

Scientific Formal (Paper) Presentations

CODE: VSPD11-05

SESSION: [VSPD11](#)

Central Nervous System of Children Exposed to Alcohol During the Prenatal Life

Date/Times

- **DATE:** Sunday
- **TIME:** 11:20-11:30 AM
- **LOCATION:** S100AB

PARTICIPANTS

- Andrzej Urbanik MD - Nothing to disclose.
- Monika Nardzewska-Szczepanik - Nothing to disclose.
- Justyna Kozub MSc - Nothing to disclose.
- Paulina Karcz MSc - Nothing to disclose.
- Teresa Jadczyk-Szumilo MSc - Nothing to disclose.

PURPOSE

The aim of the study was to define influence of alcohol to central nervous system (CNS) children exposed to alcohol whose mothers were affirmed to drinking alcohol during their pregnancy.

METHOD AND MATERIALS

This presentation shows results of the research concerning CNS of 200 children (group A) exposed to alcohol while in a fetus period of life and group of 30 children (group B), whose mothers did not drink alcohol while being pregnant and during lactation. The Project has obtained the consent of bioethical committee. Each child was examined using following imaging techniques :• MRI– size of the sagittal corpus callosum section was analyzed as well as its shape• DWI – the diffusion of CNS in six chosen localizations• HMRS – in six chosen localizations voxels were localized.

RESULTS

Statistically significant decrease of the section area as well as change of a shape (thinning) of the corpus callosum in the group A has been affirmed in relation to the group B. The research also confirmed statistically significant increase of diffusion in group A in relation to group B.

CONCLUSION

The evaluation of spectra in HMRS proved to be more complex. It can be concluded that in individual cases we found a high degree of metabolic changes which were specific for particular locations within the brain.

CLINICAL RELEVANCE/APPLICATION

MR technique can demonstrate that alcohol causes some alterations in brain structure on both macroscopic and microscopic level, as well as in its metabolism.

QUESTIONS ABOUT THIS EVENT EMAIL:

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Scientific Formal (Paper) Presentations

CODE: SSA16-06

SESSION: SSA16

Late Life Cognitive Activity Is Associated with Greater Diffusion Anisotropy in Brain White Matter

Date/Times

- **DATE: Sunday**
- **TIME: 11:35-11:45 AM**
- **LOCATION: N228**

PARTICIPANTS

- Anil Vasireddi BS - Nothing to disclose.
- Konstantinos Arfanakis PhD - Nothing to disclose.
- Debra Fleischman PhD - Nothing to disclose.
- Shengwei Zhang BEng - Nothing to disclose.
- David Bennett MD - Nothing to disclose.

SUBSPECIALTY CONTENT

- Neuroradiology

PURPOSE

To investigate the association between frequency of late life cognitive activity and diffusion anisotropy throughout the brain.

METHOD AND MATERIALS

This study included 152 elderly participants (mean age: 81±7 years) of the Rush Memory and Aging Project. Participants were without dementia or mild cognitive impairment based on a detailed clinical evaluation. Participants were asked to rate the frequency with which they participated in a list of mentally engaging activities during the last year, on a scale of 1 to 5. The mean value of these ratings was considered as the participant's late life cognitive activity. All participants underwent brain MRI using a 1.5T scanner within one year of clinical evaluation. T1-weighted anatomical, diffusion tensor imaging (DTI), and fluid-attenuated inversion recovery (FLAIR) data were collected on all participants. The DTI data were corrected, tensors were estimated, and fractional anisotropy (FA) maps were generated using TORTOISE (NIH, Bethesda, MD). White matter hyperintensity (WMH) maps were generated using support vector machine classification based on T1-weighted and FLAIR signals (SBIA, University of Pennsylvania). The tract-based spatial statistics (TBSS) approach was used to project FA values from all participants onto a white matter skeleton. The hypothesis that late life cognitive activity is associated with FA was tested in each voxel of the skeleton controlling for age, sex, level of education, and the presence of WMHs. The null distribution was built using the "randomise" tool in FSL (FMRIB, Oxford, UK) and 1000 permutations. Differences were considered significant at p<0.05, Family Wise Error corrected. The Threshold-Free Cluster Enhancement method was used to define clusters with significant differences.

RESULTS

TBSS analysis revealed significant associations between frequency of late life cognitive activity and FA in the genu and body of the corpus callosum, thalamus, fornix, superior parietal, superior frontal, and precentral white matter bilaterally.

CONCLUSION

In elderly subjects without cognitive impairment, frequent late life cognitive activity is associated with greater diffusion anisotropy in a number of brain regions.

CLINICAL RELEVANCE/APPLICATION

Among elderly subjects with no cognitive impairment, frequent late life cognitive activity is possibly linked to greater microstructural integrity in certain brain regions.

QUESTIONS ABOUT THIS EVENT EMAIL:

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Scientific Formal (Paper) Presentations

CODE: SSC11-03

SESSION: [SSC11](#)

Abnormally High Anisotropy Predicts Health Related Quality of Life (HRQoL) and Post Concussion Symptoms (PCS) at One Year Post-mTBI

Date/Times

- **DATE:** Monday
- **TIME:** 10:50-11:00 AM
- **LOCATION:** N226

PARTICIPANTS

- Sara Rosenbaum BA - Nothing to disclose.
- Namhee Kim PhD - Nothing to disclose.
- Tova Gardin - Nothing to disclose.
- Molly Zimmerman - Nothing to disclose.
- Richard Lipton - Nothing to disclose.
- Michael Lipton MD, PhD - Nothing to disclose.

SUBSPECIALTY CONTENT

- Neuroradiology

PURPOSE

It is known that a subset of mTBI patients experience persistent functional impairment and post-concussion symptoms (PCS). In this study, we use acute DTI to predict HRQoL and PCS at one year post-injury.

METHOD AND MATERIALS

17 patients were recruited from a large emergency center. DTI (3.0 T, b=1000, 32 directions) was performed within two weeks of injury. PCS (Rivermead PCS Questionnaire (RPQ)) and HRQoL (Sickness Impact Profile (SIP)) were administered one year later and served as outcome measures. Voxelwise assessment ($p(\text{individual voxel}) < 0.05$, $p(\text{cluster size}) < 0.01$) was used to identify voxels with abnormally high fractional anisotropy (FA), compared to 40 healthy controls, in each patient. Mean FA, axial diffusivity (AD) and radial diffusivity (RD) across these voxels was determined for each patient and served as predictor variables. Partial correlation analysis (controlled for premorbid intelligence) was used to assess imaging predictors of the outcome measures.

RESULTS

Mean FA across voxels with abnormally high FA predicts better outcomes on two measures of HRQoL, mobility control (SIP-MC; $R = -0.514$, $p = 0.024$) and psychological functioning (SIP-PAC; $R = -0.599$; $p = .007$, respectively), as well as cognitive PCS (RPQ; $R = -0.576$, $p = 0.01$). (Note that lower SIP and RPQ scores indicate better outcomes.) AD, RD and MD were also significantly associated with the outcome measures.

CONCLUSION

Regions of abnormally high FA predict better HRQoL and lesser PCS one year after mTBI. High FA may thus index functional changes that mitigate evolution of mTBI pathology or enhance recovery. High AD and RD in the setting of high FA indicates that diffusion along the principal axis of the diffusion tensor (AD) is likely the major determinant of abnormally high anisotropy. This is consistent with neuroplastic change in response to injury, which confers better functional and symptom outcomes.

CLINICAL RELEVANCE/APPLICATION

DTI may reveal evidence of compensatory mechanisms, which portend better functional and symptom outcomes after mTBI. These mechanisms could be exploited to enhance recovery.

QUESTIONS ABOUT THIS EVENT EMAIL:

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Scientific Formal (Paper) Presentations

CODE: SSE16-02

SESSION: [SSE16](#)

Gender Differences in Gray Matter Atrophy Patterns in the Progression from Mild Cognitive Impairment to Alzheimer's Disease

Date/Times

- **DATE:** Monday
- **TIME:** 03:10-03:20 PM
- **LOCATION:** N230

PARTICIPANTS

- Maria Vittoria Spampinato MD - Nothing to disclose.
- Markus Weinger MD - Nothing to disclose.
- Vavro Hrvoje - Nothing to disclose.
- Ryan Parker PhD - Nothing to disclose.
- Karen Patrick - Nothing to disclose.
- Zoran Rumboldt MD - Research Grant, Siemens AG

SUBSPECIALTY CONTENT

- Neuroradiology

PURPOSE

To assess if there are gender specific differences in gray matter (GM) volume loss patterns in patients with newly diagnosed Alzheimer's disease (AD).

METHOD AND MATERIALS

We included 109 patients (60 men; mean age 77±7 years) from the Alzheimer's Disease Neuroimaging Initiative cohort, who during study participation progressed from amnesic mild cognitive impairment (aMCI) to AD. Brain MRIs obtained one year before conversion from aMCI to AD, at the time of AD diagnosis, and after 12 months were available. Voxel-based morphometry was used to process MPRAGE images. The General Linear Model Repeated Measures was performed to evaluate for differences over time in disease severity, using Clinical Dementia Rating Sum of Boxes (CDR-SB). Cross-sectional and longitudinal imaging data analyses included two-sample and paired t-tests. Total intracranial volume was included as nuisance variable. Results were considered significant with $p < 0.05$ after family wise error rate correction for multiple comparisons.

RESULTS

There was significant progressive cognitive decline in both genders ($p < 0.001$) with significant interaction between CDR-SB and gender ($p = 0.035$), and with significantly worse cognitive status in males than females at the time of AD diagnosis. Cross-sectional comparison showed significant greater atrophy in females: in the posterior cingulate gyri 12 months before AD diagnosis; in the bilateral middle temporal gyrus, bilateral cingulate gyrus, left subcallosal gyrus, and right insula at the time of AD diagnosis; there were no differences in GM volume 12 months after AD diagnosis. No areas of greater GM atrophy were found in males. Longitudinal analyses revealed gender specific differences in GM volume loss during the 12 months before AD diagnosis (women: bilateral uncus; men: bilateral inferior frontal lobe, right uncus;) and during the 12 months after AD diagnosis (women: left hippocampus, bilateral temporal, and right parietal lobes; men: bilateral hippocampus, right parahippocampal gyrus, left insula, left caudate, left frontal, and left parietal lobes).

CONCLUSION

Our data indicate that the extent and distribution of regional GM volume loss in patients with progression from MCI to AD is strongly influenced by the gender.

CLINICAL RELEVANCE/APPLICATION

Gender differences in GM atrophy patterns have potential important implications for therapeutic approaches in AD and should be taken into consideration in clinical trials.

QUESTIONS ABOUT THIS EVENT EMAIL:

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Scientific Formal (Paper) Presentations

CODE: SSA16-02

SESSION: [SSA16](#)

Energy Expenditure Is Associated with Gray Matter Structure in Normal Cognition, Mild Cognitive Impairment, and Alzheimer's Dementia

Date/Times

- **DATE: Sunday**
- **TIME: 10:55-11:05 AM**
- **LOCATION: N228**

PARTICIPANTS

- Cyrus Raji MD, PhD - Nothing to disclose.
- Kirk Ericson PhD - Nothing to disclose.
- Oscar Lopez MD - Nothing to disclose.
- James Becker PhD - Nothing to disclose.
- Owen Carmichael PhD - Nothing to disclose.
- H. Michael Gach PhD - Nothing to disclose.
- Paul Thompson PhD - Nothing to disclose.
- William Longstreth MD - Nothing to disclose.
- Lewis Kuller MD - Nothing to disclose.

SUBSPECIALTY CONTENT

- Neuroradiology

PURPOSE

Prior work suggests that engagement in physical activity can mitigate brain atrophy in the elderly, but the precise nature of this relationship across the ranges of caloric expenditure and cognitive function is unclear. The main purpose of this study was to assess, in elderly participants spanning a range from normal cognition to Alzheimer's dementia, energy output from caloric expenditure as a predictor of MRI-based gray matter (GM) volume.

METHOD AND MATERIALS

All subjects in this study were recruited from the Institutional-Review-Board-approved Cardiovascular Health Study (CHS), a four-site population-based longitudinal study of coronary heart disease and stroke in persons aged 65 years and older. The present study utilized a sub-sample of 876 participants (mean age 78.3) who had: i) Energy output assessed as kilocalories per week using the standardized Minnesota Leisure-Time Activities questionnaire and binned into quartiles; ii) Cognitive assessments for clinical classification of normal cognition, mild cognitive impairment (MCI), and Alzheimer's dementia (AD); and iii) T1-weighted volumetric MR imaging of the brain. We used voxel-based morphometry (VBM) to model the relationships between energy output and local GM volume while controlling for head size, age, sex, white matter lesion burden, body mass index, clinical classification, and clinic site. We then used membership in the top quartile of energy output to assess moderating influences of high energy output in MCI or AD. Multiple comparisons were accounted for using a 5% False Discovery Rate.

RESULTS

Figure 1a shows in color locations where greater caloric expenditure was associated with greater GM volumes in frontal, temporal, and parietal lobes (False Discovery Rate p-value < .05). Implicated regions include the hippocampus, thalamus, and basal ganglia. Figure 1b shows the positive benefits of higher energy output on the posterior hippocampus ($r = .15$, adjusted for covariates), in crosshairs. High-energy output was associated with greater GM volume in persons with MCI and AD in the precuneus, posterior cingulate, and cerebellar vermis.

CONCLUSION

Higher energy output is associated with greater preservation of brain structure across a range from normal cognition to clinical dementia.

CLINICAL RELEVANCE/APPLICATION

MR imaging provides regionally specific quantitative data on the neuroprotective and disease moderating influence of physical activity on the brain.

QUESTIONS ABOUT THIS EVENT EMAIL:

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Scientific Informal (Poster) Presentations

CODE: LL-MKS-SU1B

SESSION: [LL-MKS-SU](#)

High Levels of Physical Activity are Associated with Greater Cartilage Degeneration over a Period of 4 Years as Assessed with T2 Relaxation Time Measurements – 3T MRI Data from the Osteoarthritis Initiative

Date/Times

- **DATE:** Sunday
- **TIME:** 01:00-01:30 PM
- **LOCATION:**

PARTICIPANTS

- Wilson Lin BS - Nothing to disclose.
- Hamza Alizai MD - Nothing to disclose.
- Gabby Joseph - Nothing to disclose.
- Waraporn Srikhum MD - Nothing to disclose.
- Charles McCulloch - Nothing to disclose.
- Thomas Link MD, PhD - Consultant, General Electric Company Research Grant, General Electric Company
- Michael Nevitt PhD - Nothing to disclose.
- John Lynch PhD - Nothing to disclose.

SUBSPECIALTY CONTENT

- Musculoskeletal Radiology

PURPOSE

The relationship between physical activity and the evolution of osteoarthritis (OA) remains unclear. Cross-sectional studies have shown that very low and high levels of exercise may be associated with higher cartilage T2 relaxation times than mild levels of exercise. The purpose of this study was to analyze the association between physical activity levels and the evolution of early degenerative cartilage changes in the knee, measured using T2 relaxation times over a period of 4 years in normal individuals and those with risk factors for OA.

METHOD AND MATERIALS

We included 205 subjects aged 45-60, BMI 19-27 kg/m², no knee pain at baseline (WOMAC score of zero), and a Kellgren-Lawrence score of less than 2 in the right knee at baseline, from the Osteoarthritis Initiative Incidence and Normal cohorts. Physical activity was scored using the Physical Activity Scale for the Elderly (PASE) questionnaire, which was averaged over a 4-year time period and categorized into tertiles. T2 values of articular cartilage were measured at the patella, medial/lateral femur and medial/lateral tibia of the right knee in multi-echo SE sequences at baseline, 2- and 4-year visits. A mixed model linear regression, adjusted for age, sex, and BMI, and including random effects for individual was used for statistical analysis.

RESULTS

All compartments in the knee showed significant T2 progression over the 4-year period. T2 progression was higher in the highest tertile than in the mid-tertile at the medial tibia (2.8 ± 0.3 vs. 2.0 ± 0.3 , $P=0.04$), the patella (4.1 ± 0.5 vs. 3.1 ± 0.5 , $P=0.02$), and the average T2 of all knee compartments combined (2.5 ± 0.2 vs. 2.0 ± 0.2 , $P=0.03$). T2 progression was also higher in the lowest tertile than in the mid-tertile in all compartments, but results were not significant.

CONCLUSION

High levels of physical activity were associated with greater progression of cartilage T2 measurements in asymptomatic, middle-aged individuals, suggesting accelerated cartilage matrix biochemical degeneration over time. Low levels of physical activity may exert a similar effect on cartilage, a pattern consistent with cross-sectional analysis, but longitudinal associations in our cohort were non significant.

CLINICAL RELEVANCE/APPLICATION

High physical activity levels were associated with accelerated cartilage degeneration (as judged by T2 relaxation measurements over 4 years) and may be considered a risk factor for osteoarthritis.

QUESTIONS ABOUT THIS EVENT EMAIL:

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Scientific Informal (Poster) Presentations

CODE: LL-NRS-MO3C

SESSION: [LL-NRS-MOPM](#)

Exercise Therapy for Parkinson's Disease: Faster Pedaling is Related to Greater Improvement in Motor Connectivity

Date/Times

- **DATE:** Monday
- **TIME:** 05:00-05:30 PM
- **LOCATION:**

PARTICIPANTS

- Chintan Shah BS, MS - Nothing to disclose.
- Erik Beall - Nothing to disclose.
- Anneke Frankemolle - Nothing to disclose.
- Amanda Penko - Nothing to disclose.
- Micheal Phillips MD - Nothing to disclose.
- Mark Lowe - Nothing to disclose.
- Jay Alberts - Consultant, Cleveland Medical Devices Inc/Speaker, Cleveland Medical Devices Inc

SUBSPECIALTY CONTENT

- Neuroradiology

PURPOSE

Forced-rate lower-extremity exercise (FE) has recently emerged as a potential safe and low-cost therapy for Parkinson's Disease (PD). The efficacy is believed to be dependent on pedaling rate, with rates above the subjects' voluntary exercise (VE) rates being most beneficial. In this study, we use functional connectivity (FC) MRI (fcMRI) to further elucidate the mechanism underlying this effect.

METHOD AND MATERIALS

26 patients with HY stage II-III PD, ages 30-75, were randomized to the VE or FE groups (n=13,13). Subjects underwent bicycle exercise sessions for 8 weeks (motor-assisted for FE), and MRI scans at baseline and end of therapy (EOT). Scans included a T1-MPRAGE, a complex bilateral finger-tapping task fMRI scan, and a constant task fcMRI scan (continuous visuomotor feedback task with most affected hand (MAH)). Data were preprocessed using standard methods. For each subject, activation maps were calculated from the fMRI scans, averaged across study timepoints, and seed voxels were chosen based on maximal activation in the L and R hand areas of the primary motor cortex (M1). Connectivity maps (CMs) were then calculated from the fcMRI data using seed-based correlation analysis. CMs with significant motion artifact were excluded. CMs were registered into Talairach space and difference maps were created (CMEOT – CMbaseline). RM1 or mirrored LM1 CMs were used for those with L or R MAH, respectively. A voxel-wise correlation was then performed with average pedaling rate.

RESULTS

Results of the correlation analysis (N=21) are shown in the figure. Increases in task-related FC (trFC) to the ipsilateral thalamus and bilateral mid-to-posterior putamen were significantly correlated to pedaling rate ($p < 0.05$), as were decreases in trFC to the contralateral motor cortex ($p < 0.01$).

CONCLUSION

Our results indicate that after 8 weeks of exercise, patients who pedal faster show stronger increases in cortico-subcortical trFC, and stronger decreases in cortico-cortical trFC. The foci of subcortical connectivity changes are similar to patterns of activation during deep brain stimulation of PD patients. This work was supported by grants from NIH/NINDS, VA Merit Review. Additional support for CS from the PDF and APDA.

CLINICAL RELEVANCE/APPLICATION

This work reveals important insights regarding the mechanism of exercise therapy for PD. Faster pedaling rate is the key factor related to improvements in motor connectivity.

No published email address listed.

Scientific Informal (Poster) Presentations

CODE: LL-HPS-TU1A

SESSION: [LL-HPS-TU](#)

Review of Radiological Findings in Physical Elder Abuse

Date/Times

- **DATE: Tuesday**
- **TIME: 12:15-12:45 PM**
- **LOCATION: Lakeside Learning Center**

PARTICIPANTS

- Kieran Murphy MD - Founder, Active O, LLC Founder, Vexim SA Founder, Jan Medical Corporation Founder, Cognitive Vision, Inc Founder, Kieran Murphy LLC Inventor, Active O, LLC Inventor, Vexim SA Inventor, Jan Medical Corporation Inventor, Cognitive Vision, Inc Inventor, Kieran Murphy LLC Shareholder, Active O, LLC Shareholder, Vexim SA Shareholder, Jan Medical Corporation Shareholder, Cognitive Vision, Inc Shareholder, Kieran Murphy LLC Shareholder, Unigene Laboratories, Inc Shareholder, ETEX Corporation Shareholder, Dfine, Inc Shareholder, Spineology, Inc Shareholder, Theraclion Shareholder, ActiveViews Royalties, Cook Group Incorporated
- Sheila Waa MBChB, MMed - Nothing to disclose.
- Amanda Chan - Nothing to disclose.
- Agnes Sauter MA - Nothing to disclose.
- Hussein Jaffer - Nothing to disclose.

SUBSPECIALTY CONTENT

- Health Policy

PURPOSE

Only 2% of physical elder abuse is reported by clinicians. No elder equivalent of Caffey's syndrome has been described. We reviewed databases and medical literature for reports of radiological evidence, distribution and type of physical injuries in elder abuse with the aim of aiding imaging detection in the clinical setting.

METHOD AND MATERIALS

We investigated the Ontario trauma registry, the Ontario Coroner's Office; PubMed, CINAHL, EMBASE databases using phrases such as 'elder abuse', 'geriatric abuse', for reports on the distribution and type of injuries or radiological findings in subjects at or over 60 years of age.

RESULTS

Literature review yielded 1100 injuries from elder abuse. In addition, registries in Ontario yielded 26 cases; 2 confirmed cases of elder abuse; 21 cases of assault by unknown persons in the past five years and a report by the Office of the Chief Coroner of Ontario details three senior mortalities resulting from assaults in long term care facilities. Maxillofacial trauma, dental trauma, subdural haematomas, periorbital and laryngeal trauma, rib fractures and upper extremity injuries were reported. Autopsy studies in elder abuse have shown subdural haemorrhages as causes of mortality in a third of cases(1). These patients were more likely to be socially isolated, demented, depressed, underweight, unkempt, have bed sores and are cared for at home by a financially dependent caregiver with a substance abuse problem. Brain, head and neck injuries have also been found to be more common in abused elderly than accidentally injured elderly(2).(1) Akaza K, et al. Leg Med (Tokyo) 2003. Mar:5(1);7-14(2) Friedman LS, et al. J Am Geriatr Soc 2011;59:417-422

CONCLUSION

We have outlined injuries that are common to physical elder abuse. A risk stratification that integrates the radiological and physical findings within the social context of the injury is needed. We intend to continue our work and investigate the predictiveness of this pattern prospectively, from common accidental trauma.

CLINICAL RELEVANCE/APPLICATION

Radiologists should be aware that a pattern of subdural haemorrhages, head and neck, maxillofacial, dental and upper extremity injury are more frequent in the abused elderly (2).

No published email address listed.

Scientific Formal (Paper) Presentations

CODE: SSG02-07

SESSION: [SSG02](#)

Scatter Radiation Dose During Screening Mammography to the Thyroid Gland, Salivary Gland, Lens of Eye, Sternum, and Uterus

Date/Times

- **DATE:** Tuesday
- **TIME:** 11:30-11:40 AM
- **LOCATION:** E451A

PARTICIPANTS

- Alison Chetlen DO - Nothing to disclose.
- Steven King MS - Nothing to disclose.
- Karen Brown MPH - Nothing to disclose.
- Brian Lorah - Nothing to disclose.
- Susann Schetter DO - Nothing to disclose.
- Claudia Kasales MD - Nothing to disclose.
- Shelley Tuzzato - Nothing to disclose.
- Shelly Rambler - Nothing to disclose.

SUBSPECIALTY CONTENT

- Breast (Imaging and Interventional)

PURPOSE

To quantify scatter radiation dose received by the thyroid gland, salivary gland, lens of eye, sternum, and uterus during screening digital mammography and evaluate the relationship between radiation dose with respect to the patient's body mass index, breast compression thickness, and breast composition.

METHOD AND MATERIALS

One hundred women wore six optically stimulated luminescent dosimeters, one on each thyroid lobe, right salivary gland, nasal bridge, sternum, and umbilicus during her two view screening mammogram. Skin doses were then obtained. Other parameters including age, height, weight, body mass index, and breast composition (density) were recorded. For each mammographic view, the kVp, mAs, target and filter combination, breast compression thickness, compression force, average glandular dose and estimated skin dose were recorded. Finally, scatter radiation dose to the thyroid gland, sternum, bridge of nose, right salivary gland, and umbilicus were plotted against Body Mass Index, Breast Composition (Density), and breast compression thickness.

RESULTS

Measured skin dose to the bridge of the nose and umbilicus was negligible. The average skin dose to the sternum was 1.1 mGy. The average skin dose to the right salivary gland was 0.29 mGy. The average skin dose to the right and left thyroid lobes was 0.33 mGy. Radiation dose decreased slightly with increasing breast density. Scatter radiation dose increased with increasing body mass index and with increased breast compression thickness.

CONCLUSION

Measured skin dose to the bridge of the eye and umbilicus was negligible indicating there is no risk to the patient of cataracts or teratogenic effects in early pregnancy. Measured skin dose at the salivary gland, thyroid gland, and sternum was very low. The risk of cancer induction at these low levels is indistinguishable from the background incidence of cancer due to other sources.

CLINICAL RELEVANCE/APPLICATION

Scatter radiation from screening mammography is minimal, resulting in negligible risk to the patient. Use of thyroid shields to reduce risk even further is not recommended.

QUESTIONS ABOUT THIS EVENT EMAIL:

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Scientific Informal (Poster) Presentations

CODE: LL-HPS-TU3A

SESSION: [LL-HPS-TU](#)

Assessment of Breast Cancer Risks from Medical Imaging Including Computed Tomography (CT) and Nuclear Medicine among Females Enrolled in a Large Integrated Health Care System

Date/Times

- **DATE:** Tuesday
- **TIME:** 12:15-12:45 PM
- **LOCATION:** Lakeside Learning Center

PARTICIPANTS

- Ginger Merry MD, MPH - Nothing to disclose.
- Diana Miglioretti PhD - Nothing to disclose.
- Choonsik Lee - Nothing to disclose.
- Eric Johnson - Nothing to disclose.
- Rebecca Smith-Bindman MD - Nothing to disclose.

SUBSPECIALTY CONTENT

- Health Policy

PURPOSE

Utilization of chest and cardiac CT, and cardiac medicine, has grown rapidly over the last 10 years. The impact of this increased use of imaging on radiation exposure to breast tissue and subsequent risk of breast cancer has not been determined

METHOD AND MATERIALS

We evaluated imaging and associated radiation exposure among female members enrolled in a large integrated health care system between 2000 and 2010, including over 250,000 enrollees each year. We collected CT dose parameters on 1,656 patients and used a newly developed, automated Monte Carlo computational method to estimate breast and effective doses. For nuclear medicine, data were abstracted on the volume of injected radiopharmaceutical for 5,507 exams and Monte Carlo methods were used to estimate breast doses. The breast-specific absorbed doses and the Preston 2002 pooled model for radiation-effects on breast cancer risk were used to estimate women's 10 year risk of developing breast cancer based on age at exposure to CT. Using Breast Cancer Surveillance Consortium data, we estimated women's 10 year risk of breast cancer based on the Gail model and SEER age-specific cancer incidence data and compared the imaging-related risk to the underlying Gail risk.

RESULTS

Overall 124 CTs and 42 nuclear medicine exams were obtained per 1000 female enrollees per year, with rapid increase between 2000 and 2010. Breast doses from CT were variable, with the highest breast doses delivered by multiple-phase cardiac [median 51.6 mGy, IQR 21.2, 73.1] and chest CT [median 34 mGy; IQR 16, 74). A child or young adult who underwent two cardiac or chest CTs before the age of 23 has a higher 10-year risk of developing breast cancer from these exams than her underlying risk of developing breast cancer in the same period (Figure). Thus a child or young adult who undergoes two or more chest or cardiac CTs more than doubles her 10-year risk of breast cancer.

CONCLUSION

Women should understand there is a small but real potential risk of breast cancer associated with cardiac and chest CT, and the risk increases with the number of scans.

CLINICAL RELEVANCE/APPLICATION

Cardiac and Chest CT deliver significant doses of radiation to the breast in children and young adults and repeated imaging can more than double a woman's 10 year risk of breast cancer.

QUESTIONS ABOUT THIS EVENT EMAIL:

Rebecca.smith-bindman@ucsf.edu

Scientific Informal (Poster) Presentations

CODE: LL-MIS-TU2A

SESSION: [LL-MIS-TU](#)

Towards Diagnostic Imaging of ChemoBrain Phenomenon

Date/Times

- **DATE:** Tuesday
- **TIME:** 12:15-12:45 PM
- **LOCATION:** Lakeside Learning Center

PARTICIPANTS

- Rachel Lagos DO - Nothing to disclose.
- Gary Marano MD - Nothing to disclose.
- Jame Abraham MD - Nothing to disclose.
- Marc Haut PHD - Nothing to disclose.
- Sara Kurian MS - Nothing to disclose.

SUBSPECIALTY CONTENT

- Molecular Imaging

PURPOSE

This research clinically correlates patient history, neurologic examination, and chemotherapy regimen with the 18F FDG PET-CT imaging for 128 patients diagnosed with breast cancer. This data is reviewed at the time of staging and six-month re-staging image acquisitions in patients who received interim chemotherapy. The clinical context of statistically significant image findings is established.

METHOD AND MATERIALS

One hundred twenty-eight breast cancer patients' staging and re-staging 18F FDG PET-CT Brain examinations are retrospectively reviewed. NeuroMim neuroradiology analysis software calculates the brain metabolism within 63 brain regions compared to a standard metabolism model for each diagnostic image set. Variance of these Z-score values is calculated for each patient prior to and post chemotherapy. The statistical significance of the changes in brain metabolism is calculated within the total patient population. These results are clinically correlated with documented patient history, neurologic examinations, and chemotherapy regimens. The clinical presentation of chemobrain phenomenon and the statistically significant regional decreases in brain metabolism are correlated.

RESULTS

In women treated for breast cancer, 18F FDG PET-CT demonstrates statistically significant decreases in regional brain metabolism. The metabolic change correlates to chemotherapy regimen, neurological examination and symptoms of chemobrain phenomenon.

CONCLUSION

Correlation between clinical and imaging data evaluates the role of 18F FDG PET-CT as a diagnostic tool for chemobrain phenomenon.

CLINICAL RELEVANCE/APPLICATION

This research provides statistically significant data evaluating the use of 18F FDG PET-CT as a diagnostic tool for chemobrain phenomenon, facilitating clinical diagnosis and treatment.

QUESTIONS ABOUT THIS EVENT EMAIL:

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Scientific Informal (Poster) Presentations

CODE: LL-BRS-TU1D

SESSION: [LL-BRS-TUPM](#)

Patient Awareness of Breast Density and Interest in Additional Screening Tests for Women with Dense Breasts

Date/Times

- **DATE:** Tuesday
- **TIME:** 05:30-06:00 PM
- **LOCATION:** Lakeside Learning Center

PARTICIPANTS

- Haatal Dave MD, MS - Nothing to disclose.
- Jafi Lipson MD - Nothing to disclose.

SUBSPECIALTY CONTENT

- Breast (Imaging and Interventional)

PURPOSE

To determine patient awareness of breast density and interest in additional screening tests for women with dense breasts among women obtaining routine screening mammograms.

METHOD AND MATERIALS

During a nine-day study period, 105 asymptomatic, adult patients seen in the outpatient radiology clinic of a U.S. academic medical center were surveyed after completion of a routine screening mammogram. Patients were asked if they were aware of their breast density, and if not, whether they would like to be informed of their breast density. The association between high breast density and an increased risk of breast cancer was then presented. Patients were asked about their interest in additional screening tests like automated whole breast ultrasound and contrast enhanced spectral mammography if they found out they had dense breast tissue. They were asked to provide contact information if interested in participating in future research studies regarding additional screening modalities. Patients' reported breast density was obtained from radiology reports. The Fisher's exact test (two-tailed) was used to evaluate the relationship between awareness of breast density with age and reported breast density.

RESULTS

Forty-two percent (44 of 105) of patients had heterogeneously dense or extremely dense breast tissue. Twenty-four percent (25 of 105) of patients reported they were aware of their breast density, independent of age ($p=0.496$) and breast density ($p=0.256$). The majority of patients were interested in automated whole breast ultrasound and contrast enhanced spectral mammography as additional screening tests. This interest persisted despite the possibility of an increased likelihood of undergoing invasive procedures, increase in false positives and out-of-pocket expenses. These findings were independent of age and breast density.

CONCLUSION

There is limited awareness among patients about breast density. Women are interested in additional screening modalities, and this interest persists despite the risk of false positives and potential financial costs. This study demonstrates a willingness among patients to participate in future research involving additional screening modalities for women with dense breasts.

CLINICAL RELEVANCE/APPLICATION

There is a need for patient education regarding breast density, the associated risk of breast cancer and opportunities to become involved in ongoing research of alternative screening modalities.

QUESTIONS ABOUT THIS EVENT EMAIL:

haatal.b.dave@gmail.com

Scientific Formal (Paper) Presentations

CODE: SSG02-02

SESSION: [SSG02](#)

Digital Mammography Screening for Patients in Their Forties in New York City (2007-2010): A Retrospective Study Examining the Potential Impact of the USPSTF's Changed Recommendations for Breast Cancer Screening

Date/Times

- **DATE:** Tuesday
- **TIME:** 10:40-10:50 AM
- **LOCATION:** E451A

PARTICIPANTS

- Brittany Zadek PhD - Nothing to disclose.
- Melissa Reichman MD - Nothing to disclose.
- Elizabeth Arleo MD - Nothing to disclose.
- Kemi Babagbemi MD - Nothing to disclose.
- Ruth Rosenblatt MD - Nothing to disclose.

SUBSPECIALTY CONTENT

- Breast (Imaging and Interventional)

PURPOSE

In 2009, the USPSTF changed its recommendation for the age to start screening mammography from 40 to 50 and decreased the recommended frequency from annually to biennially. This study aims to highlight how these changes could impact patients in their forties through a retrospective study of patients screened at New York Presbyterian Hospital -- Weill Cornell Medical Center (NYPH-WCMC) starting in 2007 when digital imaging replaced analog, and for the subsequent four years.

METHOD AND MATERIALS

A cross-sectional retrospective study of screening mammograms performed between 2007 and 2010 at NYPH-WCMC was conducted. All patients presenting for screening mammogram, without clinical findings, were included. Patients whose screening mammogram required additional diagnostic images and ultimately received a BIRADs 4 or 5 for a suspicious abnormality were further analyzed with respect to pathology results after biopsy, associated treatments, and family history.

RESULTS

During the four years included in this retrospective analysis, 43,351 screens were performed and 205 breast cancers were subsequently detected, for a cancer detection rate of 4.7/1000 screening mammograms. Patients screened in their forties accounted for 33.5% of the population screened and accounted for 19% of cancers subsequently found. Over 50% of the screen-detected cancers in women in their forties (21/39) were invasive. Only three of the patients diagnosed with breast cancer in their forties from screening had a 1st degree relative with premenopausal breast cancer.

CONCLUSION

Between 2007 and 2010, patients in their forties accounted for 33.5% of the population receiving screening mammography and accounted for 19% of screen-detected breast cancers, over 50% of which were invasive. If the USPSTF recommendations had been enforced during these years, these cancers may not have been detected until the patients' baseline screening mammogram at 50 or until it progressed to clinically evident, palpable disease.

CLINICAL RELEVANCE/APPLICATION

This cross-sectional study of a subgroup in New York City aims to highlight how the USPSTF 2009 recommendations could detrimentally impact patients in their forties.

QUESTIONS ABOUT THIS EVENT EMAIL:

ela9033@med.cornell.edu

Scientific Formal (Paper) Presentations

CODE: SSG02-01

SESSION: [SSG02](#)

The Effect of the U.S. Preventive Services Task Force Recommendation on Use of Screening Mammography

Date/Times

- **DATE:** Tuesday
- **TIME:** 10:30-10:40 AM
- **LOCATION:** E451A

PARTICIPANTS

- David Levin MD - Consultant, HealthHelpBoard of Directors, Outpatient Imaging Affiliates, LLC
- Vijay Rao MD - Nothing to disclose.
- Laurence Parker PhD - Nothing to disclose.
- Andrea Frangos MPH - Nothing to disclose.
- Richard Sharpe MD, MBA - Nothing to disclose.

SUBSPECIALTY CONTENT

- Breast (Imaging and Interventional)

PURPOSE

In November 2009, the U.S. Preventive Services Task Force (USPSTF) issued new breast cancer screening guidelines. For women in the Medicare age bracket, this document recommended changing the screening interval from 1 to 2 years and ceasing screening at age 74. The guidelines stirred considerable controversy but it was unclear how much they would influence women's choices about screening. Our purpose was to determine how much these recommendations impacted the use of screening mammography in the Medicare population.

METHOD AND MATERIALS

The Medicare Part B Physician/Supplier Procedure Summary Master Files for 2005-2010 were searched (2010 was the first full year after the USPSTF document came out). The codes for screening mammography (both film and digital) were selected. The database provides volumes for each code each year, and from these, we calculated screening mammography rates per 1000 female Medicare beneficiaries per year. The compound annual growth rate (CAGR) was calculated for 2005 to 2009 and compared with the change from 2009 to 2010.

RESULTS

The screening mammography rate per 1000 Medicare female beneficiaries was 311.6 in 2005, 312.4 in 2006, 316.2 in 2007, 320.1 in 2008, and 322.9 in 2009. This represented a CAGR of 0.9% from 2005 to 2009. But in 2010 the rate dropped to 309.1, representing a decline in that single year of 4.3%.

CONCLUSION

Prior to the USPSTF recommendation, the screening mammography rate in Medicare female beneficiaries had been growing in small increments each year, with an average annual increase of just under 1%. However, after the recommendation came out in late 2009, a substantial decline (4.3%) occurred in 2010. The USPSTF document appears to have had a noticeable impact on the willingness of women to undergo breast cancer screening. This has become a very controversial issue and it will be important to follow these trends in upcoming years.

CLINICAL RELEVANCE/APPLICATION

not applicable

QUESTIONS ABOUT THIS EVENT EMAIL:

david.levin@jeffersonhospital.org

Scientific Formal (Paper) Presentations

CODE: SSQ01-02

SESSION: [SSQ01](#)

Differences of Epicardial Adipose Tissue and Mediastinal Adipose Tissue Between Black and White Patients Assessed by Cardiac CT

Date/Times

- **DATE:** Thursday
- **TIME:** 10:40-10:50 AM
- **LOCATION:** S502AB

PARTICIPANTS

- Paul Apfaltrer MD - Nothing to disclose.
- Andreas Schindler - Nothing to disclose.
- John Nance MD - Nothing to disclose.
- Rozemarijn Vliegenthart MD, PhD - Nothing to disclose.
- Mathias Meyer - Nothing to disclose.
- U. Joseph Schoepf MD - Research Consultant, Bayer AG Research Grant, Bayer AG Research Consultant, Bracco Group Research Grant, Bracco Group Research Consultant, General Electric Company Research Grant, General Electric Company Research Consultant, Siemens AG Research Grant, Siemens AG
- Fabian Bamberg MD, MPH - Speakers Bureau, Bayer AG Speakers Bureau, Siemens AG Research Grant, Bayer AG Research Grant, Siemens AG

SUBSPECIALTY CONTENT

- Cardiac Radiology

PURPOSE

Thoracic adipose tissue is increasingly recognized as a promoter of coronary artery disease (CAD). Differences in thoracic adipose tissue may contribute to differences in CAD risk between races. We compared CT-derived volumes of epicardial adipose tissue (EAT), mediastinal adipose tissue (MAT), and peri-coronary fat thickness (PFT) between African American and white patients and investigated potential correlations with CAD.

METHOD AND MATERIALS

This IRB approved, HIPAA-compliant retrospective study included 411 age-and-gender-matched black and white patients (204 black - mean age 54.6±10.8yrs, 49% men; 207 white - mean age 53.5±12.2yrs, 53% men) who had undergone cardiac dual-source CT for chest pain. EAT and MAT volumes were quantified using an automated analysis algorithm. PFT was measured on reconstructed sections orthogonal to the vessel centerline at the proximal, mid, and distal segments of the RCA. Calcified plaque volume was quantified by applying a threshold-based automated algorithm. Statistical analysis included chi-square testing, independent t-testing, and linear regression.

RESULTS

Mean body mass index was 30.3±6.0kg/m² for blacks and 29.8±5.2kg/m² for whites (p>0.05). EAT volume and MAT volume were significantly lower in blacks than in whites (63.7±33.6cm³ versus 105.0±57.5cm³ and 60.2±54.7cm³ versus 110.2±84.9cm³ [p<0.0001]). PFT at the mid and distal RCA segment was lower in blacks than in whites (18.7±4.7mm versus 20.1±4.8mm and 5.9±1.6mm versus 6.4±1.8mm; p<0.0021) while PFT around the proximal RCA was similar (27.0±5.7mm versus 28.0±5.7mm, p>0.05). Patients with CAD showed significantly higher EAT volume than without CAD (97.9±52.6cm³ vs. 77.4±43.5cm³, p<0.05). Significant correlations were observed between EAT volume measurements and calcium volume (r = 0.221; p<0.05). The relationship between race and extent of adipose tissue remained significant after adjustment for cardiovascular risk factors.

CONCLUSION

Measures of thoracic fat were generally higher for symptomatic white than for black patients suggesting a differential relationship between thoracic adipose tissue and CAD pathophysiology by race.

CLINICAL RELEVANCE/APPLICATION

The differential effect of thoracic adipose tissue on the metabolic and cardiovascular risk profile should be further evaluated as a possible substrate for differences in CAD risk between races.

QUESTIONS ABOUT THIS EVENT EMAIL:

schoepf@musc.edu

Scientific Formal (Paper) Presentations

CODE: SSM13-06

SESSION: [SSM13](#)

**High Altitude Climbing: Are Microhemorrhages Only Found in the Brains of Survivors of High Altitude Cerebral Edema (HACE)?
A Cross Sectional Study including Healthy Extreme Altitude Climbers and Those with Different High Altitude Illnesses**

Date/Times

- **DATE: Wednesday**
- **TIME: 03:50-04:00 PM**
- **LOCATION: N226**

PARTICIPANTS

- Michael Knauth MD, PhD - Speakers Bureau, Penumbra, IncSpeakers Bureau, Siemens AGSpeakers Bureau, Acandis GmbH & Co KGSpeakers Bureau, Johnson & Johnson
- Kai Kallenberg MD - Speakers Bureau, Acandis GmbH & Co KG
- Kai Schommer MD - Nothing to disclose.
- Peter Bartsch MD - Nothing to disclose.

SUBSPECIALTY CONTENT

- Neuroradiology

PURPOSE

HACE is life threatening. We reported 3 cases of nonfatal HACE showing microhemorrhages (MH) in the corpus callosum while 3 control subjects who had suffered from severe acute mountain sickness (AMS) were free of MH (Kallenberg, JCBFM 2008). We hypothesized that brain MH only occur in HACE while extreme altitude climbers without any high altitude illness, climbers with severe AMS or isolated high altitude pulmonary edema (HAPE) do not show MH. We performed a cross-sectional study on extreme altitude climbers and on mountaineers who had well-documented episodes of AMS, HACE or HAPE.

METHOD AND MATERIALS

Brain MRI with T2*- and susceptibility-weighted-sequences was performed in the following groups of mountaineers: w/o history of high altitude illness who reached an altitude >7000m (n=7) history of severe AMS (n=11) history of isolated HAPE (n=8) history of HACE (n=10). Clinical severity of HACE was scored. Based on previous findings two neuroradiologists assessed all brain MRI blinded to the group identity of the mountaineers. MRI were classified as HACE-positive, HACE-negative or HACE-uncertain. An MRI score regarding the severity (number/location) of MH was established.

RESULTS

Microhemorrhages were found almost exclusively found in the brains of HACE survivors. The MRI results in the different groups of mountaineers were: extreme altitude climbers: 5 HACE-negative, 2 HACE-uncertain; severe AMS: 10 HACE-negative, 1 HACE-positive; HAPE without HACE: 7 HACE-negative, 1 HACE-positive; HACE: 2 HACE-uncertain, 8 HACE-positive. Clinical and MRI HACE-scores: the most severely clinically affected HACE-subjects showed the highest HACE-MRI-scores. MH were found predominantly in the corpus callosum (splenium>corpus>rostrum). In more severe HACE subjects the cerebral white matter was also affected.

CONCLUSION

MRI showed brain microhemorrhages (MH) in almost all and almost exclusively in HACE-survivors. MH had a characteristic distribution involving predominantly the corpus callosum. The clinically most severely affected HACE survivors were the ones with the most prominent MRI changes. The distribution of MH is a new and sensitive MRI sign of HACE and can be detected years after HACE.

CLINICAL RELEVANCE/APPLICATION

Microhemorrhages in brains of HACE-survivors show a characteristic distribution different from other diseases (e.g. vasculitis, amyloid angiopathy)

QUESTIONS ABOUT THIS EVENT EMAIL:

michael.knauth@med.uni-goettingen.de

Scientific Formal (Paper) Presentations

CODE: SSM12-02

SESSION: [SSM12](#)

Determinants of Bone Mechanical Properties in Obese Men

Date/Times

- **DATE:** Wednesday
- **TIME:** 03:10-03:20 PM
- **LOCATION:** E450A

PARTICIPANTS

- Miriam Bredella MD - Nothing to disclose.
- Eleanor Lin - Nothing to disclose.
- Anu Gerweck - Nothing to disclose.
- Bijoy Thomas MD - Nothing to disclose.
- Martin Torriani MD - Nothing to disclose.
- Mary Bouxsein PhD - Nothing to disclose.
- Karen Miller MD - Nothing to disclose.

SUBSPECIALTY CONTENT

- Musculoskeletal Radiology

PURPOSE

Recent studies have suggested that obesity may exert damaging effects on the skeleton. The purpose of our study was to investigate determinants of bone mechanical properties by micro-finite element analysis (FEA) of HR-pQCT scans of the distal radius in obese men.

METHOD AND MATERIALS

We studied 35 obese men with a mean age of 33.8±6.4 years and a mean BMI of 36.5±5.8 kg/m², who underwent 3D HR-pQCT with an isotropic voxel size of 82 µm (Xtreme CT, Scanco Medical, Basserdorf, Switzerland) of the distal radius. FE models were generated from the segmented HR-pQCT images and estimated failure load (N) and stiffness (kN/mm) were determined. QCT of the abdomen and thigh was performed to quantify abdominal subcutaneous (SAT), visceral (VAT) and total abdominal (TAT) adipose tissue, thigh muscle and thigh SAT (cm²). Linear regression analysis was performed to determine predictors of bone mechanical properties. Subjects were divided into high VAT and low VAT groups based on the VAT median.

RESULTS

Men with high VAT had lower failure load and stiffness compared to men with low VAT ($p < 0.05$), despite comparable BMIs. VAT and TAT were inversely associated with estimated failure load ($r = -0.42$, $p = 0.01$ and $r = -0.39$, $p = 0.03$, respectively) and stiffness ($r = -0.45$, $p = 0.008$ and $r = -0.42$, $p = 0.02$, respectively). Thigh muscle area correlated positively with failure load and stiffness ($r = 0.39$, $p = 0.02$ and $r = 0.34$, $p = 0.05$, respectively). There was no association between age, BMI, abdominal or thigh SAT and mechanical properties.

CONCLUSION

Our study shows that VAT and TAT are negative, and muscle mass positive, predictors of bone mechanical properties in obese men. Our results support the notion that visceral fat exerts detrimental effects on bone strength.

CLINICAL RELEVANCE/APPLICATION

Men with visceral obesity have impaired bone mechanical properties. Muscle mass is a positive predictor of bone strength in obese men.

QUESTIONS ABOUT THIS EVENT EMAIL:

mbredella@partners.org

Scientific Formal (Paper) Presentations

CODE: SSK06-09

SESSION: [SSK06](#)

Radiologists' Role: The Patient's Perspective

Date/Times

- **DATE:** Wednesday
- **TIME:** 11:50-12:00 PM
- **LOCATION:** S102D

PARTICIPANTS

- Peter Miller MD - Nothing to disclose.
- Justin Lightburn MD - Nothing to disclose.
- Richard Gunderman MD, PhD - Nothing to disclose.
- David Miller BS, MS - Nothing to disclose.

SUBSPECIALTY CONTENT

- Health Policy

PURPOSE

The invisibility of radiologists to patients has received increased attention. How well do patients understand what radiologists do? We need to better understand what patients know about radiologists and what they want to know in order to improve service and patient care.

METHOD AND MATERIALS

After expedited IRB review, we conducted surveys of patients undergoing outpatient CT scans at a university hospital. During a four-month period, all consentable adult patients were asked if they would be willing to meet with a radiologist and complete two brief surveys concerning radiologists and their role in healthcare.

RESULTS

A total of 307 patients were surveyed. 49.8% were high school educated and 48.6% had at least a college education or higher. 8.8% of respondents reported that they had no idea what radiologists do, 55.4% reported little understanding, and 35.8% have much understanding. However, only 53.5% of respondents believed radiologists are physicians. Concerning the importance of who interprets their imaging study, 3.7% replied that it is not important, 13.4% replied some importance, 30.1% replied it is important, and 52.8% replied it is very important. Regarding their interest in receiving a copy of their radiology report, 2.7% were not interested, 4.3% little interested, 5.8% somewhat interested, 21.4% interested, and 61.9% very interested. 62.7% would like to have access to a website with their radiologists' biographies and pictures.

CONCLUSION

Many patients know little about the role of radiologists in their healthcare and would like to know more. The majority of patients think that it is important to know who is reading their study, would like a copy of their radiology report, and would like to know more about their radiologists. These findings present an important educational opportunity for radiology practices.

CLINICAL RELEVANCE/APPLICATION

Understanding patients is a vital component of providing the best service in a radiology practice.

QUESTIONS ABOUT THIS EVENT EMAIL:

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