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● Subject Index to Volume 35

2D

Synonyms: 2-D, two dimensional, two-dimensional, 2-dimensional

Scopus Search: 2D OR 2-D OR “two dimensional” OR two-dimensional OR 2-dimensional

de Labriolle A, Mohty D, Pacouret G, Giraudeau B, Fichet J, Fremont B, Fauchier L, Charbonnier B, Arbeille P.
Comparison of Degree of Stenosis and Plaque Volume for the Assessment of Carotid Atherosclerosis Using 2-D Ultrasound. 35:1436-1442.

Horsch S, Bengtsson J, Nordell A, Lagercrantz H, Aden U, Blennow M. Lateral Ventricular Size in Extremely Premature Infants: 3D Mri Confirms 2D Ultrasound Measurements. 35:360-366.

Mavinkurve-Groothuis AMC, Weijers G, Groot-Loonen J, Pourier M, Feuth T, de Korte CL, Hoogerbrugge PM, Kapusta L. Interobserver, Intraobserver and Inpatient Reliability Scores of Myocardial Strain Imaging with 2-D Echocardiography in Patients Treated with Anthracyclines. 35:697-704.

Yuen QWH, Ying MTC, Brook FM, Kinoshita RE.
Reliability of 2D Ultrasound Measurements of Testis Size in Dolphins Taken Under Voluntary Behavior. 35:1005-1009.

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

Chen NG, Fowlkes JB, Carson PL, Schipper MJ, LeCarpentier GL. Rapid 3-D Imaging of Contrast Flow: Application in A Perfused Kidney Phantom. 35:813-828.

Crosby J, Amundsen BH, Hergum T, Remme EW, Langeland S, Torp H. 3-D Speckle Tracking for Assessment of Regional Left Ventricular Function. 35:458-471.

Duan Q, Angelini ED, Herz SL, Ingrassia CM, Costa KD, Holmes JW, Homma S, Laine AF. Region-Based Endocardium Tracking on Real-Time Three-Dimensional Ultrasound. 35:256-265.

Hsiao YH, Huang YL, Liang WM, Lin C, Kuo SJ, Chen DR.
Characterization of Benign and Malignant Solid Breast Masses: Harmonic Versus Nonharmonic 3D Power Doppler Imaging. 35:353-359.

Krasinski A, Chiu B, Spence JD, Fenster A, Parraga G. Three-Dimensional Ultrasound Quantification of Intensive Statin Treatment of . 35:1763-1772.

MacGillivray TJ, Ross E, Simpson HAHR, Greig CA. 3D Freehand Ultrasound for in Vivo Determination of Human Skeletal Muscle Volume. 35:928-935.

Maffessanti F, Lang RM, C.Corsi, Mor-Avi V, Caiani EG.
Feasibility of Left Ventricular Shape Analysis from Transthoracic Real-Time 3-D Echocardiographic Images. 35:1953-1962.

Nardoza LMM, Araujo E, Simioni C, Torloni MR, Moron AF.
Evolution of 3-D Power Doppler Indices of Fetal Brain in Normal Pregnancy. 35:545-549.

Rutten MJ, Pistorius LR, Mulder EJH, Stoutenbeek P, de Vries LS, Visser GHA. Fetal Cerebellar Volume and Symmetry on 3-D Ultrasound: Volume Measurement with Multiplanar and Vocal Techniques. 35:1284-1289.

Smith SW, Ivancevich NM, Lindsey BD, Whitman J, Light E, Fronheiser M, Nicoletto HA, Laskowitz DT.
The Ultrasound Brain Helmet: Feasibility Study of Multiple Simultaneous 3D Scans of Cerebral Vasculature. 35:329-338.

Winter S, Pechlivanis I, Dekomien C, Igel C, Schmieder K.
Toward Registration of 3D Ultrasound and CT Images of the Spine in Clinical Praxis: Design and Evaluation of a Data Acquisition Protocol. 35:1773-1782.

Zhou J, Zhu S, Liu R, Luo F, Shu D. Vascularity Index of Laryngeal Cancer Derived from 3-D Ultrasound: A Predicting Factor for the in vivo Assessment of Cervical Lymph Node Status. 35:1596-1600.

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

A

Abdominal ultrasound

Synonyms: Abdominal imaging, Abdomen

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

See also: **Kidney, liver, spleen, pancreas, gall bladder**

Mook-Kanamori DO, Holzhauer S, Hollestein LM, Durmus B, Manniesing R, Koek M, Boehm G, Van Der Beek EM, Hofman A, Witteman JCM, Lequin MH, Jaddoe VWV. Abdominal fat in children measured by ultrasound and computed tomography. 35:1938-1946.

Acoustic emission

Synonyms: AE, passive detection

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

See also: **Cavitation**

Samuel S, Cooper MA, Bull JL, Fowlkes JB, Miller DL. An Ex Vivo Study of the Correlation Between Acoustic Emission and Microvascular Damage. 35:1574-1586.

Acoustic microscopy

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

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

See also: **High frequency ultrasound**

Bosisio MR, Maisonneuve C, Gregoire S, Kettaneh A, Mueller CG, Bridal SL. Ultrasound Biomicroscopy: A Powerful Tool Probing Murine Lymph Node Size in Vivo. 35:1209-1216.

Wang Q, Zheng YP. Ultrasound Biomicroscopy Imaging for Monitoring Progressive Trypsin Digestion and Inhibition in Articular Cartilage. 35:1535-1545.

Acoustic properties of tissues

Synonyms: ultrasound/ultrasonic properties

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

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

Kiviranta P, Lammontausta E, Toyras J, Nieminen HJ, Julkunen P, Kiviranta I, Jurvelin JS. Differences in Acoustic Properties of Intact and Degenerated Human Patellar Cartilage During Compression. 35:1367-1375.

Silverman RH, Patel MS, Gal O, Sarup A, Deobhakta A, Dababneh H, Reinstein DZ, Feleppa EJ, Coleman DJ. Effect of Corneal Hydration on Ultrasound Velocity and Backscatter. 35:839-846.

Adaptive filtering

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

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

See also: **Image processing**

Aneurysm

Synonyms: aneurism

Scopus Search: Aneur*sm OR AAA

See also: **Atherosclerosis, hypertension**

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

Nishida M, Koito K, Hirokawa N, Hori M, Satoh T, Hareyama M. Does Contrast-Enhanced Ultrasound Reveal Tumor Angiogenesis in Pancreatic Ductal Carcinoma? A Prospective Study. 35:175-185.

Shau YW, Pao SH, Chou NK, Chang KJ, Shyu JJ. Renal Vascular Perfusion Index in A Canine Model. 35:36-43.

Zhou J, Zhu S, Liu R, Luo F, Shu D. Vascularity Index of Laryngeal Cancer Derived from 3-D Ultrasound: A Predicting Factor for the in vivo Assessment of Cervical Lymph Node Status. 35:1596-1600.

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

Jiamsripong P, Alharthi MS, Calleja AM, McMahon EM, Mookadam F, Khandheria BK, Belohlavek M. Quantification of Left Ventricular Twisting Mechanics by Velocity Vector Imaging in an Animal Model of Pericardial Adhesions. 35:1963-1972.

Mamou J, Aristizabal O, Silverman RH, Ketterling JA, Turnbull DH. High-Frequency Chirp Ultrasound Imaging with An Annular Array for Ophthalmologic and Small-Animal Imaging. 35:1198-1208.

Melodelima D, N'Djin WA, Parmentier H, Chesnais S, Rivoire M, Chapelon JY. Thermal Ablation by High-Intensity-Focused Ultrasound Using A Toroid Transducer Increases the Coagulated Volume. Results of Animal Experiments. 35:425-435.

Tang J, Li WX, Lv FQ, Zhang HQ, Zhang LH, Wang YX, Li JL, Yang L. Comparison of Gray-Scale Contrast-Enhanced Ultrasonography with Contrast-Enhanced Computed Tomography in Different Grading of Blunt Hepatic and Splenic Trauma: An Animal Experiment. 35:566-575.

Weytjens C, D'hooge J, Droogmans S, Van den Bergh A, Cosyns B, Lahoutte T, Herugers P, Van Camp G. Influence of Heart Rate Reduction on Doppler Myocardial Imaging Parameters in A Small Animal Model. 35:30-35.

Arrays

Synonyms: phased array, beam steering, compound imaging

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

See also: Transducers

Bank AJ, Berry JM, Wilson RF, Lester BR. Acceptance Criteria for Reprocessed Acunav (R) Catheters: Comparison Between Functionality Testing and Clinical Image Assessment. 35:507-514.

Foster FS, Mehi J, Lukacs M, Hirson D, White C, Chaggares C, Needles A. A New 15-50 MHz Array-Based Micro-Ultrasound Scanner for Preclinical Imaging. 35:1700-1708.

Lopata RGP, Nillesen MM, Hansen HHG, Gerrits IH, Thijssen JM, De Korte CL. Performance Of Two Dimensional Displacement And Strain Estimation Techniques Using A Phased Array Transducer. 35:2031-2041.

Melodelima D, N'Djin WA, Parmentier H, Chesnais S, Rivoire M, Chapelon JY. Thermal Ablation by High-Intensity-Focused Ultrasound Using A Toroid Transducer Increases the Coagulated Volume. Results of Animal Experiments. 35:425-435.

Artefacts

See: image artifacts

Artery

Synonyms: Arterial vessel

Scopus Search: Arter* OR aorta OR carotid

See also: Blood vessels, carotid

Stapleton CH, Green DJ, Cable NT, George KP. Flow-Mediated Dilation and Intima-Media Thickness of the Brachial and Axillary Arteries in Individuals with and Without Inducible Axillary Artery Compression. 35:1443-1451.

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

Behler RH, Nichols TC, Zhu HT, Merricks EP, Gallippi CM. Arfi Imaging for Noninvasive Material Characterization of Atherosclerosis Part II: Toward in Vivo Characterization. 35:278-295.

Choi YS, Youn HJ, Park CS, Oh YS, Chung WS. Measurement of the Intimal Thickness of the Carotid Artery: Comparison

Between 40 Mhz Ultrasound and Histology in Rats. 35:962-966.

Dahl JJ, Dumont DM, Allen JD, Miller EM, Trahey GE. Acoustic Radiation Force Impulse Imaging for Noninvasive Characterization of Carotid Artery Atherosclerotic Plaques: A Feasibility Study. 35:707-716.

de Labriolle A, Mohty D, Pacouret G, Giraudeau B, Fichet J, Fremont B, Fauchier L, Charbonnier B, Arbeille P. Comparison of Degree of Stenosis and Plaque Volume for the Assessment of Carotid Atherosclerosis Using 2-D Ultrasound. 35:1436-1442.

Graf IM, Schreuder FHBM, Hameleers JM, Mess WH, Reneman RS, Hoeks APG. Wall Irregularity Rather Than Intima-Media Thickness Is Associated with Nearby Atherosclerosis. 35:955-961.

Kaple RK, Maehara A, Sano K, Missel E, Castellanos C, Tsujita K, Fahy M, Moses JW, Stone GW, Leon MB, Mintz GS. The Axial Distribution of Lesion-Site Atherosclerotic Plaque Components: An in Vivo Volumetric Intravascular Ultrasound Radio-Frequency Analysis of Lumen Stenosis, Necrotic Core and Vessel Remodeling. 35:550-557.

Krasinski A, Chiu B, Spence JD, Fenster A, Parraga G. Three-Dimensional Ultrasound Quantification of Intensive Statin Treatment of . 35:1763-1772.

Mallett C, House AA, Spence JD, Fenster A, Parraga G. Longitudinal Ultrasound Evaluation of Carotid Atherosclerosis in One, Two and Three Dimensions. 35:367-375.

Ono K, Kawasaki M, Tanaka R, Segawa T, Matsuo H, Watanabe S, Takemura G, Minatoguchi S. Integrated Backscatter and Intima-Media Thickness of the Thoracic Aorta Evaluated by Transesophageal Echocardiography in Hypercholesterolemic Patients: Effect of Pitavastatin Therapy. 35:193-200.

Attenuation

Synonyms: BUA

Scopus Search: attenuat* OR BUA

See also: Acoustic properties of tissues

Gibson AA, Singh GK, Hoffman JJ, Ludomirsky A, Holland MR. Measurements of Ultrasonic Attenuation Properties of Midgestational Fetal Pig Hearts. 35:319-328.

Secomski W, Nowicki A, Tortoli P, Olszewski R. Multigate Doppler Measurements of Ultrasonic Attenuation and Blood Hematocrit in Human Arteries. 35:230-236.

Zhang S, Wan M, Zhong H, Xu C, Liao Z, Liu H, Wang S. Dynamic Changes of Integrated Backscatter; Attenuation Coefficient and Bubble Activities During High-Intensity Focused Ultrasound (HIFU) Treatment. 35:1828-1844.

Auditory system

Synonyms: hearing, ear, cochlea, ossicles

Scopus Search: auditory OR hearing OR ear OR cochlea OR ossicles

Brown JA, Torbatian Z, Adamson RB, Van Wijhe R, Pennings RJ, Lockwood GR, Bance ML. High-Frequency Ex Vivo Ultrasound Imaging of the Auditory System. 35:1899-1907.

B

Backscatter

Synonyms: back scatter, backscattering

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

See also: Acoustic properties of tissues

Tsui P, Chang C, Ho M, Lee Y, Chen Y, Chang C, Huang NE, Wu Z, Chang K. Use of Nakagami statistics and empirical mode decomposition for ultrasound tissue characterization by a nonfocused transducer. 35:2055-2068.

Garra BS, Locher M, Felker S, Wear KA. Measurements of Ultrasonic Backscattered Spectral Centroid Shift from Spine in Vivo: Methodology and Preliminary Results. 35:165-168.

Karjalainen JP, Toyras J, Riekkinen O, Hakulinen M, Jurvelin JS. Ultrasound Backscatter Imaging Provides Frequency-Dependent Information on Structure, Composition and Mechanical Properties of Human Trabecular Bone. 35:1376-1384.

Ono K, Kawasaki M, Tanaka R, Segawa T, Matsuo H, Watanabe S, Takemura G, Minatoguchi S. Integrated Backscatter and Intima-Media Thickness of the Thoracic Aorta Evaluated by Transesophageal Echocardiography in Hypercholesterolemic Patients: Effect of Pitavastatin Therapy. 35:193-200.

Tsui PH, Yeh CK, Chang CC. Microvascular Flow Estimation by Microbubble-Assisted Nakagami Imaging. 35:653-671.

Zhang S, Wan M, Zhong H, Xu C, Liao Z, Liu H, Wang S. Dynamic Changes of Integrated Backscatter; Attenuation Coefficient and Bubble Activities During High-Intensity Focused Ultrasound (HIFU) Treatment. 35:1828-1844.

Bacteria

Synonyms: biofilms, infection

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

Bigelow TA, Northagen T, Hill TM, Sailer FC. The Destruction of Escherichia Coli Biofilms Using High-Intensity Focused Ultrasound. 35:1026-1031.

Beam focusing

Synonyms: beam forming, dynamic focusing

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

See also: Arrays

Biological effects

Synonyms: Bioeffects, Biochemical effect

Scopus Search: "bio*effect*"

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

O'Brien WD, Yang Y, Simpson DG. Threshold Estimation and Superthreshold Behavior of Ultrasound-Induced Lung Hemorrhage in Rats: Role of Age Dependency. 35:129-135.

Or M, Kimmel E. Modeling Linear Vibration of Cell Nucleus in Low Intensity Ultrasound Field. 35:1015-1025.

Juffermans LJM, van Dijk A, Jongenelen CAM, Drukarch B, Reijkerkerk A, de Vries HE, Kamp O, Musters RJP. Ultrasound and Microbubble-Induced Intra- and Intercellular Bioeffects in Primary Endothelial Cells. 35:1917-1927.

Tamma R, Dell'Endice S, Notarnicola A, Moretti L, Patella S, Patella V, Zallone A, Moretti B. Extracorporeal Shock Waves Stimulate Osteoblast Activities. 35:2093-2100.

Samuel S, Cooper MA, Bull JL, Fowlkes JB, Miller DL. An Ex Vivo Study of the Correlation Between Acoustic Emission and Microvascular Damage. 35:1574-1586.

Sontag W, Kruglikov IL. Expression of Heat Shock Proteins After Ultrasound Exposure in HI-60 Cells. 35:1032-1041.

Biometrics

Synonyms: Identification

Scopus Search: "bio*metric*"

Blood

Synonyms:

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

Blood flow

Synonyms: haemodynamics, venous reflux

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

See also: Doppler

Hudson JM, Karshafian R, Burns PN. Quantification of Flow Using Ultrasound and Microbubbles: A Disruption Replenishment Model Based on Physical Principles. 35:2007-2020.

Quaia E, Nacentini A, Torelli L. Assessment of A New Mathematical Model for the Computation of Numerical Parameters Related to Renal Cortical Blood Flow and Fractional Blood Volume by Contrast-Enhanced Ultrasound. 35:616-627.

Rakebrandt F, Palombo C, Swampillai J, Schon F, Donald A, Kozakova M, Kato K, Fraser AG. Arterial Wave Intensity and Ventricular-Arterial Coupling by Vascular Ultrasound: Rationale and Methods for the Automated Analysis of Forwards and Backwards Running Waves. 35:266-277.

Tsui PH, Yeh CK, Chang CC. Microvascular Flow Estimation by Microbubble-Assisted Nakagami Imaging. 35:653-671.

Wakugawa Y, Sugimori H, Nakane H, Hata J, Irie K, Kitazono T, Iida M. Flow Volume and Cross-Sectional Area of the Extracranial Vertebral Arteries and Its Relation to Vascular

Lesions Or Anatomical Variations in the Posterior Circulation. 35:1068-1075.

Zhou J, Zhu S, Liu R, Luo F, Shu D. Vascularity Index of Laryngeal Cancer Derived from 3-D Ultrasound: A Predicting Factor for the in vivo Assessment of Cervical Lymph Node Status. 35:1596-1600.

Blood perfusion

Synonyms: tissue perfusion

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

Krix M, Krakowski-Roosen H, Kauczor H, Delorme S, Weber MA. Real-Time Contrast-Enhanced Ultrasound for the Assessment of Perfusion Dynamics in Skeletal Muscle. 35:1587-1595.

Blood pressure

Synonyms: hypertension, hypotension, vascular pressure, arterial pressure

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

See also: Hypertension

Blood vessel

Synonyms: artery, vein, capillary, vascular

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

See also: Artery

Blood-brain barrier

Synonyms: BBB

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

See also: Thrombolysis, transcranial ultrasound

Bing KF, Howles GP, Qi Y, Palmeri ML, Nightingale KR. Blood-Brain Barrier (Bbb) Disruption Using A Diagnostic Ultrasound Scanner and Definity (R) in Mice. 35:1298-1308.

Bone

Synonyms: osteo-

Scopus Search: bone OR trabecular OR cortical OR osteo*

Albanese CV, Cepollaro C, de Terlizzi F, Brandi ML, Passariello R. Performance of Five Phalangeal Qus Parameters in the Evaluation of Gonadal-Status, Age and Vertebral Fracture Risk Compared with Dxa. 35:537-544.

Aula AS, Toyras J, Hakulinen MA, Jurvelin JS. Effect of Bone Marrow on Acoustic Properties of Trabecular Bone-3D Finite Difference Modeling Study. 35:308-318.

Garra BS, Locher M, Felker S, Wear KA. Measurements of Ultrasonic Backscattered Spectral Centroid Shift from

Spine in Vivo: Methodology and Preliminary Results. 35:165-168.

Hacihaliloglu I, Abugharbieh R, Hodgson AJ, Rohling RN. Bone Surface Localization in Ultrasound Using Image Phase-Based Features. 35:1475-1487.

Karjalainen JP, Toyras J, Riekkinen O, Hakulinen M, Jurvelin JS. Ultrasound Backscatter Imaging Provides Frequency-Dependent Information on Structure, Composition and Mechanical Properties of Human Trabecular Bone. 35:1376-1384.

Maata M, Moilanen P, Nicholson P, Cheng SL, Timonen J, Jamsa T. Correlation of Tibial Low-Frequency Ultrasound Velocity with Femoral Radiographic Measurements and Bmd in Elderly Women. 35:903-911.

Nuzzo V, de Milita AM, Ferraro T, Monaco A, Florio E, Miano P, Montemarano E, Zuccoli A, de Terlizzi F. Analysis of Skeletal Status by Quantitative Ultrasonometry in A Cohort of Postmenopausal Women with High Blood Cholesterol Without Documented Osteoporosis. 35:717-722.

Romano CL, Romano D, Logoluso N. Low-Intensity Pulsed Ultrasound for the Treatment of Bone Delayed Union Or Nonunion: A Review. 35:529-536.

Ta D, Wang WQ, Wang YY, Le LH, Zhou YQ. Measurement of the Dispersion and Attenuation of Cylindrical Ultrasonic Guided Waves in Long Bone. 35:641-652.

Talmant M, Kolta S, Roux C, Haguenuer D, Vedel I, Cassou B, Bossy E, Laugier P. In Vivo Performance Evaluation of Bi-Directional Ultrasonic Axial Transmission for Cortical Bone Assessment. 35:912-919.

Tam KF, Cheung WH, Lee KM, Qin L, Leung KS. Shockwave Exerts Osteogenic Effect on Osteoporotic Bone in An Ovariectomized Goat Model. 35:1109-1118.

Bone density measurement

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

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

Book review

Reddy A. Text Book of in vivo Imaging in Vertebrates. 35:1231.

Brain

Synonyms: cerebral, cerebrovascular, cerebrum

Scopus Search: Brain OR cerebr*

Bellapart J, Fraser JF. Transcranial Doppler Assessment of Cerebral Autoregulation. 35:883-893.

Horsch S, Bengtsson J, Nordell A, Lagercrantz H, Aden U, Blennow M. Lateral Ventricular Size in Extremely Premature

Infants: 3D Mri Confirms 2D Ultrasound Measurements. 35:360-366.

Sara M, Sorpresi F, Guadagni F, Pistoia F. Real-Time Ultrasonography in Craniectomized Severely Brain Injured Patients. 35:169-170.

Breast

Synonyms: mammary glands

Scopus Search: Breast OR Mamm*

Li C, Duric N, Littrup P, Huang L. In vivo Breast Sound-Speed Imaging with Ultrasound Tomography. 35:1615-1628.

Moon W, Huang C, Shen W, Takada E, Chang R, Joe J, Nakajima M, Kobayashi M. Analysis of Elastographic and B-mode Features at Sonoelastography for Breast Tumor Classification. 35:1794-1802.

Bubble dynamics

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

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

See also: Cavitation, contrast agents

Emmer M, Vos HJ, Goertz DE, van Wamel A, Versluis M, de Jong N. Pressure-Dependent Attenuation and Scattering of Phospholipid-Coated Microbubbles at Low Acoustic Pressures. 35:102-111.

Sarkar K, Katiyar A, Jain P. Growth and Dissolution of An Encapsulated Contrast Microbubble: Effects of Encapsulation Permeability. 35:1385-1396.

Thomas DH, Butler MB, Anderson T, Steel R, Pye SD, Poland M, Brock-Fisher T, McDicken WN, Sboros V. Single Microbubble Response Using Pulse Sequences: Initial Results. 35:112-119.

C

Calibration

Synonyms: standards, metrology, quality assurance

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

See also: Dosimetry, exposimetry, safety, instrumentation

Chen TK, Thurston AD, Ellis RE, Abolmaesumi P. A Real-Time Freehand Ultrasound Calibration System with Automatic Accuracy Feedback and Control. 35:79-93.

McBride KA, Pye SD. The Effect of Back Reflections on the Acoustic Power Delivered by Physiotherapy Ultrasound Machines. 35:1672-1678.

Rowland DE, Newey VR, Turner DP, Nassiri DK. The Automated Assessment of Ultrasound Scanner Lateral and Slice Thickness Resolution: Use of the Step Response. 35:1525-1534.

Cancer

Synonyms: tumor

Scopus Search: cancer*

See also: Tumor

Barati AH, Mokhtari-Dizaji M, Mozdarani H, Bathaie SZ, Hassan ZM. Treatment of Murine Tumors Using Dual-Frequency Ultrasound in An Experimental in Vivo Model. 35:756-763.

D'Onofrio M, Zamboni GA, Malago R, Mantovani W, Principe F, Gallotti A, Faccioli N, Falconi M, Capelli P, Pozzi Mucelli R. Resectable Pancreatic Adenocarcinoma: Is The Enhancement Pattern At Contrast-Enhanced Ultrasonography A Pre-Operative Prognostic Factor?. 35:1929-1937.

Droogmans S, Roosens B, Cosyns B, Hernot S, Weytjens C, Degallier C, Garbar C, Caveliers V, Pipeleers-Marichal M, Franken PR, Bossuyt A, Lahoutte T, Schoors D, Van Camp G. Echocardiographic and Histological Assessment of Age-Related Valvular Changes in Normal Rats. 35:558-565.

Li SY, Huang PT, Wang ZM, Huang FG, Zheng ZQ, Yang Y, Cosgrove D. The Relationship Between Enhanced Intensity and Microvessel Density of Gastric Carcinoma Using Double Contrast-Enhanced Ultrasonography. 35:1086-1091.

Mi N, Liu QH, Wang XB, Zhao X, Tang W, Wang P, Cao B. Induction of Sonodynamic Effect with Protoporphyrin IX on Isolate Hepatoma-22 Cells. 35:680-686.

Nishida M, Koito K, Hirokawa N, Hori M, Satoh T, Hareyama M. Does Contrast-Enhanced Ultrasound Reveal Tumor Angiogenesis in Pancreatic Ductal Carcinoma? A Prospective Study. 35:175-185.

Wang MH, Palmeri ML, Guy CD, Yang L, Hedlund LW, Mae Diehl A, Nightingale KR. In vivo Quantification of Liver Stiffness in a Rat Model of Hepatic Fibrosis with Acoustic Radiation Force. 35:1709-1721.

Xu ZL, Zhu XQ, Lu P, Zhou Q, Zhang J, Wu F. Activation of Tumor-Infiltrating Antigen Presenting Cells by High Intensity Focused Ultrasound Ablation of Human Breast Cancer. 35:50-57.

Zhou J, Zhu S, Liu R, Luo F, Shu D. Vascularity Index of Laryngeal Cancer Derived from 3-D Ultrasound: A Predicting Factor for the in vivo Assessment of Cervical Lymph Node Status. 35:1596-1600.

Cardiology

Synonyms: heart, cardiography

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

See also: Echocardiography

Jiamsripong P, Alharthi MS, Calleja AM, McMahon EM, Mookadam F, Khandheria BK, Belohlavek M. Quantification of Left Ventricular Twisting Mechanics by Velocity Vector Imaging in an Animal Model of Pericardial Adhesions. 35:1963-1972.

Crosby J, Amundsen BH, Hergum T, Remme EW, Langeland S, Torp H. 3-D Speckle Tracking for Assessment of Regional Left Ventricular Function. 35:458-471.

Duan Q, Angelini ED, Herz SL, Ingrassia CM, Costa KD, Holmes JW, Homma S, Laine AF. Region-Based Endocardium Tracking on Real-Time Three-Dimensional Ultrasound. 35:256-265.

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Cardiovascular system

Synonyms: circulatory system, circulation

Scopus Search: Cardiovascular OR circulat*

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

Carotid

Synonyms:

Scopus Search: Carotid

See also: Artery

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Synonyms:

Scopus Search: cartilage OR articular OR chondrogenesis OR chondrocyte OR fibrocartilage OR hyaline OR "elastic cartilage"

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Cavitation

Synonyms: bubble dynamics, acoustic cavitation, bubble collapse

Scopus Search: cavitation OR inertial OR transient OR "bubble collapse"

See also: Bubble dynamics, contrast agents

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Cavitation detection

Synonyms: Broadband Noise, ACD, PCD

Scopus Search: "Cavitation detect*" OR "Passive Cavitation Detect*" OR "Active cavitation detect*" OR "Broadband Noise" OR PCD OR ACD

See also: Instrumentation

Cell damage

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

Scopus Search: "cell damage" OR apoptosis OR cytolysis OR "membrane disruption" OR viability OR necrosis OR cytotoxi*

See also: Safety, toxicity, biological effects

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Chemotherapy

Synonyms: drug delivery, cancer therapy

Scopus Search: Chemotherapy OR "drug delivery" OR paclitaxel OR doxorubicin OR "cancer therapy"

See also: Drug delivery, sonodynamic therapy

Cirrhosis

Synonyms: liver disease

Scopus Search: cirrho* OR "liver disease"

See also: Liver

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Clinical Applications of Ultrasound

Synonyms: Clinical study, clinical trial

Scopus Search: Clinical AND study OR trial

Coded pulse excitation

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

Scopus Search: "Coded pulse excitation" OR Barker OR Golay OR "pulse compression" OR "coded excitation" OR chirp* OR "phase codes" OR "compression codes" OR "m-sequences" OR "pulse coding"

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Color flow techniques

Synonyms: color velocity imaging, color Doppler

Scopus Search: color OR colour AND velocity OR flow

See also: Doppler

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Compliance

Synonyms: adherence, observance

Scopus Search: Compliance OR Adherence OR Observance

See also: Drug delivery

Computed tomography

Synonyms: ultrasonic tomography, CT

Scopus Search: tomography OR CT

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Computer aided diagnosis (CAD) system

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

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

See also: Ultrasound guided surgery

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Contrast enhanced ultrasound

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

Scopus Search: "contrast enhanc*"

See also: Doppler, contrast agents, harmonic imaging

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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: Bubble dynamics, cavitation, contrast enhanced ultrasound

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Coupling agents

Synonyms:

Scopus Search: “Coupling agent*” OR “Coupling Gel”

Crawling waves

Synonyms: Crawling wave sonoelastography

Scopus Search: “Crawling wave*”

See also: **Elastography**

Critical angle reflectometry

Synonyms: UCR

Scopus Search: “critical angle” OR UCR

Crohn’s disease

Synonyms: regional enteritis

Scopus Search: “Crohn’s disease” OR “regional enteritis”

See also: **Gastroenterology**

Cyclic echogenicity variations

Synonyms: cyclic backscatter variation

Scopus Search: “cycl* variation*”

See also: Backscatter

D

Dental

Synonyms: teeth

Scopus Search: Dent* OR t*th OR enamel

Hasegawa H, Matsuura M, Sato H, Yamamoto T, Kanai H. Imaging of Gaps in Digital Joints by Measurement of Ultrasound Transmission Using A Linear Array. 35:382-394.

Derated values

Synonyms: derating

Scopus Search: derat*

See also: Thermal effects

Diffusion

Synonyms: Acoustically driven diffusion

Scopus Search: Diffusion

Dispersion

Synonyms: speed of sound dispersion

Scopus Search: dispersion

See also: Velocity

Doppler ultrasound

Synonyms:

Scopus Search: Doppler

See also: Flow visualisation

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Dosimetry

Synonyms: dose response, dosology

Scopus Search: Dos*

See also: Exposimetry, safety

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Drug delivery

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

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

See also: Sonoporation, sonodynamic therapy, chemotherapy

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E

Echocardiography

Synonyms: cardiac imaging, sonocardiography

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

See also: Cardiology, contrast enhanced ultrasound

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Zhang W, Kovacs SJ. The Age Dependence of Left Ventricular Filling Efficiency. 35:1076-1085.

Editorial

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

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Emboli detection

Synonyms: embolic signal, microembolic signal, embolus, embolism

Scopus Search: embol* OR occlusion OR clot

See also: Bubbles, thrombolysis

Lipperts MGA, Sauren LDC, Maessen JG, Hoeks APG, Mess WH. Quantification of Embolic Showers Using Radio-Frequency Based Tcd Analysis. 35:395-402.

Endometriosis

Synonyms:

Scopus Search: endometr*

Endorectal ultrasonography

Synonyms: transrectal

Scopus Search: *rectal

Endoscopic ultrasonography

Synonyms: EUS

Scopus Search: "Endoscopic" OR "EUS"

Entropy-Based Imaging

Synonyms:

Scopus Search: Entrop*

Errata

Liu XZ, Gong XF, Yin C, Li JL, Zhang D. Noninvasive Estimation of Temperature Elevations in Biological Tissues Using Acoustic Nonlinearity Parameter Imaging (vol 34, pg 414, 2008). 35:171-171.

Exposimetry

Synonyms:

Scopus Search: expos*

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

Liang HD, Zhou LX, Wells PNT, Halliwell M. Temperature Measurement by Thermal Strain Imaging with Diagnostic Power Ultrasound, with Potential for Thermal Index Determination. 35:773-780.

Eyes

Synonyms: ocular, retinal, cornea

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

See also: Ophthalmology

Mamou J, Aristizabal O, Silverman RH, Ketterling JA, Turnbull DH. High-Frequency Chirp Ultrasound Imaging with An

Annular Array for Ophthalmologic and Small-Animal Imaging. 35:1198-1208.

Silverman RH, Patel MS, Gal O, Sarup A, Deobhakta A, Dababneh H, Reinstein DZ, Feleppa EJ, Coleman DJ. Effect of Corneal Hydration on Ultrasound Velocity and Backscatter. 35:839-846.

Feature detection

Synonyms: Feature selection, Feature tracking, Feature Extraction, Feature selection, Edge detection, Contour detection, Boundary Delineation, Pattern recognition, Pattern classification, Automated tracking, virtual histology

Scopus Search: "Feature detection" OR "Feature selection" OR "Feature tracking" OR "Feature Extraction" OR "Feature selection" OR "Edge detection" OR "Contour detection" OR "Boundary Delineation" OR "Pattern recognition" OR "Pattern classification" OR "automated tracking" OR "virtual histology"

See also: Computer aided diagnosis (CAD) system, image processing, principle components analysis

D'Onofrio M, Zamboni GA, Malago R, Mantovani W, Principe F, Gallotti A, Faccioli N, Falconi M, Capelli P, Pozzi Mucelli R. Resectable Pancreatic Adenocarcinoma: Is The Enhancement Pattern At Contrast-Enhanced Ultrasonography A Pre-Operative Prognostic Factor?. 35:1929-1937.

Fetal ultrasound

Synonyms: prenatal, fetus, foetal, FBM, FHR

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

Nardoza LMM, Araujo E, Simioni C, Torloni MR, Moron AF. Evolution of 3-D Power Doppler Indices of Fetal Brain in Normal Pregnancy. 35:545-549.

Rutten MJ, Pistorius LR, Mulder EJH, Stoutenbeek P, de Vries LS, Visser GHA. Fetal Cerebellar Volume and Symmetry on 3-D Ultrasound: Volume Measurement with Multiplanar and Vocal Techniques. 35:1284-1289.

Finite element modeling

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

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

See also: Modelling

Aula AS, Toyras J, Hakulinen MA, Jurvelin JS. Effect of Bone Marrow on Acoustic Properties of Trabecular Bone-3D Finite Difference Modeling Study. 35:308-318.

Finite amplitude effects

Synonyms:

Scopus Search: "finite amplitude"

See also: Nonlinear effects, shock waves

Flow models/phantoms

Synonyms: flow cell, vessel phantoms

Scopus Search: Flow AND models OR phantoms OR cell*

See also: **Phantoms**

Blake JR, Eason WJ, Hoskins PR. A Dual-Phantom System for Validation of Velocity Measurements in Stenosis Models Under Steady Flow. 35:1510-1524.

Flow visualisation

Synonyms: flowmetry, particle image velocimetry, PIV

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

See also: **Doppler**

Blake JR, Eason WJ, Hoskins PR. A Dual-Phantom System for Validation of Velocity Measurements in Stenosis Models Under Steady Flow. 35:1510-1524.

Tsai C, Chen J, Shau Y, Hsiao T. Dynamic B-Mode Ultrasound Imaging of Vocal Fold Vibration During Phonation. 35:1812-1818.

Fracture healing

Synonyms: regeneration

Scopus Search: Fracture AND healing OR regen*

See also: **Bone, healing**

Lavandier B, Gleizal A, Bera JC. Experimental Assessment of Calvarial Bone Defect Re-Ossification Stimulation Using Low-Intensity Pulsed Ultrasound. 35:585-594.

Wijdicks CA, Virdi AS, Sena K, Sumner DR, Leven RM. Ultrasound Enhances Recombinant Human BMP-2 Induced Ectopic Bone Formation in a Rat Model. 35:1629-1637.

G**Gall bladder**

Synonyms: gallbladder, hepatobiliary, cholecyst

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

Gastroenterology

Synonyms: Gastrointestinal Tract, Gastric, digestive system

Scopus Search: Gastr* AND digestive

See also: **Liver, pancreas**

Gene therapy

Synonyms: gene delivery, Gene transfection, Gene transfer

Scopus Search: gene AND therapy OR transfection OR transfer

Alter J, Sennoga CA, Lopes DM, Eckersley RJ, Wells DJ. Microbubble Stability Is A Major Determinant of the Efficiency of Ultrasound and Microbubble Mediated in Vivo Gene Transfer. 35:976-984.

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Mou Y, Ye Y, Zhao X, Yao L, Yan L, Sun J, Zhu Z, Hu S. Partial Restoration of Left Ventricular Systolic Function by asPLB Gene Transfer Using Ultrasound-Mediated Microbubble Destruction. 35:1638-1646.

Stride E, Porter C, Prieto AG, Pankhurst Q. Enhancement of Microbubble Mediated Gene Delivery by Simultaneous Exposure to Ultrasonic and Magnetic Fields. 35:861-868.

Genitourinary

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

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

See also: **Prostate, testis, uterus**

Jones JA, Sargsyan AE, Barr YR, Melton S, Hamilton DR, Dulchavsky SA, Whitson PA. Diagnostic Ultrasound at Mach 20: Retroperitoneal and Pelvic Imaging in Space. 35:1059-1067.

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Whittaker J, Warner M, Stokes M. Induced Transducer Orientation During Ultrasound Imaging: Effects on Abdominal Muscle Thickness and Bladder Position. 35:1803-1811.

H**Harmonic Imaging**

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

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

See also: **Contrast enhanced imaging**

Dave JK, Forsberg F. Novel Automated Motion Compensation Technique for Producing Cumulative Maximum Intensity Subharmonic Images. 35:1555-1563.

Hsiao YH, Huang YL, Liang WM, Lin C, Kuo SJ, Chen DR. Characterization of Benign and Malignant Solid Breast Masses: Harmonic Versus Nonharmonic 3D Power Doppler Imaging. 35:353-359.

Liu XZ, Gong XF, Yin C, Li JL, Zhang D. Noninvasive Estimation of Temperature Elevations in Biological Tissues

Using Acoustic Nonlinearity Parameter Imaging (vol 34, pg 414, 2008). 35:171-171.

Healing

Synonyms: regeneration, regenerative

Scopus Search: healing OR regener*

See also: Fracture healing, therapeutic applications of ultrasound

Lu M, Zheng Y, Lu H, Huang Q, Qin L. Evaluation of Bone-Tendon Junction Healing Using Water Jet Ultrasound Indentation Method. 35:1783-1793.

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Hemorrhage

Synonyms: bleeding, trauma

Scopus Search: H*emorrhage OR Bleed* OR trauma

Hemostasis

Synonyms: stenosis, coagulation, clotting

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

Hepatobiliary system

Synonyms: liver, bile duct, pancreas, gall bladder

Scopus Search: Hepatobiliary

See also: Liver, pancreas, gall bladder

High frequency ultrasound

Synonyms: high resolution

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

See also: Acoustic microscopy

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Foster FS, Mehi J, Lukacs M, Hirson D, White C, Chaggares C, Needles A. A New 15-50 MHz Array-Based Micro-Ultrasound Scanner for Preclinical Imaging. 35:1700-1708.

Machet L, Belot V, Naouri M, Boka M, Mourtada Y, Giraudeau B, Laure B, Perrinaud A, Machet MC, Vaillant L. Preoperative Measurement of Thickness of Cutaneous Melanoma Using High-Resolution 20 Mhz Ultrasound Imaging: A Monocenter Prospective Study and Systematic Review of the Literature. 35:1411-1420.

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with An Annular Array for Ophthalmologic and Small-Animal Imaging. 35:1198-1208.

Pinter SZ, Lacefield JC. Detectability of Small Blood Vessels with High-Frequency Power Doppler and Selection of Wall Filter Cut-Off Velocity for Microvascular Imaging. 35:1217-1228.

Stapleton S, Goodman H, Zhou YQ, Cherin E, Henkelman RM, Burns PN, Foster FS. Acoustic and Kinetic Behaviour of Definity in Mice Exposed to High Frequency Ultrasound. 35:296-307.

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, hyperthermia, thermal effects

Anand A, Kaczkowski PJ. Noninvasive Determination of in situ Heating Rate Using kHz Acoustic Emissions and Focused Ultrasound. 35:1662-1671.

Bigelow TA, Northagen T, Hill TM, Sailer FC. The Destruction of Escherichia Coli Biofilms Using High-Intensity Focused Ultrasound. 35:1026-1031.

Colucci V, Strichartz G, Jolesz F, Vykhodtseva N, Hynynen K. Focused Ultrasound Effects on Nerve Action Potential in vitro. 35:1737-1747.

Curiel L, Chopra R, Hynynen K. In Vivo Monitoring of Focused Ultrasound Surgery Using Local Harmonic Motion. 35:65-78.

Farny CH, Holt RG, Roy RA. Temporal and Spatial Detection of Hifu-Induced Inertial and Hot-Vapor Cavitation with A Diagnostic Ultrasound System. 35:603-615.

Girnyk SA, Barannik AE, Tovstiak VV, Tolstoluzhsky DA, Barannik EA. Ultrasound Doppler Monitoring of Soft Tissues in Vitro and Tissue Phantoms Heating and Thermal Destruction Induced by Acoustic Remote Palpation. 35:764-772.

Hancock HA, Smith LH, Cuesta J, Durrani AK, Angstadt M, Palmeri ML, Kimmel E, Frenkel V. Investigations into Pulsed High-Intensity Focused Ultrasound-Enhanced Delivery: Preliminary Evidence for a Novel Mechanism. 35:1722-1736.

Hwang JH, Wang YN, Warren C, Upton MP, Starr F, Zhou YF, Mitchell SB. Preclinical in Vivo Evaluation of An Extracorporeal Hifu Device for Ablation of Pancreatic Tumors. 35:967-975.

Melodelima D, N'Djin WA, Parmentier H, Chesnais S, Rivoire M, Chapelon JY. Thermal Ablation by High-Intensity-Focused Ultrasound Using A Toroid Transducer Increases the Coagulated Volume. Results of Animal Experiments. 35:425-435.

O'Neill BE, Vo H, Angstadt M, Li KPC, Quinn T, Frenkel V. Pulsed High Intensity Focused Ultrasound Mediated Nanoparticle Delivery: Mechanisms and Efficacy in Murine Muscle. 35:416-424.

Smith MJ, Ho VHB, Darton NJ, Slater NKH. Effect of Magnetite Nanoparticle Agglomerates on Ultrasound Induced Inertial Cavitation. 35:1010-1014.

Xu ZL, Zhu XQ, Lu P, Zhou Q, Zhang J, Wu F. Activation of Tumor-Infiltrating Antigen Presenting Cells by High Intensity Focused Ultrasound Ablation of Human Breast Cancer. 35:50-57.

Zhang S, Wan M, Zhong H, Xu C, Liao Z, Liu H, Wang S. Dynamic Changes of Integrated Backscatter, Attenuation Coefficient and Bubble Activities During High-Intensity Focused Ultrasound (HIFU) Treatment. 35:1828-1844.

Historical review

History

Synonyms: case study

Scopus Search: History OR "case study"

Histotripsy

Synonyms: pulsed ultrasound cavitation therapy

Scopus Search: Histotripsy OR "cav* therapy"

See also: Cavitation

Maxwell AD, Cain CA, Duryea AP, Yuan L, Gurm HS, Xu Z. Noninvasive Thrombolysis Using Pulsed Ultrasound Cavitation Therapy - Histotripsy. 35:1982-1994.

Xu Z, Fan ZZ, Hall TL, Winterroth F, Fowlkes JB, Cain CA. Size Measurement of Tissue Debris Particles Generated from Pulsed Ultrasound Cavitation Therapy - Histotripsy. 35:245-255.

Hyperthermia

Synonyms: thermotherapy

Scopus Search: Hyperthermia OR thermotherapy

See also: High intensity Focused Ultrasound, thermal effects, therapeutic applications of ultrasound

I

Image artifacts

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

Scopus Search: art*facts OR shadow*

See also: Speckle, image processing

Ressner M, Jansson T, Cedefamn J, Ask P, Janerot-Sjoberg B. Contrast Biases the Autocorrelation Phase Shift Estimation in Doppler Tissue Imaging. 35:447-457.

Whittaker J, Warner M, Stokes M. Induced Transducer Orientation During Ultrasound Imaging: Effects on

Abdominal Muscle Thickness and Bladder Position. 35:1803-1811.

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: Adaptive filtering, feature detection, principle components analysis, speckle, computer aided diagnosis

Guo YH, Cheng HD, Tian JW, Zhang YT. A Novel Approach to Speckle Reduction in Ultrasound Imaging. 35:628-640.

Image reconstruction

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

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

Image segmentation

Synonyms: Partitioning Clustering

Scopus Search: segmentation OR Partitioning OR Clustering

See also: Computer aided diagnosis, image processing

Liu B, Cheng HD, Huang JH, Tian JW, Liu JF, Tang XL. Automated Segmentation of Ultrasonic Breast Lesions Using Statistical Texture Classification and Active Contour Based on Probability Distance. 35:1309-1324.

Rossi AC, Brands PJ, Hoeks APG. Nonlinear Processing in B-Mode Ultrasound Affects Carotid Diameter Assessment. 35:736-747.

Slabaugh G, Unal G, Wels M, Fang T, Rao B. Statistical Region-Based Segmentation of Ultrasound Images. 35:781-795.

Vansteenkiste E, Govaert P, Conneman N, Lequin M, Philips W. Segmentation of White Matter Flaring Areas in Ultrasound Images of Very-Low-Birth-Weight Preterm Infants. 35:991-1004.

Image registration

Synonyms: correlation, recorelation

Scopus Search: registration OR *correlation

See also: Image processing

Leung C, Hashtrudi-Zaad K, Foroughi P, Abolmaesumi P. A Real-Time Intrasubject Elastic Registration Algorithm for Dynamic 2-D Ultrasound Images. 35:1159-1176.

Winter S, Pechlivanis I, Dekomien C, Igel C, Schmieder K. Toward Registration of 3D Ultrasound and CT Images of the Spine in Clinical Praxis: Design and Evaluation of a Data Acquisition Protocol. 35:1773-1782.

*in memoriam***Instrumentation***Synonyms:* scanning systems, imaging hardware*Scopus Search:* instrument* OR scann* OR hardware*See also:* Arrays, transducers**Intravascular ultrasound***Synonyms:* IVUS*Scopus Search:* intravascular OR IVUS*See also:* Blood vessels

Kaple RK, Tsujita K, Maehara A, Mintz GS. Accuracy of Stent Measurements Using Ecg-Gated Greyscale Intravascular Ultrasound Images: A Validation Study. 35:1265-1270.

Ischemia*Synonyms:* ischaemia*Scopus Search:* isch*emia OR isch*emic*See also:* Thrombolysis, atherosclerosis, blood perfusion

Schreuder FHBM, Hoeks APG, Mess WH. Inadequate Acoustical Temporal Bone Window in Patients with Transient Ischemic Attack Or Minor Stroke: Role of Skull Thickness and Bone Density. 35:1229-1229.

Wijnhoud AD, van der Lugt A, Koudstaal PJ, Dippel DWJ. Reply To: Inadequate Acoustical Temporal Bone Window in Patients with Transient Ischemic Attack Or Minor Stroke: Role of Skull Thickness and Bone Density. 35:1230-1230.

K**Kidney***Synonyms:* nephrology, renal*Scopus Search:* kidney OR nephr* OR renal

Shabana W, Bude RO, Rubin JM. Comparison Between Color Doppler Twinkling Artifact and Acoustic Shadowing for Renal Calculus Detection: An in Vitro Study. 35: 339-350.

Shau YW, Pao SH, Chou NK, Chang KJ, Shyu JJ. Renal Vascular Perfusion Index in A Canine Model. 35:36-43.

L**Larynx***Synonyms:* vocal folds*Scopus Search:* laryn* OR vocal* OR trachea

Tsai C, Chen J, Shau Y, Hsiao T. Dynamic B-Mode Ultrasound Imaging of Vocal Fold Vibration During Phonation. 35:1812-1818.

Letters to the editor

Chen HY. A Novel Method for Measuring Electromechanical Delay on the Vastus Medialis Obliquus and Vastus Lateralis Reply. 35:879-879.

Nordez A, Cathelin S, Hug F. A Novel Method for Measuring Electromechanical Delay on the Vastus Medialis Obliquus and Vastus Lateralis. 35:878-878.

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Schreuder FHBM, Hoeks APG, Mess WH. Inadequate Acoustical Temporal Bone Window in Patients with Transient Ischemic Attack Or Minor Stroke: Role of Skull Thickness and Bone Density. 35:1229-1229.

Wijnhoud AD, van der Lugt A, Koudstaal PJ, Dippel DWJ. Reply To: Inadequate Acoustical Temporal Bone Window in Patients with Transient Ischemic Attack Or Minor Stroke: Role of Skull Thickness and Bone Density. 35:1230-1230.

Ligament*Synonyms:* Connective tissue, Collagen*Scopus Search:* Ligament OR Collagen OR “Connective tissue”*See also:* Tendon

Wang YC, Wang HK, Chen WS, Wang TG. Dynamic Visualization of the Coracoacromial Ligament by Ultrasound. 35:1242-1248.

Liposomes*Synonyms:* vesicle, reverse micelle*Scopus Search:* Liposome* OR vesicle* OR micelle*See also:* Contrast agents, drug delivery**Lithotripsy***Synonyms:* Extracorporeal lithotripsy, shock-wave lithotripsy (SWL), gall stones, kidney stones, calcification, choleliths, calculus/i*Scopus Search:* Lithotrip* OR ESWL OR SWL OR “gall stones” OR “kidney stones” OR calcification OR choleliths OR calcul**See also:* Cavitation, shock waves, therapeutic applications of ultrasound

Gollwitzer H, Roessner M, Langer R, Gloeck T, Diehl P, Horn C, Stemberger A, von Eiff C, Gerdesmeyer L. Safety and Effectiveness of Extracorporeal Shockwave Therapy: Results of A Rabbit Model of Chronic Osteomyelitis. 35:595-602.

Liver*Synonyms:* hepatic*Scopus Search:* Liver OR hepat*

Hohmann J, Muller C, Oldenburg A, Skrok J, Frericks BB, Wolf KJ, Albrecht T. Hepatic Transit Time Analysis Using

Contrast-Enhanced Ultrasound with Br1: A Prospective Study Comparing Patients with Liver Metastases from Colorectal Cancer with Healthy Volunteers. 35:1427-1435.

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Low frequency ultrasound

Synonyms: LFUS

Scopus Search: "Low frequency ultrasound" OR LFUS

See also: Physiotherapy

Low intensity ultrasound

Synonyms: Low intensity pulsed ultrasound, LIPUS, LIFU

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

Lavandier B, Gleizal A, Bera JC. Experimental Assessment of Calvarial Bone Defect Re-Ossification Stimulation Using Low-Intensity Pulsed Ultrasound. 35:585-594.

Papatheodorou LK, Malizos KN, Poultides LA, Hantes ME, Grafanaki K, Giannouli S, Ioannou MG, Koukoulis GK, Protopappas VC, Fotiadis DI, Stathopoulos C. Effect of Transosseous Application of Low-Intensity Ultrasound at the Tendon Graft-Bone Interface Healing: Gene Expression and Histological Analysis in Rabbits. 35:576-584.

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Zacherl M, Gruber G, Radl R, Rehak PH, Windhager R. No Midterm Benefit from Low Intensity Pulsed Ultrasound After Chevron Osteotomy for Hallux Valgus. 35:1290-1297.

Lung

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

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

Chen CH, Chen W, Chen HJ, Yu YH, Lin YC, Tu CY, Hsu WH. Transthoracic Ultrasonography in Predicting the Outcome of Small-Bore Catheter Drainage in Empyemas Or Complicated Parapneumonic Effusions. 35:1468-1474.

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Lie CH, Chao TY, Chung YH, Wang JL, Wang YH, Lin MC. New Image Characteristics in Endobronchial

Ultrasonography for Differentiating Peripheral Pulmonary Lesions. 35:376-381.

O'Brien WD, Yang Y, Simpson DG. Threshold Estimation and Superthreshold Behavior of Ultrasound-Induced Lung Hemorrhage in Rats: Role of Age Dependency. 35:129-135.

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Lymphatic system

Synonyms: lymph nodes

Scopus Search: lymph*

Bosisio MR, Maisonneuve C, Gregoire S, Kettaneh A, Mueller CG, Bridal SL. Ultrasound Biomicroscopy: A Powerful Tool Probing Murine Lymph Node Size in Vivo. 35:1209-1216.

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M

Magnetic Resonance Imaging: **Synonyms**MRI, nuclear imaging, MR imaging

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

Arbeille P, Kerbeci P, Capri A, Dannaud C, Trappe SW, Trappe TA. Quantification of Muscle Volume by Echography: Comparison with Mri Data on Subjects in Long-Term Bed Rest. 35:1092-1097.

Horsch S, Bengtsson J, Nordell A, Lagercrantz H, Aden U, Blennow M. Lateral Ventricular Size in Extremely Premature Infants: 3D Mri Confirms 2D Ultrasound Measurements. 35:360-366.

Mammography

Synonyms: breast imaging, breast screening, mammogram

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

See also: Breast

Liu B, Cheng HD, Huang JH, Tian JW, Liu JF, Tang XL. Automated Segmentation of Ultrasonic Breast Lesions Using Statistical Texture Classification and Active Contour Based on Probability Distance. 35:1309-1324.

Mechanical effects

Synonyms:

Scopus Search: "mechanical effects"

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

Mechanical index

Synonyms: MI, cavitation threshold

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

See also: Cavitation, exposimetry, safety

MEMS

Synonyms: Micro-electromechanical systems, microsystems technology

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

See also: Instrumentation, transducers

Modelling

Synonyms: simulations, theory, mathematical, in silico

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

Aula AS, Toyras J, Hakulinen MA, Jurvelin JS. Effect of Bone Marrow on Acoustic Properties of Trabecular Bone-3D Finite Difference Modeling Study. 35:308-318.

Baron C, Aubry JF, Tanter M, Meairs S, Fink M. Simulation of Intracranial Acoustic Fields in Clinical Trials of Sonothrombolysis. 35:1148-1158.

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Quaia E, Nocentini A, Torelli L. Assessment of A New Mathematical Model for the Computation of Numerical Parameters Related to Renal Cortical Blood Flow and Fractional Blood Volume by Contrast-Enhanced Ultrasound. 35:616-627.

Molecular imaging

Synonyms: molecular tagging, targeted imaging, biomarkers

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

Needles A, Couture O, Foster FS. A Method for Differentiating Targeted Microbubbles in Real Time Using Subharmonic Micro-Ultrasound and Interframe Filtering. 35:1564-1573.

Motion analysis

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

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

Dave JK, Forsberg F. Novel Automated Motion Compensation Technique for Producing Cumulative Maximum Intensity Subharmonic Images. 35:1555-1563.

Musculoskeletal

Synonyms: Sonomyography

Scopus Search: Musc* OR Sonomyography

Arbeille P, Kerbeci P, Capri A, Dannaud C, Trappe SW, Trappe TA. Quantification of Muscle Volume by Echography: Comparison with Mri Data on Subjects in Long-Term Bed Rest. 35:1092-1097.

Chen HY, Liao JJ, Wang CL, Lai HJ, Jan MH. A Novel Method for Measuring Electromechanical Delay of the Vastus Medialis Obliquus and Vastus Lateralis. 35:14-20.

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Krix M, Krakowski-Roosen H, Kauczor H, Delorme S, Weber MA. Real-Time Contrast-Enhanced Ultrasound for the Assessment of Perfusion Dynamics in Skeletal Muscle. 35:1587-1595.

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Nordez A, Cathelin S, Hug F. A Novel Method for Measuring Electromechanical Delay on the Vastus Medialis Obliquus and Vastus Lateralis. 35:878-878.

Ozgonenel L, Aytekin E, Durmusoglu G. A Double-Blind Trial of Clinical Effects of Therapeutic Ultrasound in Knee Osteoarthritis. 35:44-49.

Pillen S, Tak RO, Zwarts MJ, Lammens MMY, Verrijp KN, Arts IMP, van der Laak JA, Hoogerbrugger PM, van Engelen BGM, Verrips A. Skeletal Muscle Ultrasound: Correlation Between Fibrous Tissue and Echo Intensity. 35:443-446.

N**Nervous system**

Synonyms: neurology

Scopus Search: Neuro* OR nerv*

Alshami AM, Cairns CW, Wylie BK, Souvlis T, Coppieters MW. Reliability and Size of the Measurement Error When Determining the Cross-Sectional Area of the Tibial Nerve at the Tarsal Tunnel with Ultrasonography. 35:1098-1102.

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Neurosonology

Synonyms: brain imaging, transcranial

Scopus Search: Neurosonology OR “brain imaging” OR transcranial

See also: Brain

Bellapart J, Fraser JF. Transcranial Doppler Assessment of Cerebral Autoregulation. 35:883-893.

Schreuder FHBM, Hoeks APG, Mess WH. Inadequate Acoustical Temporal Bone Window in Patients with Transient Ischemic Attack Or Minor Stroke: Role of Skull Thickness and Bone Density. 35:1229-1229.

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Nonlinear effects

Synonyms: nonlinear propagation, acoustic nonlinearity, harmonic distortion

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

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

Merks EJW, van Neer P, Bom N, van der Steen AFW, de Jong N. Multilayer Transducer for Acoustic Bladder Volume Assessment on the Basis of Nonlinear Wave Propagation. 35:1690-1699.

O

Obstetrics

Synonyms: prenatal, fetal, gynaecology

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

See also: Fetal ultrasound, uterus

Ophthalmology

Synonyms:

Scopus Search: Ophthalmolog*

See also: Eyes

Mamou J, Aristizabal O, Silverman RH, Ketterling JA, Turnbull DH. High-Frequency Chirp Ultrasound Imaging with An Annular Array for Ophthalmologic and Small-Animal Imaging. 35:1198-1208.

Optoacoustic

Synonyms: photoacoustic, ultrasound light modulation, laser ultrasonic

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

Osteoarthritis

Synonyms: arthritis

Scopus Search: *arthritis

See also: Bone, bone density measurement

Ozgonenel L, Aytekin E, Durmusoglu G. A Double-Blind Trial of Clinical Effects of Therapeutic Ultrasound in Knee Osteoarthritis. 35:44-49.

Osteoporosis

Synonyms: loss of bone density, bone fragility

Scopus Search: Osteoporosis OR “bone mineral density”

See also: Bone, bone density measurement

Albanese CV, Cepollaro C, de Terlizzi F, Brandi ML, Passariello R. Performance of Five Phalangeal Qus Parameters in the Evaluation of Gonadal-Status, Age and Vertebral Fracture Risk Compared with Dxa. 35:537-544.

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Maata M, Moilanen P, Nicholson P, Cheng SL, Timonen J, Jamsa T. Correlation of Tibial Low-Frequency Ultrasound Velocity with Femoral Radiographic Measurements and Bmd in Elderly Women. 35:903-911.

Nuzzo V, de Milita AM, Ferraro T, Monaco A, Florio E, Miano P, Montemarano E, Zuccoli A, de Terlizzi F. Analysis of Skeletal Status by Quantitative Ultrasonometry in A Cohort of Postmenopausal Women with High Blood Cholesterol Without Documented Osteoporosis. 35:717-722.

Tam KF, Cheung WH, Lee KM, Qin L, Leung KS. Shockwave Exerts Osteogenic Effect on Osteoporotic Bone in An Ovariectomized Goat Model. 35:1109-1118.

Ovary

Synonyms: reproductive system, ovarian

Scopus Search: Ovar* OR “reproductive system”

See also: Genitourinary

P

Pancreas

Synonyms: Pancreatic, gastrointestinal

Scopus Search: Pancrea* OR gastrointestinal

See also: Gastroenterology

Hwang JH, Wang YN, Warren C, Upton MP, Starr F, Zhou YF, Mitchell SB. Preclinical in Vivo Evaluation of An Extracorporeal Hifu Device for Ablation of Pancreatic Tumors. 35:967-975.

Pathophysiology

Synonyms: pathology

Scopus Search: Pathophysiology OR pathology

Pediatrics**Synonyms:** children, infants, neonates**Scopus Search:** Pediatrics OR child* OR infant* OR neonat* OR neo-nat*

Horsch S, Bengtsson J, Nordell A, Lagercrantz H, Aden U, Blennow M. Lateral Ventricular Size in Extremely Premature Infants: 3D Mri Confirms 2D Ultrasound Measurements. 35:360-366.

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Padilla NF, Enriquez G, Jansson T, Gratacos E, Hernandez-Andrade E. Quantitative Tissue Echogenicity of the Neonatal Brain Assessed by Ultrasound Imaging. 35:1421-1426.

Schoy TV, Matte G, van Neer P, van der Steen AFW, McGhie J, Bogers A, de Jong N. A New Transesophageal Probe for Newborns. 35:1686-1689.

Vansteenkiste E, Govaert P, Conneman N, Lequin M, Philips W. Segmentation of White Matter Flaring Areas in Ultrasound Images of Very-Low-Birth-Weight Preterm Infants. 35:991-1004.

Mook-Kanamori DO, Holzhauer S, Hollestein LM, Durmus B, Manniesing R, Koek M, Boehm G, Van Der Beek EM, Hofman A, Wittman JCM, Lequin MH, Jaddoe VWV. Abdominal fat in children measured by ultrasound and computed tomography. 35:1938-1946.

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*"**See also:** **Flow models/phantoms**

Kim YT, Kim HC, Inada-Kim M, Jung SS, Yun YH, Jho MJ, Sandstrom K. Evaluation of Tissue Mimicking Quality of Tofu for Biomedical Ultrasound. 35:472-481.

Oudry J, Bastard C, Miette V, Willinger R, Sandrin L. Copolymer-In-Oil Phantom Materials for Elastography. 35:1185-1197.

Walker A, Henriksen E, Ringqvist I, Ask P. A Rotating Cylinder Phantom For Flow and Tissue Color Doppler Testing. 35:1892-1898.

Physiotherapy**Synonyms:** Physical therapy**Scopus Search:** Physiotherapy OR "Physical therapy"**See also:** **Healing, hyperthermia, therapeutic applications of ultrasound**

McBride KA, Pye SD. The Effect of Back Reflections on the Acoustic Power Delivered by Physiotherapy Ultrasound Machines. 35:1672-1678.

Principal components analysis**Synonyms:** PCA, Decomposition, Dimensionality reduction, Karhunen-Loève transform, Hotelling transform, proper orthogonal decomposition (POD)**Scopus Search:** "principal components analysis" OR PCA OR Decomposition OR "Karhunen-Loève transform" OR "Hotelling transform" OR "proper orthogonal decomposition" OR POD OR "Dimensionality reduction"**See also:** **Feature detection, image processing**

Mauldin FW, Viola F, Walker WF. Reduction of Echo Decorrelation Via Complex Principal Component Filtering. 35:1325-1343.

Prostate**Synonyms:** prostate gland**Scopus Search:** prostate OR transrectal OR endorectal OR TRUS**See also:** **Genitourinary****Pulsatility index****Synonyms:** tissue pulsatility imaging**Scopus Search:** Pulsatil***Pulse wave velocity****Synonyms:** pulsed-wave Doppler, Pulse-Wave Imaging (PWI), Pulse-Wave Velocity (PWV)**Scopus Search:** "Pulse* wave" OR PWI OR PWV**Q****Quantitative ultrasound****Synonyms:** QUS, quantification, quantitation**Scopus Search:** Quantit* OR QUS

Chikui T, Shimizu M, Kawazu T, Okamura K, Shiraiishi T, Yoshiura K. A Quantitative Analysis of Sonographic Images of the Salivary Gland: A Comparison Between Sonographic and Sialographic Findings. 35:1257-1264.

Gibson AA, Schaffer JE, Peterson LR, Bilhorn KR, Robert KM, Haider TA, Farmer MS, Holland MR, Miller JG. Quantitative Analysis of the Magnitude and Time Delay of Cyclic Variation of Myocardial Backscatter from Asymptomatic Type 2 Diabetes Mellitus Subjects. 35:1458-1467.

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Krasinski A, Chiu B, Spence JD, Fenster A, Parraga G. Three-Dimensional Ultrasound Quantification of Intensive Statin Treatment of . 35:1763-1772.

Maata M, Moilanen P, Nicholson P, Cheng SL, Timonen J, Jamsa T. Correlation of Tibial Low-Frequency Ultrasound Velocity with Femoral Radiographic Measurements and Bmd in Elderly Women. 35:903-911.

Padilla NF, Enriquez G, Jansson T, Gratacos E, Hernandez-Andrade E. Quantitative Tissue Echogenicity of the Neonatal Brain Assessed by Ultrasound Imaging. 35:1421-1426.

Talmant M, Kolta S, Roux C, Haguenaer D, Vedel I, Cassou B, Bossy E, Laugier P. In Vivo Performance Evaluation of Bi-Directional Ultrasonic Axial Transmission for Cortical Bone Assessment. 35:912-919.

R

Radiation force

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

Scopus Search: "radiation force" OR ARFI OR Bjerknes OR "acoustic tweezers" OR "ultrason* tweezers" OR ARP

Behler RH, Nichols TC, Zhu HT, Merricks EP, Gallippi CM. Arfi Imaging for Noninvasive Material Characterization of Atherosclerosis Part II: Toward in Vivo Characterization. 35:278-295.

Dahl JJ, Dumont DM, Allen JD, Miller EM, Trahey GE. Acoustic Radiation Force Impulse Imaging for Noninvasive Characterization of Carotid Artery Atherosclerotic Plaques: A Feasibility Study. 35:707-716.

Girnyk SA, Barannik AE, Tovstiak VV, Tolstoluzhsky DA, Barannik EA. Ultrasound Doppler Monitoring of Soft Tissues in Vitro and Tissue Phantoms Heating and Thermal Destruction Induced by Acoustic Remote Palpation. 35:764-772.

Hancock HA, Smith LH, Cuesta J, Durrani AK, Angstadt M, Palmeri ML, Kimmel E, Frenkel V. Investigations into

Pulsed High-Intensity Focused Ultrasound-Enhanced Delivery: Preliminary Evidence for a Novel Mechanism. 35:1722-1736.

Wang MH, Palmeri ML, Guy CD, Yang L, Hedlund LW, Mae Diehl A, Nightingale KR. In vivo Quantification of Liver Stiffness in a Rat Model of Hepatic Fibrosis with Acoustic Radiation Force. 35:1709-1721.

Radio-Frequency

Synonyms: RF

Scopus Search: "radio*frequency" OR RF

Real-time imaging

Synonyms:

Scopus Search: "real* time"

Chen TK, Thurston AD, Ellis RE, Abolmaesumi P. A Real-Time Freehand Ultrasound Calibration System with Automatic Accuracy Feedback and Control. 35:79-93.

Duan Q, Angelini ED, Herz SL, Ingrassia CM, Costa KD, Holmes JW, Homma S, Laine AF. Region-Based Endocardium Tracking on Real-Time Three-Dimensional Ultrasound. 35:256-265.

Leung C, Hashtrudi-Zaad K, Foroughi P, Abolmaesumi P. A Real-Time Intrasubject Elastic Registration Algorithm for Dynamic 2-D Ultrasound Images. 35:1159-1176.

Krix M, Krakowski-Roosen H, Kauczor H, Delorme S, Weber MA. Real-Time Contrast-Enhanced Ultrasound for the Assessment of Perfusion Dynamics in Skeletal Muscle. 35:1587-1595.

Needles A, Couture O, Foster FS. A Method for Differentiating Targeted Microbubbles in Real Time Using Subharmonic Micro-Ultrasound and Interframe Filtering. 35:1564-1573.

Sara M, Sorpresi F, Guadagni F, Pistoia F. Real-Time Ultrasonography in Craniectomized Severely Brain Injured Patients. 35:169-170.

Su HL, Qian YQ, Wei ZR, He JG, Li GQ, Zhang J, Zhou XD, Jing W. Real-Time Myocardial Contrast Echocardiography in Rat: Infusion Versus Bolus Administration. 35:748-755.

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Bellapart J, Fraser JF. Transcranial Doppler Assessment of Cerebral Autoregulation. 35:883-893.

Romano CL, Romano D, Logoluso N. Low-Intensity Pulsed Ultrasound for the Treatment of Bone Delayed Union Or Nonunion: A Review. 35:529-536.

Robotics-assisted surgery

Synonyms: robotic surgery, remote surgery, unmanned surgery

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

S

Safety

Synonyms:

Scopus Search: safety

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

Shear waves

Synonyms:

Scopus Search: “Shear Wave*”

See also: Elastography

Shock waves

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

Scopus Search: shock*wave OR ESW

See also: Finite amplitude effects, lithotripsy, nonlinear effects

Goldenstedt C, Birer A, Cathignol D, Lafon C. Blood Clot Disruption in Vitro Using Shockwaves Delivered by An Extracorporeal Generator After Pre-Exposure to Lytic Agent. 35:985-990.

Gollwitzer H, Roessner M, Langer R, Gloeck T, Diehl P, Horn C, Stemberger A, von Eiff C, Gerdesmeyer L. Safety and Effectiveness of Extracorporeal Shockwave Therapy: Results of A Rabbit Model of Chronic Osteomyelitis. 35:595-602.

Moretti B, Notarnicola A, Garofalo R, Moretti L, Patella S, Marlinghaus E, Patella V. Shock Waves in the Treatment of Stress Fractures. 35:1042-1049.

Tamma R, Dell’Endice S, Notarnicola A, Moretti L, Patella S, Patella V, Zallone A, Moretti B. Extracorporeal Shock Waves Stimulate Osteoblast Activities. 35:2093-2100.

Signal processing

Synonyms:

Scopus Search: “signal processing”

See also: Image processing, wave form analysis

Skin

Synonyms: dermal, transdermal, cutaneous, transcutaneous, subcutaneous

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

Gupta J, Prausnitz MR. Recovery of Skin Barrier Properties After Sonication in Human Subjects. 35:1405-1408.

Machet L, Belot V, Naouri M, Boka M, Mourtada Y, Giraudeau B, Laure B, Perrinaud A, Machet MC, Vaillant L. Preoperative Measurement of Thickness of Cutaneous Melanoma Using High-Resolution 20 Mhz Ultrasound Imaging: A Monocenter Prospective Study and Systematic Review of the Literature. 35:1411-1420.

Sonochemistry

Synonyms: sonochemical

Scopus Search: sonochemi*

Sonodynamic therapy

Synonyms: SDT

Scopus Search: sonodyn* OR SDT

See also: Drug delivery, sonoporation

Mi N, Liu QH, Wang XB, Zhao X, Tang W, Wang P, Cao B. Induction of Sonodynamic Effect with Protoporphyrin Ix on Isolate Hepatoma-22 Cells. 35:680-686.

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, cell damage, drug delivery, streaming

Hauser J, Ellisman M, Steinau H, Stefan E, Dudda M, Hauser M. Ultrasound Enhanced Endocytotic Activity of Human Fibroblasts. 35:2084-2092.

Juffermans LJM, van Dijk A, Jongenelen CAM, Drukarch B, Reijkerk A, de Vries HE, Kamp O, Musters RJP. Ultrasound and Microbubble-Induced Intra- and Intercellular Bioeffects in Primary Endothelial Cells. 35:1917-1927.

Karshafian R, Bevan PD, Williams R, Samac S, Burns PN. Sonoporation by Ultrasound-Activated Microbubble Contrast Agents: Effect of Acoustic Exposure Parameters on Cell Membrane Permeability and Cell Viability. 35:847-860.

Kumon RE, Aehle M, Sabens D, Parikh P, Han YW, Kourennyi D, Deng CX. Spatiotemporal Effects of Sonoporation Measured by Real-Time Calcium Imaging. 35:494-506.

Lionetti V, Fittipaldi A, Agostini S, Giacca M, Recchia FA, Picano E. Enhanced Caveolae-Mediated Endocytosis by Diagnostic Ultrasound in Vitro. 35:136-143.

Miller DL, Dou CY. Induction of Apoptosis in Sonoporation and Ultrasonic Gene Transfer. 35:144-154.

Zhou Y, Kumon RE, Cui J, Deng C. The Size of Sonoporation Pores on the Cell Membrane. 35:1756-1760.

Speckle

Synonyms: interference pattern, noise

Scopus Search: speckle OR noise OR interference

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

Yoshii Y, Villarraga HR, Henderson J, Zhao C, An K, Amadio PC. Speckle Tracking Ultrasound for Assessment of the Relative Motion of Flexor Tendon and Subsynovial Connective Tissue in the Human Carpal Tunnel. 35:1973-1981.

Crosby J, Amundsen BH, Hergum T, Remme EW, Langeland S, Torp H. 3-D Speckle Tracking for Assessment of Regional Left Ventricular Function. 35:458-471.

Jia CX, Olafsson R, Kim K, Koliass TJ, Rubin JM, Weitzel WF, Witte RS, Huang SW, Richards MS, Deng CX, O'Donnell M. Two-Dimensional Strain Imaging of Controlled Rabbit Hearts. 35:1488-1501.

Jiang J, Hall TJI. A Generalized Speckle Tracking Algorithm for Ultrasonic Strain Imaging Using Dynamic Programming. 35:1863-1879.

Spectral analysis

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

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

See also: Waveform analysis

Brand S, Solanki B, Foster DB, Czarnota GJ, Koliass MC. Monitoring of Cell Death in Epithelial Cells Using High Frequency Ultrasound Spectroscopy. 35:482-493.

Standing wave

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

Scopus Search: "Standing wave" OR "stationary wave" OR trap* OR USWT

See also: Imaging artefacts

Streaming

Synonyms: Acoustic streaming, microstreaming

Scopus Search: *streaming

See also: Bubble dynamics, cell damage, radiation force, sonoporation

Stroke

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

Scopus Search: Stroke OR "cerebrovascular accident" OR CVA OR thromb*

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

Huang YL, Hsieh SF, Chang YC, Chen HC, Wang TG. Ultrasonographic Evaluation of Hyoid-Larynx Approximation in Dysphagic Stroke Patients. 35:1103-1108.

Schreuder FFBM, Hoeks APG, Mess WH. Inadequate Acoustical Temporal Bone Window in Patients with Transient Ischemic Attack Or Minor Stroke: Role of Skull Thickness and Bone Density. 35:1229-1229.

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Barrack T, Stride E. Microbubble Destruction During Intravenous Administration: A Preliminary Study. 35:515-522.

Eggers R, Ossadnik S, Seidel G. Enhanced Clot Dissolution in Vitro by 1.8-Mhz Pulsed Ultrasound. 35:523-526.

Temperature Imaging

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

Scopus Search: Temperature OR thermometry

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

Farny CH, Clement GT. Ultrasound phase contrast thermal imaging with reflex transmission imaging methods in tissue phantoms. 35:1995-2006.

Liang HD, Zhou LX, Wells PNT, Halliwell M. Temperature Measurement by Thermal Strain Imaging with Diagnostic Power Ultrasound, with Potential for Thermal Index Determination. 35:773-780.

Liu H, Li M, Shih T, Huang S, Lu I, Lin D, Lin S, Ju K. Instantaneous Frequency-Based Ultrasonic Temperature Estimation During Focused Ultrasound Thermal Therapy. 35:1647-1661.

Tendon

Synonyms: Collagen, Connective tissue

Scopus Search: tendon OR "connective tissue" OR collagen

Yoshii Y, Villarraga HR, Henderson J, Zhao C, An K, Amadio PC. Speckle Tracking Ultrasound for Assessment of the Relative Motion of Flexor Tendon and Subsynovial Connective Tissue in the Human Carpal Tunnel. 35:1973-1981.

Lu M, Zheng Y, Lu H, Huang Q, Qin L. Evaluation of Bone-Tendon Junction Healing Using Water Jet Ultrasound Indentation Method. 35:1783-1793.

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Testis

Synonyms: Testicular, Paratesticular, Testes, Scrotum

Scopus Search: Test* OR Scrot*

Yuen QWH, Ying MTC, Brook FM, Kinoshita RE. Reliability of 2D Ultrasound Measurements of Testis Size in Dolphins Taken Under Voluntary Behavior. 35:1005-1009.

Textural analysis

Synonyms:

Scopus Search: Textur*

See also: Image analysis, speckle

Liu B, Cheng HD, Huang JH, Tian JW, Liu JF, Tang XL. Automated Segmentation of Ultrasonic Breast Lesions Using Statistical Texture Classification and Active Contour Based on Probability Distance. 35:1309-1324.

Therapeutic Applications of Ultrasound

Synonyms: ultrasound therapy, sonotherapy

Scopus Search: Therap* OR Sonotherap*

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

Okita M, Nakano J, Kataoka H, Sakamoto J, Origuchi T, Yoshimura T. Effects of Therapeutic Ultrasound on Joint Mobility and Collagen Fibril Arrangement in the Endomysium of Immobilized Rat Soleus Muscle. 35:237-244.

Ozgonenel L, Aytekin E, Durmusoglu G. A Double-Blind Trial of Clinical Effects of Therapeutic Ultrasound in Knee Osteoarthritis. 35:44-49.

Thermal effects

Synonyms: ultrasound heating, tissue heating

Scopus Search: "Thermal effects" OR heating

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

Thermoacoustic imaging

Synonyms: Acousto-thermal imaging

Scopus Search: thermo*acoustic OR Acousto*thermal

See also: Temperature imaging

Thrombolysis

Synonyms: sonothrombolysis, recanalisation, clot busting

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

See also: Ischemia

Baron C, Aubry JF, Tanter M, Meairs S, Fink M. Simulation of Intracranial Acoustic Fields in Clinical Trials of Sonothrombolysis. 35:1148-1158.

Eggers R, Ossadnik S, Seidel G. Enhanced Clot Dissolution in Vitro by 1.8-Mhz Pulsed Ultrasound. 35:523-526.

Goldenstedt C, Birer A, Cathignol D, Lafon C. Blood Clot Disruption in Vitro Using Shockwaves Delivered by An Extracorporeal Generator After Pre-Exposure to Lytic Agent. 35:985-990.

Maxwell AD, Cain CA, Duryea AP, Yuan L, Gurm HS, Xu Z. Noninvasive Thrombolysis Using Pulsed Ultrasound Cavitation Therapy - Histotripsy. 35:1982-1994.

Yamashita T, Ohtsuka H, Arimura N, Sonoda S, Kato C, Ushimaru K, Hara N, Tachibana K, Sakamoto T. Sonothrombolysis for Intraocular Fibrin Formation in an Animal Model. 35:1845-1853.

Thyroid

Synonyms: Thyroid gland

Scopus Search: Thyroid* OR goitre

Chen SJ, Yu SN, Tzeng JE, Chen YT, Chang KY, Cheng KS, Hsiao FT, Wei CK. Characterization of the Major Histopathological Components of Thyroid Nodules Using Sonographic Textural Features for Clinical Diagnosis and Management. 35:201-208.

Kim JH, Lee JH, Shong YK, Hong SJ, Ko MS, Lee DH, Choi CG, Kim SJ. Ultrasound Features of Suture Granulomas in the Thyroid Bed After Thyroidectomy for Papillary Thyroid Carcinoma with An Emphasis on Their Differentiation from Locally Recurrent Thyroid Carcinomas. 35:1452-1457.

Time-of-flight

Synonyms: TOF, transmit time

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

See also: Velocity

Time-reversal Acoustics

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

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

Tissue characterization

Synonyms: tissue identification, tissue differentiation, histoscanning

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

See also: Acoustic properties of tissues, speckle

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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, acoustic properties of tissues

Toxicity

Synonyms:

Scopus Search: Toxicity AND ultraso*

See also: Cell damage, safety, sonochemistry

Transcranial ultrasound

Synonyms: TCD

Scopus Search: Transcranial OR TCD OR skull

See also: Doppler

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Transducers

Synonyms: probe, scanning head

Scopus Search: Transducer* OR probe* OR "scan* head" OR "piezoelectric effect" OR *MUT OR PZT OR "PMN-PT" OR "polyvinylidene fluoride"

See also: Arrays

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Trauma

Synonyms: injury, bleeding, vascular injury, wound

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

See also: Hemorrhage

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Tumor

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

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

See also: Cancer

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U

Ultrasonic vibration cutting

Synonyms: Ultrasonic scalpel

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

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*”

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Uterus

Synonyms: Womb

Scopus Search: Uter* OR Cervi* OR Womb

See also: Fetal ultrasound, Abdominal imaging

V

Velocity

Synonyms: speed of sound, acoustic velocity

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

See also: Acoustic properties of tissues, tissue characterisation

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Volume measurement

Synonyms: volumetric measurement

Scopus Search: “volume* measurement” OR “volume rendering”

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W

Waveform analysis

Synonyms:

Scopus Search: "waveform analysis"

See also: **Image processing, cardiology, spectral analysis**