N, Hirota N, Itoh K. A New Method for Measuring the Speed of Sound in Rat Liver ex Vivo Using an Ultrasound System: Correlation of Sound Speed with Fat Deposition. 40:2499-2507.

Huang Z, Zheng J, Zeng J, Wang X, Wu T, Zheng R. Normal Liver Stiffness in Healthy Adults Assessed By Real-Time Shear Wave Elastography and Factors That Influence This Method. 40:2549-2555.

Liu D, Qian L, Wang J, Hu X, Qiu L. Hepatic Perfusion Parameters of Contrast-Enhanced Ultrasonography Correlate With the Severity of Chronic Liver Disease. 40:2556-2563.

Hansen PM, Hemmsen M, Brandt A, Rasmussen J, Lange T, Krohn PS, Lönn L, Jensen JA, Nielsen MB. Clinical Evaluation of Synthetic Aperture Sequential Beamforming Ultrasound in Patients with Liver Tumors. 40:2805-2810.

Krämer C, Jaspers N, Nierhoff D, Kuhr K, Bowe A, Goeser T, Michels G. Acoustic Structure Quantification Ultrasound Software Proves Imprecise in Assessing Liver Fibrosis or Cirrhosis in Parenchymal Liver Diseases. 40:2811-2818.

## Low intensity ultrasound

**Synonyms:** Low intensity pulsed ultrasound, LIPUS, LIFU

**Scopus Search:** "low\*intensity ultrasound" OR LIPUS OR LIFU

Jang KW, Ding L, Seol D, Lim T-H, Buckwalter JA, Martin JA. Low-Intensity Pulsed Ultrasound Promotes Chondrogenic



Progenitor Cell Migration via Focal Adhesion Kinase Pathway. 40:1177-1186.

Al-Daghreer S, Doschak M, Sloan AJ, Major PW, Heo G, Scurtescu C, Tsui YY, El-Bialy T. Effect of Low-Intensity Pulsed Ultrasound on Orthodontically Induced Root Resorption in Beagle Dogs. 40:1187-1196.

Akiyama H, Hachiya Y, Otsuka H, Kurisuno M, Kawanabe K, Katayama N, Ohura H, Yamamoto K, Sato K, Matsuda S. Low-Intensity Pulsed Ultrasound Therapy Stimulates Callus Formation between Host Femur and Cortical Onlay Strut Allograft. 40:1197-1203.

Abtahi NS, Eimani H, Vosough A, Shahverdi A, Fathi R, Hayati N, Nasiri N. Effect of Therapeutic Ultrasound on Folliculogenesis, Angiogenesis and Apoptosis After Heterotopic Mouse Ovarian Transplantation. 40:1535-1544.

Hu Y, Wan JMF, Yu ACH. Cytomechanical Perturbations during Low-Intensity Ultrasound Pulsing. 40:1587-1598.

Cheng K, Xia P, Lin Q, Shen S, Gao M, Ren S, Li X. Effects of Low-Intensity Pulsed Ultrasound on Integrin-FAK-PI3K/Akt Mechanochemical Transduction in Rabbit Osteoarthritis Chondrocytes. 40:1609-1618.

Lee IC, Lo T-L, Young T-H, Li Y-C, Chen NG, Chen C-H, Chang Y-C. Differentiation of Neural Stem/Progenitor Cells Using Low-Intensity Ultrasound. 40:2195-2206.

### Lymphatic system

**Synonyms:** lymph nodes

**Scopus Search:** lymph\*

Dudau C, Hameed S, Gibson D, Muthu S, Sandison A, Eckersley RJ, Clarke P, Cosgrove DO, Lim AK. Can Contrast-Enhanced Ultrasound Distinguish Malignant from Reactive Lymph Nodes in Patients with Head and Neck Cancers? 40:747-754.

Sato T, Mori S, Arai Y, Kodama T. The Combination of Intralymphatic Chemotherapy with Ultrasound and Nano-/Microbubbles Is Efficient in the Treatment of Experimental Tumors in Mouse Lymph Nodes. 40:1237-1249.

Park SH, Jeong YM, Cho SH, Jung HK, Kim SJ, Ryu HS. Imaging Findings of Variable Axillary Mass and Axillary Lymphadenopathy. 40:1934-1948.

Nieuwoudt M, Lameris R, Corcoran C, Rossouw TM, Slavik T, Du Plessis J, Omoshoro-Jones JAO, Stivaktas P, Potgieter F, Van der Merwe SW. Polymerase Chain Reaction Amplifying Mycobacterial DNA from Aspirates Obtained by Endoscopic Ultrasound Allows Accurate Diagnosis of Mycobacterial Disease in HIV-Positive Patients with Abdominal Lymphadenopathy. 40:2031-2038.

## M

### Modelling

**Synonyms:** simulations, theory, mathematical, in silico

**Scopus Search:** Modelling OR simulation\* OR theor\* OR mathemat\* OR "in silico"

Carstensen EL, Parker KJ. Physical Models of Tissue in Shear Fields. 40:655-674.

Parker KJ, Baddour N. The Gaussian Shear Wave in a Dispersive Medium. 40:675-684.

Holm S, Näsholm SP. Comparison of Fractional Wave Equations for Power Law Attenuation in Ultrasound and Elastography. 40:695-703.

Dahl JJ, Sheth NM. Reverberation Clutter from Subcutaneous Tissue Layers: Simulation and in Vivo Demonstrations. 40:714-726.

Grimal Q, Rohrbach D, Grondin J, Barkmann R, Glüer C-C, Raum K, Laugier P. Modeling of Femoral Neck Cortical Bone for the Numerical Simulation of Ultrasound Propagation. 40:1015-1026.

Bouchoux G, Shivashankar R, Abruzzo TA, Holland CK. In silico Study of Low-Frequency Transcranial Ultrasound Fields in Acute Ischemic Stroke Patients. 40:1154-1166.

Buschschlüter S, Koch C, von Eicken J, Höh H. Computation of the Temperature Rise at the Corneal Endothelium during Cataract Surgery by Modeling of Heat Generation Inside the Anterior Chamber. 40:2431-2444.

### Molecular imaging

**Synonyms:** molecular tagging, targeted imaging, biomarkers

**Scopus Search:** "molecular imaging" OR "molecular tagging" OR "targeted imaging" OR bio\*markers

Denbeigh JM, Nixon BA, Hudson JM, Puri MC, Foster FS. VEGFR2-Targeted Molecular Imaging in the Mouse Embryo: An Alternative to the Tumor Model. 40:389-399.

Muramoto T, Shimoya R, Yoshida K, Watanabe Y. Evaluation of the Specific Adsorption of Biotinylated Microbubbles Using a Quartz Crystal Microbalance. 40:1027-1033.

Kee PH, Kim H, Huang S, Laing ST, Moody MR, Vela D, Klegerman ME, McPherson DD. Nitric Oxide Pretreatment Enhances Atheroma Component Highlighting in Vivo with Intercellular Adhesion Molecule-1-Targeted Echogenic Liposomes. 40:1167-1176.

Wei S, Fu N, Sun Y, Yang Z, Lei L, Huang P, Yang B. Targeted Contrast-Enhanced Ultrasound Imaging of Angiogenesis in an Orthotopic Mouse Tumor Model of Renal Carcinoma. 40:1250-1259.

Sennoga CA, Seddon JM, Frueh JA, Zhang D, Haskard DO, Eckersley RJ, Tang M-X. Dynamics of Targeted Microbubble Adhesion Under Pulsatile Compared with Steady Flow. 40:2445-2457.

Rix A, Palmowski M, Gremse F, Palmowski K, Lederle W, Kiessling F, Bzyl J. Influence of Repetitive Contrast Agent Injections on Functional and Molecular Ultrasound Measurements. *40:2468-2475*.

### Musculoskeletal

**Synonyms:** Sonomyography

**Scopus Search:** Musc\* OR Sonomyography OR Joint\*

DeWall RJ, Jiang J, Wilson JJ, Lee KS. Visualizing Tendon Elasticity in an ex Vivo Partial Tear Model. *40:158-167*.

Ungi T, King F, Kempston M, Keri Z, Lasso A, Mousavi P, Rudan J, Borschneck DP, Fichtinger G. Spinal Curvature Measurement by Tracked Ultrasound Snapshots. *40:447-454*.

Abrunhosa VM, Soares CP, Batista Possidonio AC, Alvarenga AV, Costa-Felix RPB, Costa ML, Mermelstein C. Induction of Skeletal Muscle Differentiation In Vitro by Therapeutic Ultrasound. *40:504-512*.

Stegman KJ, Djurickovic S, Dechev N. In Vivo Estimation of Flexor Digitorum Superficialis Tendon Displacement with Speckle Tracking on 2-D Ultrasound Images Using Laplacian, Gaussian and Rayleigh Techniques. *40:568-582*.

Sato J, Ishii Y, Noguchi H, Takeda M. Sonographic Analyses of Pulley and Flexor Tendon in Idiopathic Trigger Finger with Interphalangeal Joint Contracture. *40:1146-1153*.

Wang Y, Huang Y-P, Liu A, Wan W, Zheng Y-P. An Ultrasound Biomicroscopic and Water Jet Ultrasound Indentation Method for Detecting the Degenerative Changes of Articular Cartilage in a Rabbit Model of Progressive Osteoarthritis. *40:1296-1306*.

Gonçalves EM, Sewaybricker LE, Baptista F, Silva AM, Carvalho WRG, Santos AO, de Mello MP, Lemos-Marini SHV, Guerra-Junior G. Performance of Phalangeal Quantitative Ultrasound Parameters in the Evaluation of Reduced Bone Mineral Density Assessed By DX in Patients with 21 Hydroxylase Deficiency. *40:1414-1419*.

Matsumoto Y, Nakano J, Oga S, Kataoka H, Honda Y, Sakamoto J, Okita M. The Non-Thermal Effects of Pulsed Ultrasound Irradiation on the Development of Disuse Muscle Atrophy in Rat Gastrocnemius Muscle. *40:1578-1586*.

McCreech K, Adusumilli P, Evans T, Riley S, Davies A, Lewis J. Validation of Ultrasound Measurement of the Subacromial Space Using a Novel Shoulder Phantom Model. *40:1729-1733*.

Mohseni-Bandpei MA, Nakhaee M, Mousavi ME, Shakourirad A, Safari MR, Vahab Kashani R. Application of Ultrasound in the Assessment of Plantar Fascia in Patients With Plantar Fasciitis: A Systematic Review. *40:1737-1754*.

Liong K, Lahiri A, Lee S, Chia D, Biswas A, Lee HP. Predominant Patterns of Median Nerve Displacement and Deformation during Individual Finger Motion in Early Carpal Tunnel Syndrome. *40:1810-1818*.

Chern T-C, Wu K-C, Huang L-W, Shao C-J, Wu T-T, Kuo L-C, Jou IM. A Cadaveric and Preliminary Clinical Study of Ultrasonographically Assisted Percutaneous Carpal Tunnel Release. *40:1819-1826*.

Melvin MN, Smith-Ryan AE, Wingfield HL, Fultz SN, Roelofs EJ. Evaluation of Muscle Quality Reliability and Racial Differences in Body Composition of Overweight Individuals. *40:1973-1979*.

Nakamura M, Ikezoe T, Kobayashi T, Umegaki H, Takeno Y, Nishishita S, Ichihashi N. Acute Effects of Static Stretching on Muscle Hardness of the Medial Gastrocnemius Muscle Belly in Humans: An Ultrasonic Shear-Wave Elastography Study. *40:1991-1997*.

Liukkonen J, Lehenkari P, Hirvasniemi J, Joukainen A, Virén T, Saarakkala S, Nieminen MT, Jurvelin JS, Töyräs J. Ultrasound Arthroscopy of Human Knee Cartilage and Subchondral Bone in Vivo. *40:2039-2047*.

Abe T, Thiebaud RS, Loenneke JP, Ogawa M, Mitsukawa N. Association Between Forearm Muscle Thickness and Age-related Loss of Skeletal Muscle Mass, Handgrip and Knee Extension Strength and Walking Performance in Old Men and Women: A Pilot Study. *40:2069-2075*.

Ruiz-Molinero C, Jimenez-Rejano JJ, Chillon-Martinez R, Suarez-Serrano C, Rebollo-Roldan J, Perez-Cabezas V. Efficacy of Therapeutic Ultrasound in Pain and Joint Mobility in Whiplash Traumatic Acute and Subacute Phases. *40:2089-2095*.

Poliachik SL, Khokhlova TD, Wang Y-N, Simon JC, Bailey MR. Pulsed Focused Ultrasound Treatment of Muscle Mitigates Paralysis-Induced Bone Loss in the Adjacent Bone: A Study in a Mouse Model. *40:2113-2124*.

Bianchi S. Ultrasonography of the Upper Extremity: Hand and Wrist. *40:2325*.

Brandsma R, Verbeek RJ, Maurits NM, van der Hoeven JH, Brouwer OF, den Dunnen WFA, Burger H, Sival DA. Visual Screening of Muscle Ultrasound Images in Children. *40:2345-2351*.

Kok AC, Terra MP, Muller S, Askeland C, van Dijk CN, Kerckhoffs GMMJ, Tuijthof GJM. Feasibility of Ultrasound Imaging of Osteochondral Defects in the Ankle: A Clinical Pilot Study. *40:2530-2536*.

Ten Cate DF, Luime JJ, Hazes JMW, Kleinrensink G-J, Jacobs JWG. Is the Frequent Sonographic Anechoic Area Distally in Metacarpophalangeal Joints a Sign of Arthritis? *40:2537-2541*.

Shin S, Kim JY, Kim WO, Kim SH, Kil HK. Ultrasound Visibility of Spinal Structures and Local Anesthetic Spread in Children Undergoing Caudal Block. *40:2630-2636*.

Lioce EEAN, Novello M, Durando G, Bistolfi A, Actis MV, Massazza G, Magnetto C, Guiot C. Therapeutic Ultrasound in Physical Medicine and Rehabilitation: Characterization and

Assessment of Its Physical Effects on Joint-Mimicking Phantoms. 40:2743-2748.

Giglio V, Puddu PE, Holland MR, Camastra G, Ansalone G, Ricci E, Mela J, Sciarra F, Di Gennaro M. Ultrasound Tissue Characterization Does Not Differentiate Genotype, But Indexes Ejection Fraction Deterioration in Becker Muscular Dystrophy. 40:2777-2785.

Notarnicola A, Quagliarella L, Sasanelli N, Maccagnano G, Fracella MR, Forcignanò MI, Moretti B. Effects of Extracorporeal Shock Wave Therapy on Functional and Strength Recovery of Handgrip in Patients Affected by Epicondylitis. 40:2830-2840.

## N

### Nervous system

*Synonyms:* neurology

*Scopus Search:* Neuro\* OR nerv\*

Scheidl E, Böhm J, Simó M, Bereznai B, Bereczki D, Arányi Z. Different Patterns of Nerve Enlargement in Polyneuropathy Subtypes as Detected by Ultrasonography. 40:1138-1145.

Zhu Y-S, Mu N-N, Zheng M-J, Zhang Y-C, Feng H, Cong R, Zhou X-D, Chen D-Z. High-Resolution Ultrasonography for the Diagnosis of Brachial Plexus Root Lesions. 40:1420-1426.

Nakashima Y, Sunagawa T, Shinomiya R, Ochi M. High-Resolution Ultrasonographic Evaluation of “Hourglass-like Fascicular Constriction” in Peripheral Nerves: A Preliminary Report. 40:1718-1721.

Yoshii Y, Ishii T, Etou F, Sakai S, Tanaka T, Ochiai N. Reliability of Automatic Vibratory Equipment for Ultrasonic Strain Measurement of the Median Nerve. 40:2352-2357.

### Neurostimulation

*Scopus Search:* Neurostimulation

*See also:* brain, transcranial

King RL, Brown JR, Pauly KB. Localization of Ultrasound-Induced In Vivo Neurostimulation in the Mouse Model. 40:1512-1522.

## O

### Obstetrics

*Synonyms:* prenatal, fetal, gynaecology, foetal, FBM, FHR

*Scopus Search:* obstetric\* OR gynaecolog\* OR gynecolog\* OR pre\*natal

*See also:* uterus

Hernandez-Andrade E, Ahn H, Szalai G, Korzeniewski SJ, Wang B, King M, Chaiworapongsa T, Than NG, Romero R. Evaluation of Utero-placental and Fetal Hemodynamic Parameters Throughout Gestation in Pregnant Mice Using High-Frequency Ultrasound. 40:351-360.

Sanderson J, Wu L, Mahajan A, Meriki N, Henry A, Welsh AW. Selection of the Sub-noise Gain Level for Acquisition of VOCAL Data Sets: A Reliability Study. 40:562-567.

Maurice RL, Vaujois L, Dahdah N, Chibab N, Maurice A, Nuyt A-M, Lévy É, Bigras J-L. Carotid Wall Elastography to Assess Midterm Vascular Dysfunction Secondary to Intrauterine Growth Restriction: Feasibility and Comparison with Standardized Intima-Media Thickness. 40:864-870.

Papastefanou I, Kappou D, Souka AP, Pilalis A, Chrelias C, Siristatidis C, Kassanos D. Reproducibility Study of Fetal 3-D Volumetry in the First Trimester: Effect of Fetal Size and Rotational Angle of VOCAL Software. 40:877-883.

Qin Y, Zhang Y, Zhou X, Wang Y, Sun W, Chen L, Zhao D, Zhan Y, Cai A. Four-Dimensional Echocardiography with Spatiotemporal Image Correlation and Inversion Mode for Detection of Congenital Heart Disease. 40:1434-1441.

Reus AD, Klop-van der Aa J, Rifouna MS, Koning AHJ, Exalto N, van der Spek PJ, Steegers EAP. Early Pregnancy Placental Bed and Fetal Vascular Volume Measurements Using 3-D Virtual Reality. 40:1796-1803.

Galjaard S, Pasman SA, Ameye L, Timmerman D, Devlieger R. Intima-Media Thickness Measurements in the Fetus and Mother During Pregnancy: A Feasibility Study. 40:1949-1957.

Yu S, Tan KK, Sng BL, Li S, Sia ATH. Automatic Identification of Needle Insertion Site in Epidural Anesthesia with a Cascading Classifier. 40:1980-1990.

Meng X, Xie L. Quantitative Evaluation of Fetal Brainstem–Vermis and Brainstem–Tentorium Angles by Three-Dimensional Ultrasound. 40:2076-2081.

Luo D, Yu H, Garfield RE, Shi S-Q, Towe B. Treatment with Focused Ultrasound Waves Softens the Rat Cervix During Pregnancy. 40:2107-2112.

Ni D, Yang X, Chen X, Chin C-T, Chen S, Heng PA, Li S, Qin J, Wang T. Standard Plane Localization in Ultrasound by Radial Component Model and Selective Search. 40:2728-2742.

### Optoacoustic

*See* Photoacoustic

### Orthopedic

*See* Musculoskeletal, Bone

### Oral

*Synonyms:* mouth

*Scopus Search:* Oral OR Mouth OR Saliva\* OR Tongue OR Lingua\*

*See also:* dental

Winterroth F, Kato H, Kuo S, Feinberg SE, Hollister SJ, Fowlkes JB, Hollman KW. High-Frequency Ultrasonic Imaging of Growth and Development in Manufactured Engineered Oral Mucosal Tissue Surfaces. 40:2244-2251.

Chen J-W, Chang C-H, Wang S-J, Chang Y-T, Huang C-C. Submental Ultrasound Measurement of Dynamic Tongue Base Thickness in Patients with Obstructive Sleep Apnea. *40:2590-2598.*

Dejaco C, De Zordo T, Heber D, Hartung W, Lipp R, Lutfi A, Magyar M, Zauner D, Lackner A, Duftner C, Horwath-Winter J, Graninger WB, Hermann J. Real-Time Sonoelastography of Salivary Glands for Diagnosis and Functional Assessment of Primary Sjögrens Syndrome. *40:2759-2767.*

## P

### Pancreas

**Synonyms:** pancreatic, gastrointestinal

**Scopus Search:** pancrea\* OR gastrointestinal

See also: **Gastroenterology**

Ge H-Y, Miao L-Y, Xiong L-L, Yan F, Zheng C-S, Wang J-R, Jia J-W, Cui L-G, Chen W. High-Intensity Focused Ultrasound Treatment of Late-Stage Pancreatic Body Carcinoma: Optimal Tumor Depth for Safe Ablation. *40:947-955.*

Paik WH, Yoon H, Park DH, Jung K, Lee SS, Seo DW, Lee SK, Kim M-H. Utility of Endoscopic Ultrasound (EUS)-Guided Fine-Needle Aspiration for Peri-arterial Soft Tissue Cuffs Without Identifiable Pancreas Mass on CT and EUS: A Prospective Comparative Study. *40:1463-1468.*

Li T, Chen H, Khokhlova T, Wang Y-N, Kreider W, He X, Hwang JH. Passive Cavitation Detection during Pulsed HIFU Exposures of Ex Vivo Tissues and In Vivo Mouse Pancreatic Tumors. *40:1523-1534.*

Li YJ, Huang P, Jiang CL, Jia DX, Du XX, Zhou JH, Han Y, Sui H, Wei XL, Liu L, Yuan HH, Zhang TT, Zhang WJ, Xie R, Lang XH, Wang LY, Liu T, Bai YX, Tian Y. Sonodynamically Induced Anti-tumor Effect of 5-Aminolevulinic Acid on Pancreatic Cancer Cells. *40:2671-2679.*

### Pediatrics

**Synonyms:** children, infants, neonates

**Scopus Search:** Pediatrics OR child\* or infant\* OR neonat\* OR neo-nat\*

Fontanilla T, Cañas T, Macia A, Alfageme M, Gutierrez Junquera C, Malalana A, Luz Cilleruelo M, Roman E, Miralles M. Normal Values of Liver Shear Wave Velocity in Healthy Children Assessed by Acoustic Radiation Force Impulse Imaging Using a Convex Probe and a Linear Probe. *40:470-477.*

Vaidya K, Osgood R, Ren D, Pichichero ME, Helguera M. Ultrasound Imaging and Characterization of Biofilms Based on Wavelet De-noised Radiofrequency Data. *40:583-595.*

Nestaas E, Fugelseth D, Støylen A. Automated, Objective and Expert-Independent Assessment of the Analyzability of Strain

and Strain Rate in Tissue Doppler Images in Term Neonates by Analysis of Beat-to-Beat Variation. *40:637-642.*

Maurice RL, Vaujois L, Dahdah N, Chibab N, Maurice A, Nuyt A-M, Lévy É, Bigras J-L. Carotid Wall Elastography to Assess Midterm Vascular Dysfunction Secondary to Intrauterine Growth Restriction: Feasibility and Comparison with Standardized Intima-Media Thickness. *40:864-870.*

Hacıhamdioğlu B, Öçal G, Berberoğlu M, Şıklar Z, Fitöz S, Tutar E, Nergisoğlu G, Erdeve ŞŞ, Çamtosun E. Preperitoneal Fat Tissue May Be Associated with Arterial Stiffness in Obese Adolescents. *40:871-876.*

Brandsma R, Verbeek RJ, Maurits NM, van der Hoeven JH, Brouwer OF, den Dunnen WFA, Burger H, Sival DA. Visual Screening of Muscle Ultrasound Images in Children. *40:2345-2351.*

Shi H, Song H, Wang J, Xia L, Yang J, Shang Y, Zhou H. Ultrasound in Assessing the Efficacy of Propranolol Therapy for Infantile Hemangiomas. *40:2622-2629.*

Shin S, Kim JY, Kim WO, Kim SH, Kil HK. Ultrasound Visibility of Spinal Structures and Local Anesthetic Spread in Children Undergoing Caudal Block. *40:2630-2636.*

### Phantoms

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

**Scopus Search:** phantom\* OR mimic\* OR tissue-mimic\* OR Gel\* OR agar\* OR polyacrylamide OR urethane OR “flow cell\*” OR “flow model\*”

Nguyen MM, Zhou S, Robert J-I, Shamdasani V, Xie H. Development of Oil-in-Gelatin Phantoms for Viscoelasticity Measurement in Ultrasound Shear Wave Elastography. *40:168-176.*

Rubert N, Varghese T. Scatterer Number Density Considerations in Reference Phantom-Based Attenuation Estimation. *40:1680-1696.*

Madsen EL, Song C, Frank GR. Low-Echo Sphere Phantoms and Methods for Assessing Imaging Performance of Medical Ultrasound Scanners. *40:1697-1717.*

McCreech K, Adusumilli P, Evans T, Riley S, Davies A, Lewis J. Validation of Ultrasound Measurement of the Subacromial Space Using a Novel Shoulder Phantom Model. *40:1729-1733.*

Najafi M, Afsham N, Abolmaesumi P, Rohling R. A Closed-Form Differential Formulation for Ultrasound Spatial Calibration: Multi-wedge Phantom. *40:2231-2243.*

Guntur SR, Choi MJ. An Improved Tissue-Mimicking Polyacrylamide Hydrogel Phantom for Visualizing Thermal Lesions with High-Intensity Focused Ultrasound. *40:2680-2691.*



Kenwright DAS, Neelaksh; Rajagopal, Srinath; Anderson, Tom; Moran, Carmel M.; Hadoke, Patrick W.; Gray, Gillian A.; Zeqiri, Bajram; Hoskins, Peter R. Acoustic assessment of konjac-carrageen tissue mimicking material at 5-60 MHz. 40:2895-2902.

### Photoacoustic

**Synonyms:** optoacoustic, ultrasound light modulation, laser ultrasonic

**Scopus Search:** Optoacoustic OR photoacoustic OR “ultrasound light modulation” OR “laser ultraso\*”

Johnson JL, van Wijk K, Sabick M. Characterizing Phantom Arteries with Multi-channel Laser Ultrasonics and Photoacoustics. 40:513-520.

Moilanen P, Zhao Z, Karppinen P, Karppinen T, Kilappa V, Pirhonen J, Myllylä R, Hægström E, Timonen J. Photoacoustic Excitation and Optical Detection of Fundamental Flexural Guided Wave in Coated Bone Phantoms. 40:521-531.

Jansen K, van Soest G, van der Steen AFW. Intravascular Photoacoustic Imaging: A New Tool for Vulnerable Plaque Identification. 40:1037-1048.

### Prostate

**Synonyms:** prostate gland

**Scopus Search:** prostate OR transrectal OR endorectal OR TRUS

*See also:* **genitourinary**

Qiu W, Yuchi M, Ding M. Phase Grouping-Based Needle Segmentation in 3-D Trans-rectal Ultrasound-Guided Prostate Trans-perineal Therapy. 40:804-816.

Zhang B, Ma X, Zhan W, Zhu F, Li M, Huang J, Li Y, Xue L, Liu L, Wei Y. Real-Time Elastography in the Diagnosis of Patients Suspected of Having Prostate Cancer: A Meta-analysis. 40:1400-1407.

Zhang M, Fu S, Zhang Y, Tang J, Zhou Y. Elastic Modulus of the Prostate: A New Non-invasive Feature to Diagnose Bladder Outlet Obstruction in Patients with Benign Prostatic Hyperplasia. 40:1408-1413.

## Q

### Quantitative ultrasound

**Synonyms:** QUS, quantification, quantitation

**Scopus Search:** Quantit\* OR QUS

Gonçalves EM, Sewaybricker LE, Baptista F, Silva AM, Carvalho WRG, Santos AO, de Mello MP, Lemos-Marini SHV, Guerra-Junior G. Performance of Phalangeal Quantitative Ultrasound Parameters in the Evaluation of Reduced Bone Mineral Density Assessed By DX in Patients with 21 Hydroxylase Deficiency. 40:1414-1419.

Græbe M, Entrekin R, Collet-Billon A, Harrison G, Sillesen H. Reproducibility of Two 3-D Ultrasound Carotid Plaque Quantification Methods. 40:1641-1649.

Pinter SZ, Kim D-R, Hague MN, Chambers AF, MacDonald IC, Lacefield JC. A Method to Validate Quantitative High-Frequency Power Doppler Ultrasound With Fluorescence in Vivo Video Microscopy. 40:1908-1917.

Zhao T-C, Wu J-Y, Li R-N, Li X. Quantitative Analysis of Four Types of Primary Glomerulopathy by Application of a Decision Forest to Ultrasonic and Laboratory Characteristics. 40:2310-2316.

Chen K-Y, Chen C-N, Wu M-H, Ho M-C, Tai H-C, Kuo W-H, Huang W-C, Wang Y-H, Chen A, Chang K-J. Computerized Quantification of Ultrasonic Heterogeneity in Thyroid Nodules. 40:2581-2589.

Krämer C, Jaspers N, Nierhoff D, Kuhr K, Bowe A, Goeser T, Michels G. Acoustic Structure Quantification Ultrasound Software Proves Imprecise in Assessing Liver Fibrosis or Cirrhosis in Parenchymal Liver Diseases. 40:2811-2818.

## R

### Radiation force

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

**Scopus Search:** “radiation force” OR ARFI OR Bjerknes OR “acoustic tweezers” OR “ultraso\* tweezers” OR ARP OR trap\*

*See also:* **elastography, shear waves**

Liu Y, Herman BA, Sonesson JE, Harris GR. Thermal Safety Simulations of Transient Temperature Rise during Acoustic Radiation Force-Based Ultrasound Elastography. 40:1001-1014.

### Respiratory system

**Synonyms:** diaphragm, thoracic

**Scopus Search:** respirator\* OR thora\* OR diaphragm\*

*See also:* **lung**

Zanforlin A, Smargiassi A, Inchingolo R, di Marco Bernardino A, Valente S, Ramazzina E. Ultrasound Analysis of Diaphragm Kinetics and the Diagnosis of Airway Obstruction: The Role of the M-Mode Index of Obstruction. 40:1065-1071.

### Review

Carstensen EL, Parker KJ. Physical Models of Tissue in Shear Fields. 40:655-674.

Zhang Z, Xu X, Ye S, Xu L. Ultrasonographic Measurement of the Respiratory Variation in the Inferior Vena Cava Diameter Is Predictive of Fluid Responsiveness in Critically Ill Patients: Systematic Review and Meta-analysis. 40:845-853.

Jansen K, van Soest G, van der Steen AFW. Intravascular Photoacoustic Imaging: A New Tool for Vulnerable Plaque Identification. *40:1037-1048*.

Mohseni-Bandpei MA, Nakhaee M, Mousavi ME, Shakourirad A, Safari MR, Vahab Kashani R. Application of Ultrasound in the Assessment of Plantar Fascia in Patients With Plantar Fasciitis: A Systematic Review. *40:1737-1754*.

Paparo F, Corradi F, Cevasco L, Revelli M, Marziano A, Molini L, Cenderello G, Cassola G, Rollandi GA. Real-Time Elastography in the Assessment of Liver Fibrosis: A Review of Qualitative and Semi-quantitative Methods for Elastogram Analysis. *40:1923-1933*.

Park SH, Jeong YM, Cho SH, Jung HK, Kim SJ, Ryu HS. Imaging Findings of Variable Axillary Mass and Axillary Lymphadenopathy. *40:1934-1948*.

## S

### Shear waves

**Scopus Search:** "Shear Wave\*"

See also: **elastography, radiation force**

DeWall RJ, Jiang J, Wilson JJ, Lee KS. Visualizing Tendon Elasticity in an ex Vivo Partial Tear Model. *40:158-167*.

Nguyen MM, Zhou S, Robert J-I, Shamdasani V, Xie H. Development of Oil-in-Gelatin Phantoms for Viscoelasticity Measurement in Ultrasound Shear Wave Elastography. *40:168-176*.

Nabavizadeh A, Greenleaf JF, Fatemi M, Urban MW. Optimized Shear Wave Generation Using Hybrid Beamforming Methods. *40:188-199*.

Ramnarine KV, Garrard JW, Dexter K, Nduwayo S, Panerai RB, Robinson TG. Shear Wave Elastography Assessment of Carotid Plaque Stiffness: In Vitro Reproducibility Study. *40:200-209*.

Fontanilla T, Cañas T, Macía A, Alfageme M, Gutierrez Junquera C, Malalana A, Luz Cilleruelo M, Roman E, Miralles M. Normal Values of Liver Shear Wave Velocity in Healthy Children Assessed by Acoustic Radiation Force Impulse Imaging Using a Convex Probe and a Linear Probe. *40:470-477*.

Parker KJ, Baddour N. The Gaussian Shear Wave in a Dispersive Medium. *40:675-684*.

Partin A, Hah Z, Barry CT, Rubens DJ, Parker KJ. Elasticity Estimates from Images of Crawling Waves Generated by Miniature Surface Sources. *40:685-694*.

Barry CT, Hah Z, Partin A, Mooney RA, Chuang K-H, Augustine A, Almudevar A, Cao W, Rubens DJ, Parker KJ. Mouse Liver Dispersion for the Diagnosis of Early-Stage Fatty Liver Disease: A 70-Sample Study. *40:704-713*.

Song P, Manduca A, Zhao H, Urban MW, Greenleaf JF, Chen S. Fast Shear Compounding Using Robust 2-D Shear Wave Speed Calculation and Multi-directional Filtering. *40:1343-1355*.

Pislaru C, Urban MW, Pislaru SV, Kinnick RR, Greenleaf JF. Viscoelastic Properties of Normal and Infarcted Myocardium Measured by a Multifrequency Shear Wave Method: Comparison with Pressure-Segment Length Method. *40:1785-1795*.

Youk JH, Son EJ, Gweon HM, Kim H, Park YJ, Kim J-A. Comparison of Strain and Shear Wave Elastography for the Differentiation of Benign From Malignant Breast Lesions, Combined With B-mode Ultrasonography: Qualitative and Quantitative Assessments. *40:2336-2344*.

### Shock waves

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

**Scopus Search:** shock\* OR ESW

de Girolamo L, Stanco D, Galliera E, Viganò M, Lovati AB, Marazzi MG, Romeo P, Sansone V. Soft-Focused Extracorporeal Shock Waves Increase the Expression of Tendon-Specific Markers and the Release of Anti-inflammatory Cytokines in an Adherent Culture Model of Primary Human Tendon Cells. *40:1204-1215*.

Millán-Chiu B, Camacho G, Varela-Echavarría A, Tamariz E, Fernández F, López-Marín LM, Loske AM. Shock Waves and DNA-Cationic Lipid Assemblies: A Synergistic Approach to Express Exogenous Genes in Human Cells. *40:1599-1608*.

Notarnicola A, Quagliarella L, Sasanelli N, Maccagnano G, Fracella MR, Forcignanò MI, Moretti B. Effects of Extracorporeal Shock Wave Therapy on Functional and Strength Recovery of Handgrip in Patients Affected by Epicondylitis. *40:2830-2840*.

### Sonodynamic therapy

**Synonyms:** sonochemistry

**Scopus Search:** sonodynamic OR sonochemi\*

Li Y, Wang P, Wang X, Su X, Liu Q. Involvement of Mitochondrial and Reactive Oxygen Species in the Sonodynamic Toxicity of Chlorin e6 in Human Leukemia K562 Cells. *40:990-1000*.

Wang S, Hu Z, Wang X, Gu C, Gao Z, Cao W, Zheng J. 5-Aminolevulinic Acid-mediated Sonodynamic Therapy Reverses Macrophage and Dendritic Cell Passivity in Murine Melanoma Xenografts. *40:2125-2133*.

Li YJ, Huang P, Jiang CL, Jia DX, Du XX, Zhou JH, Han Y, Sui H, Wei XL, Liu L, Yuan HH, Zhang TT, Zhang WJ, Xie R, Lang XH, Wang LY, Liu T, Bai YX, Tian Y. Sonodynamically Induced Anti-tumor Effect of 5-Aminolevulinic Acid on Pancreatic Cancer Cells. *40:2671-2679*.

**Sonoporation**

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

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

*See also:* **cavitation, drug delivery, gene therapy**

Qin P, Xu L, Hu Y, Zhong W, Cai P, Du L, Jin L, Yu ACH. Sonoporation-Induced Depolarization of Plasma Membrane Potential: Analysis of Heterogeneous Impact. *40:979-989.*

Fan Z, Chen D, Deng CX. Characterization of the Dynamic Activities of a Population of Microbubbles Driven by Pulsed Ultrasound Exposure in Sonoporation. *40:1260-1272.*

**Speckle**

**Synonyms:** interference pattern, noise

**Scopus Search:** speckle OR noise OR interference

*See also:* **image artifacts, image processing**

Stegman KJ, Djurickovic S, Dechev N. In Vivo Estimation of Flexor Digitorum Superficialis Tendon Displacement with Speckle Tracking on 2-D Ultrasound Images Using Laplacian, Gaussian and Rayleigh Techniques. *40:568-582.*

Xu T, Hozan M, Bashford GR. In Vivo Lateral Blood Flow Velocity Measurement Using Speckle Size Estimation. *40:931-937.*

Fadnes S, Nyrnes SA, Torp H, Lovstakken L. Shunt Flow Evaluation in Congenital Heart Disease Based on Two-Dimensional Speckle Tracking. *40:2379-2391.*

Gómez Flores W, Pereira WCdA, Infantosi AFC. Breast Ultrasound Despeckling Using Anisotropic Diffusion Guided by Texture Descriptors. *40:2609-2621.*

**Stroke**

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

**Scopus Search:** Stroke OR “cerebrovascular accident” OR CVA OR thromb\*

*See also:* **emboli detection, thrombolysis**

Bouchoux G, Shivashankar R, Abruzzo TA, Holland CK. In silico Study of Low-Frequency Transcranial Ultrasound Fields in Acute Ischemic Stroke Patients. *40:1154-1166.*

Hsu H-Y, Lee Y-S, Ou M-C, Chung C-P, Chen S-Y, Ho Y-P, Hu H-H. Severity of Spontaneous Echo Contrast in the Jugular Vein Associated with Ischemic Stroke. *40:1427-1433.*

Ruiz-Ares G, Fuentes B, Martínez-Sánchez P, Díez-Tejedor E. A Prediction Model for Unstable Carotid Atheromatous Plaque in Acute Ischemic Stroke Patients: Proposal and Internal Validation. *40:1958-1965.*

**T****Technical note**

Chen X, Leeman JE, Wang J, Pacella JJ, Villanueva FS. New Insights into Mechanisms of Sonothrombolysis Using Ultra-High-Speed Imaging. *40:258-262.*

Muramoto T, Shimoya R, Yoshida K, Watanabe Y. Evaluation of the Specific Adsorption of Biotinylated Microbubbles Using a Quartz Crystal Microbalance. *40:1027-1033.*

Stasinopoulou M, Mantziaras G, Paronis E, Balafas E, Lelovas P, Samara A, Kostomitsopoulos N. Use of Real-Time Ultrasonography as an Alternative Method for Early Detection, Confirmation and Evaluation of Rat Pregnancy. *40:1372-1378.*

Reznik N, Lajoinie G, Shpak O, Gelderblom EC, Williams R, de Jong N, Versluis M, Burns PN. On the Acoustic Properties of Vaporized Submicron Perfluorocarbon Droplets. *40:1379-1384.*

Pinter SZ, Kim D-R, Hague MN, Chambers AF, MacDonald IC, Lacefield JC. A Method to Validate Quantitative High-Frequency Power Doppler Ultrasound With Fluorescence in Vivo Video Microscopy. *40:1908-1917.*

Lioce EEAN, Novello M, Durando G, Bistolfi A, Actis MV, Massazza G, Magnetto C, Guiot C. Therapeutic Ultrasound in Physical Medicine and Rehabilitation: Characterization and Assessment of Its Physical Effects on Joint-Mimicking Phantoms. *40:2743-2748.*

**Tendon**

**Synonyms:** Collagen, Connective tissue

**Scopus Search:** tendon OR “connective tissue” OR collagen

DeWall RJ, Jiang J, Wilson JJ, Lee KS. Visualizing Tendon Elasticity in an ex Vivo Partial Tear Model. *40:158-167.*

Sato J, Ishii Y, Noguchi H, Takeda M. Sonographic Analyses of Pulley and Flexor Tendon in Idiopathic Trigger Finger with Interphalangeal Joint Contracture. *40:1146-1153.*

de Girolamo L, Stanco D, Galliera E, Viganò M, Lovati AB, Marazzi MG, Romeo P, Sansone V. Soft-Focused Extracorporeal Shock Waves Increase the Expression of Tendon-Specific Markers and the Release of Anti-inflammatory Cytokines in an Adherent Culture Model of Primary Human Tendon Cells. *40:1204-1215.*

McCreesh K, Adusumilli P, Evans T, Riley S, Davies A, Lewis J. Validation of Ultrasound Measurement of the Subacromial Space Using a Novel Shoulder Phantom Model. *40:1729-1733.*

Liong K, Lahiri A, Lee S, Chia D, Biswas A, Lee HP. Predominant Patterns of Median Nerve Displacement and Deformation during Individual Finger Motion in Early Carpal Tunnel Syndrome. *40:1810-1818.*

### Therapeutic Applications of Ultrasound

**Synonyms:** ultrasound therapy, sonotherapy

**Scopus Search:** Therap\* OR Sonotherap\*

*See also:* **healing, high intensity focused ultrasound**

Sehgal CM, Wood AKW. Re “Disruption of Tumor Neovasculature by Microbubble Enhanced Ultrasound: A Potential New Physical Therapy of Anti-angiogenesis”. 40:455-456.

Gao S, Liu Z, Xie F. Reply to the Letter to the Editor re “Disruption of Tumor Neovasculature by Microbubble Enhanced Ultrasound: A Potential New Physical Therapy of Anti-angiogenesis”. 40:456.

Abrunhosa VM, Soares CP, Batista Possidonio AC, Alvarenga AV, Costa-Felix RPB, Costa ML, Mermelstein C. Induction of Skeletal Muscle Differentiation In Vitro by Therapeutic Ultrasound. 40:504-512.

Juffermans LJM, Meijering BDM, Henning RH, Deelman LE. Ultrasound and Microbubble-Targeted Delivery of Small Interfering RNA Into Primary Endothelial Cells Is More Effective Than Delivery of Plasmid DNA. 40:532-540.

Ruiz-Molinero C, Jimenez-Rejano JJ, Chillon-Martinez R, Suarez-Serrano C, Rebollo-Roldan J, Perez-Cabezas V. Efficacy of Therapeutic Ultrasound in Pain and Joint Mobility in Whiplash Traumatic Acute and Subacute Phases. 40:2089-2095.

Wei H, Shi L, Zhang J, Xia Y, Cuan J, Zhang Y, Li W, Yan A, Jiang X, Lang M-F, Sun J. High-Intensity Focused Ultrasound Leads to Histopathologic Changes of the Inferior Turbinate Mucosa with Allergic Inflammation. 40:2425-2430.

Lioce EEAN, Novello M, Durando G, Bistolfi A, Actis MV, Massazza G, Magnetto C, Guiot C. Therapeutic Ultrasound in Physical Medicine and Rehabilitation: Characterization and Assessment of Its Physical Effects on Joint-Mimicking Phantoms. 40:2743-2748.

Notarnicola A, Quagliarella L, Sasanelli N, Maccagnano G, Fracella MR, Forcignanò MI, Moretti B. Effects of Extracorporeal Shock Wave Therapy on Functional and Strength Recovery of Handgrip in Patients Affected by Epicondylitis. 40:2830-2840.

### Thermal effects

**Synonyms:** ultrasound heating, tissue heating

**Scopus Search:** “Thermal effects” OR heating

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

Liu Y, Herman BA, Sonesson JE, Harris GR. Thermal Safety Simulations of Transient Temperature Rise during Acoustic Radiation Force-Based Ultrasound Elastography. 40:1001-1014.

Liu Z, Guo X, Tu J, Zhang D. Variations in Temperature Distribution and Tissue Lesion Formation Induced by Tissue Inhomogeneity for Therapeutic Ultrasound. 40:1857-1868.

Buschschlüter S, Koch C, von Eicken J, Höh H. Computation of the Temperature Rise at the Corneal Endothelium during Cataract Surgery by Modeling of Heat Generation Inside the Anterior Chamber. 40:2431-2444.

Guntur SR, Choi MJ. An Improved Tissue-Mimicking Polyacrylamide Hydrogel Phantom for Visualizing Thermal Lesions with High-Intensity Focused Ultrasound. 40:2680-2691.

### Thrombolysis

**Synonyms:** sonothrombolysis, recanalisation, clot busting  
**Scopus Search:** Thromb\* OR sonothrombolysis OR stroke OR clot OR recanalisation

Chen X, Leeman JE, Wang J, Pacella JJ, Villanueva FS. New Insights into Mechanisms of Sonothrombolysis Using Ultra-High-Speed Imaging. 40:258-262.

Bouchoux G, Shivashankar R, Abruzzo TA, Holland CK. In silico Study of Low-Frequency Transcranial Ultrasound Fields in Acute Ischemic Stroke Patients. 40:1154-1166.

Wu J, Xie F, Kumar T, Liu J, Lof J, Shi W, Everbach EC, Porter TR. Improved Sonothrombolysis from a Modified Diagnostic Transducer Delivering Impulses Containing a Longer Pulse Duration. 40:1545-1553.

Acconcia C, Leung BYC, Manjunath A, Goertz DE. Interactions between Individual Ultrasound-Stimulated Microbubbles and Fibrin Clots. 40:2134-2150.

Pajak D, Burgess A, Huang Y, Hynynen K. High-Intensity Focused Ultrasound Sonothrombolysis: The Use of Perfluorocarbon Droplets to Achieve Clot Lysis at Reduced Acoustic Power. 40:2151-2161.

### Thyroid

**Synonyms:** Thyroid gland

**Scopus Search:** Thyroid\* OR goitre

Ko SY, Kim E-K, Sung JM, Moon HJ, Kwak JY. Diagnostic Performance of Ultrasound and Ultrasound Elastography with Respect to Physician Experience. 40:854-863.

Herh SJ, Kim E-K, Sung JM, Yoon JH, Moon HJ, Kwak JY. Heterogeneous Echogenicity of the Thyroid Parenchyma Does Not Influence the Detection of Multi-focality in Papillary Thyroid Carcinoma on Preoperative Ultrasound Staging. 40:884-889.

Ryu JH, Kim DW, Kang T. Pre-operative Detection of Thyroid Pyramidal Lobes by Ultrasound and Computed Tomography. 40:1442-1446.

Turtulici G, Orlandi D, Corazza A, Sartoris R, Derchi LE, Silvestri E, Baek JH. Percutaneous Radiofrequency Ablation of Benign Thyroid Nodules Assisted by a Virtual Needle Tracking System. 40:1447-1452.

Freesmeyer M, Wiegand S, Schierz J-H, Winkens T, Licht K. Multimodal Evaluation of 2-D and 3-D Ultrasound, Computed Tomography and Magnetic Resonance Imaging in



Measurements of the Thyroid Volume Using Universally Applicable Cross-Sectional Imaging Software: A Phantom Study. 40:1453-1462.

Jin Z-Q, Lin M-Y, Hu W-H, Li W-Y, Bai S-J. Gray-Scale Ultrasonography Combined with Elastography Imaging for the Evaluation of Papillary Thyroid Microcarcinoma: As a Prognostic Clinicopathology Factor. 40:1769-1777.

Kim DW, Jung SJ, Ha TK, Park HK, Kang T. Comparative Study of Ultrasound and Computed Tomography for Incidentally Detecting Diffuse Thyroid Disease. 40:1778-1784.

Chen S-P, Hu Y-P, Chen B. Taller-Than-Wide Sign for Predicting Thyroid Microcarcinoma: Comparison and Combination of Two Ultrasonographic Planes. 40:2004-2011.

Yoon JH, Yoo J, Kim E-K, Moon HJ, Lee HS, Seo JY, Park HY, Park W-J, Kwak JY. Real-Time Elastography in the Evaluation of Diffuse Thyroid Disease: A Study Based on Elastography Histogram Parameters. 40:2012-2019.

Xu J-M, Xu H-X, Xu X-H, Liu C, Zhang Y-F, Guo L-H, Liu L-N, Zhang J. Solid Hypo-echoic Thyroid Nodules on Ultrasound: The Diagnostic Value of Acoustic Radiation Force Impulse Elastography. 40:2020-2030.

Kim M-H, Luo S, Ko SH, Jung S-L, Lim D-J, Kim Y. Elastography Can Effectively Decrease the Number of Fine-Needle Aspiration Biopsies in Patients with Calcified Thyroid Nodules. 40:2329-2335.

Chen K-Y, Chen C-N, Wu M-H, Ho M-C, Tai H-C, Kuo W-H, Huang W-C, Wang Y-H, Chen A, Chang K-J. Computerized Quantification of Ultrasonic Heterogeneity in Thyroid Nodules. 40:2581-2589.

### Tissue characterization

**Synonyms:** tissue identification, tissue differentiation, histoscanning

**Scopus Search:** tissue AND characteri\*ation OR identification OR differentiation OR histoscanning  
Carstensen EL, Parker KJ. Physical Models of Tissue in Shear Fields. 40:655-674.

Partin A, Hah Z, Barry CT, Rubens DJ, Parker KJ. Elasticity Estimates from Images of Crawling Waves Generated by Miniature Surface Sources. 40:685-694.

Larrue A, Noble JA. Modeling of Errors in Nakagami Imaging: Illustration on Breast Mass Characterization. 40:917-930.

Katz-Hanani I, Rothstein T, Gaitini D, Gallimidi Z, Azhari H. Age-Related Ultrasonic Properties of Breast Tissue In Vivo. 40:2265-2271.

Kumagai H, Yokoyama K, Katsuyama K, Hara S, Yamamoto H, Yamagata T, Taniguchi N, Hirota N, Itoh K. A New Method for Measuring the Speed of Sound in Rat Liver ex Vivo Using an Ultrasound System: Correlation of Sound Speed with Fat Deposition. 40:2499-2507.

Choi SH, Jo S, Kim D-H, Park JS, Choi Y, Kook S-H, Chung EC, Lee S-Y. Clinical and Imaging Characteristics of Papillary Neoplasms of the Breast Associated with Malignancy: A Retrospective Cohort Study. 40:2599-2608.

Gómez Flores W, Pereira WCdA, Infantosi AFC. Breast Ultrasound Despeckling Using Anisotropic Diffusion Guided by Texture Descriptors. 40:2609-2621.

### Tissue Elasticity

**Synonyms:** Young's modulus, elastic modulus, stiffness

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

*See also:* tissue characterization, elastography

Ling W, Lu Q, Lu C, Quan J, Ma L, Li J, He D, Liu J, Yang J, Wen T, Wu H, Zhu H, Luo Y. Effects of Vascularity and Differentiation of Hepatocellular Carcinoma on Tumor and Liver Stiffness: In Vivo and in Vitro Studies. 40:739-746.

Umamoto T, Ueno E, Matsumura T, Yamakawa M, Bando H, Mitake T, Shiina T. Ex Vivo and In Vivo Assessment of the Non-linearity of Elasticity Properties of Breast Tissues for Quantitative Strain Elastography. 40:1755-1768.

Pislaru C, Urban MW, Pislaru SV, Kinnick RR, Greenleaf JF. Viscoelastic Properties of Normal and Infarcted Myocardium Measured by a Multifrequency Shear Wave Method: Comparison with Pressure-Segment Length Method. 40:1785-1795.

### Tissue Engineering

**Synonyms:** tissue synthesis, remodelling, prostheses

**Scopus Search:** Tissue AND Engineer\*

Inkinen S, Liukkonen J, Ylärinne JH, Puhakka PH, Lammi MJ, Virén T, Jurvelin JS, Töyräs J. Collagen and Chondrocyte Concentrations Control Ultrasound Scattering in Agarose Scaffolds. 40:2162-2171.

Winterroth F, Kato H, Kuo S, Feinberg SE, Hollister SJ, Fowlkes JB, Hollman KW. High-Frequency Ultrasonic Imaging of Growth and Development in Manufactured Engineered Oral Mucosal Tissue Surfaces. 40:2244-2251.

### Transcranial ultrasound

**Synonyms:** TCS, TCD

**Scopus Search:** Transcranial OR TCD OR skull

*See also:* Doppler

Wallace S, Logallo N, Faiz KW, Lund C, Brucher R, Russell D. Relative Blood Flow Changes Measured Using Calibrated Frequency-Weighted Doppler Power at Different Hematocrit Levels. 40:828-836.

Hao N, Liu K, Guo Z-N, Wu X, Yang Y, Xing Y. Comparison of Two Contrast Agents for Right-to-Left Shunt Diagnosis with Contrast-Enhanced Transcranial Doppler. 40:2317-2320.

Bártová P, Kraft O, Bernátek J, Havel M, Ressler P, Langová K, Herzig R, Školoudík D. Transcranial Sonography and 123I-FP-CIT Single Photon Emission Computed Tomography in Movement Disorders. *40:2365-2371*.

Yonan KA, Greene ER, Sharrar JM, Caprihan A, Qualls C, Roldan CA. Middle Cerebral Artery Blood Flows by Combining TCD Velocities and MRA Diameters: In Vitro and In Vivo Validations. *40:2692-2699*.

## U

### Ultrasound guided surgery

**Synonyms:** intraoperative imaging, ultrasonic guidance, image guided surgery

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

Pheiffer TS, Thompson RC, Rucker DC, Simpson AL, Miga MI. Model-Based Correction of Tissue Compression for Tracked Ultrasound in Soft Tissue Image-Guided Surgery. *40:788-803*.

Turtulici G, Orlandi D, Corazza A, Sartoris R, Derchi LE, Silvestri E, Baek JH. Percutaneous Radiofrequency Ablation of Benign Thyroid Nodules Assisted by a Virtual Needle Tracking System. *40:1447-1452*.

Paik WH, Yoon H, Park DH, Jung K, Lee SS, Seo DW, Lee SK, Kim M-H. Utility of Endoscopic Ultrasound (EUS)-Guided Fine-Needle Aspiration for Peri-arterial Soft Tissue Cuffs Without Identifiable Pancreas Mass on CT and EUS: A Prospective Comparative Study. *40:1463-1468*.

Burkhardt J-K, Serra C, Neidert MC, Woernle CM, Fierstra J, Regli L, Bozinov O. High-Frequency Intra-operative Ultrasound-Guided Surgery of Superficial Intra-cerebral Lesions via a Single-Burr-Hole Approach. *40:1469-1475*.

Belohlavek M, Katayama M, Zarbatany D, Fortuin FD, Fatemi M, Nenadic IZ, McMahon EM. Acoustically Active Injection Catheter Guided by Ultrasound: Navigation Tests in Acutely Ischemic Porcine Hearts. *40:1650-1659*.

Yu S, Tan KK, Sng BL, Li S, Sia ATH. Automatic Identification of Needle Insertion Site in Epidural Anesthesia with a Cascading Classifier. *40:1980-1990*.

Nieuwoudt M, Lameris R, Corcoran C, Rossouw TM, Slavik T, Du Plessis J, Omoshoro-Jones JAO, Stivaktas P, Potgieter F, Van der Merwe SW. Polymerase Chain Reaction Amplifying Mycobacterial DNA from Aspirates Obtained by Endoscopic Ultrasound Allows Accurate Diagnosis of Mycobacterial Disease in HIV-Positive Patients with Abdominal Lymphadenopathy. *40:2031-2038*.

Chen H-J, Liao W-C, Liang S-J, Li C-H, Tu C-Y, Hsu W-H. Diagnostic Impact of Color Doppler Ultrasound-Guided Core Biopsy on Fine-Needle Aspiration of Anterior Mediastinal Masses. *40:2768-2776*.

Rangraz P, Behnam H, Sobhebidari P, Tavakkoli J. Real-Time Monitoring of High-Intensity Focused Ultrasound Thermal Therapy Using the Manifold Learning Method. *40:2841-2850*.

## V

### Velocity

**Synonyms:** speed of sound, acoustic velocity

**Scopus Search:** velocity OR speed OR “phase velocity” OR “group velocity” OR “transmission measurements”

*See also:* **tissue characterisation**

Kumagai H, Yokoyama K, Katsuyama K, Hara S, Yamamoto H, Yamagata T, Taniguchi N, Hirota N, Itoh K. A New Method for Measuring the Speed of Sound in Rat Liver ex Vivo Using an Ultrasound System: Correlation of Sound Speed with Fat Deposition. *40:2499-2507*.