Enhancement of US-CT registration accuracy for spinal surgery

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- **Motivation**: Enhancing bone boundary of the vertebra in US images could improve the registration accuracy of US-CT data

- **Methods:**
  - Created locally-weighted SLSC (LW-SLSC)
  - LW-SLSC uses minimization of total variance regularized over a moving kernel
  - Quantified CT / US similarity with gradient correlation metric

- **Results:** Similar performance registration between DAS, SLSC and LW-SLSC. SLSC and LW-SLSC features better contrast at bone edges.

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