

sure is 11% to 49% of the operator, greatest in Left Lateral oblique projection. The assistant's radiation exposure is 23% to 46% of the operator's.

**Conclusions:** Deliberate variations in technique result in significant reductions in your radiation exposure.

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#### PS186.

##### The Effect of Risk and Race on Amputations among Medicare Diabetics: An Opportunity to Focus National Quality Improvement Initiatives

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**Objectives:** The impact of national quality initiatives aiming at limiting lower extremity amputations (AMPS) in diabetics remains uncertain. Therefore, we explored trends in AMPS among Medicare diabetics with a focus on those at highest risk.

**Methods:** The Diabetes Analytic File, an enhanced sample of all diabetics from the Medicare 5% sample, was used to study the national incidence of AMPS in diabetics. Within a cohort of ~5 million diabetics between 1999-2006, we compared the incidence of AMPS in high-risk (ESRD or > 3 comorbidities) and low-risk groups, and by race.

**Results:** A total of 23,976 AMPS were performed between 1999 and 2006; 11,558 in high risk and 12,418 in low risk patients. The rate of AMPS declined over time (4.8 per 1000 in 1999, 4.4 in 2006,  $p < 0.001$ ). Over time, high-risk patients represented a growing proportion of all AMPS (33% in 1999, 50% in 2006;  $p < 0.001$ ) despite representing a minority of all diabetics (4% in 1999 to 10% in 2006,  $p < 0.001$ ). The incidence of AMPS was 10 fold higher in the high-risk group (29.6 per 1000) versus

low-risk patients (2.7 per 1000,  $p < 0.001$ ), and African Americans had higher rates of AMPS, in both high and low-risk groups (Figure 1).

**Conclusions:** Although high-risk patients represent a minority of Medicare diabetics, they account for 50% of all AMPS, and this effect is magnified in African Americans. Future QI efforts should focus on high-risk patients and African Americans.

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#### PS188.

##### Prediction of Outcome of Treatment of Osteomyelitis in Diabetic Foot after Minor Amputation: The Role of MR Imaging

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**Objectives:** The aim of this study was to evaluate the role of magnetic resonance imaging (MRI) in the pre-operative mapping of the extension of osteomyelitis in the diabetic foot before minor (toe) amputation and to test the hypothesis that amputation through a osteomyelitis free level results in an improved wound healing.

**Methods:** A total of 22 minor amputations in 21 diabetic patients with persistent osteomyelitis despite conservative therapy (antibiotics), were evaluated prospectively after minor amputation. Patients with peripheral arterial disease were excluded. All patients underwent MR imaging of the foot prior to amputation. During amputation, a bone biopsy underneath the ulcer was performed and at the level of amputation (caput metatarsal) for histopathological diagnosis. Agreement between MRI and histopathological diagnosis of osteomyelitis was assessed. Furthermore, wound healing after amputation was analyzed. Wound healing within three months after amputation was regarded as successful.

**Results:** Diagnostic performance of MRI for the confirmation of osteomyelitis of bone underneath an ulcer and at the level of amputation showed a 100% sensitivity (17/17 and 7/7 respectively) and 80% specificity (4/5 (1 false positive case) and 12/15 (3 false positive cases) respectively) for both locations. Positive predictive value was 94% and 70% respectively. There was no difference in wound healing tendency in case histology and MRI was positive or negative for osteomyelitis at the level of amputation.

**Conclusions:** MR imaging is reliable in diagnosing the extension of osteomyelitis in the diabetic foot. Wound healing seems not to be dependant on the presence of osteomyelitis at amputation level.

