



## **International Diagnostic Technologies**

**PATIENT'S NAME:** *Sample Image 2*

**AGE:** 43

**REFERRED BY:** *Dr. Good Guy*

**ANALYSIS:** 06/03/04

**DATE OF VIDEO:** 06/02/04

**REPORT:** 06/04/04

### **RADIOGRAPHIC BIOMECHANICAL REPORT**

This report is based upon biomechanical analysis and protocols that have been established for roentgenological digitization of the spine. This evaluation will not include a pathological report. Dynamic Motion Radiographic studies were used, which were of acceptable quality and in compliance with normal protocols for x-ray digitization. This report is based on the digitization printout.

**AP Left/Right Bending and Lateral Cervical Spine:** There are abnormal lateral baselines. Atlas lateral shift is 1.5mm during left lateral bending. Atlas lateral shift is 1.5mm during right lateral bending. Cervical Lordosis is diminished due to an increased fixed anterior/superior Occiput and an altered Atlas/Axis angle. Normal range of Atlas/Skull movement is 7 degrees in flexion and 7 degrees in extension. (See Atlas/Skull Angle, Extension View). Center of Gravity is altered by 16.3mm to the posterior. Interruptions of George's Line at C2/C3, C3/C4, C4/C5 and C6/C7 are indicative of Ligamentous laxity. Jackson's angle demonstrates hypolordosis and there appears to be abnormal stress lines at C4/C5. There is abnormal lateral anterior Vertebral Offset at C3.

**Cervical Motion Study:** There are abnormal lateral baselines. There appears to be abnormal stress lines in the flexion at C1, C2 and C4 also in the extension at C2 and C5. The angular motion segment integrity appears to be compromised at C3.

#### **IMPRESSIONS:**

1. Abnormal straightening of the cervical spine.
2. Cervical (C7-C1) motion study indicates angular motion segment integrity change at C3. The impairment of the cervical region is due to loss of motion segment integrity and is ratable at 25% for cervicothoracic spine (AMA Guides, Fifth Edition). This patient's digital analysis reveals such loss of motion integrity at C3=20.4 degrees inferior, yielding an impairment estimate based on plain film forensics at 25% whole body.
3. Ligamentous laxity is suggested in the cervical spine.
4. Atlas lateral shift is 1.6mm during left lateral bending.
5. Atlas lateral shift is 1.5mm during right lateral bending.
6. Center of Gravity is altered by 16.3mm to the posterior.
7. George's Line is interrupted at C2/C3, C3/C4, C4/C5 and C6/C7 indicative of ligamentous laxity.
8. Lateral Anterior Vertebral Offset (Spondylolisthesis, Grade I) at C3, which is a ratable impairment at 6% whole body. Anterior Offsets are considered to be extremely unstable motor units.



## **International Diagnostic Technologies**

**PATIENT'S NAME:** *Kristin Sample*

**AGE:** 22

**REFERRED BY:** *Dr. Good Guy*

**ANALYSIS:** 07/01/04

**DATE OF FILMS:** 06/28/04

**REPORT:** 07/02/04

### ***RADIOGRAPHIC BIOMECHANICAL REPORT***

This report is based upon biomechanical analysis and protocols that have been established for roentgenological digitization of the spine. This evaluation will not include a pathological report. Radiographs used were of acceptable quality and in compliance with normal protocols for x-ray digitization. This report is based on the digitization printout.

***AP and Lateral Thoracic Spine:*** There are abnormal AP and Lateral baselines. Cobb's Angle is measured at T6/T4=8.2 degrees (RT.). AP Thoracic Stress lines indicate 2.3 degrees of displacement. Abnormal vertebral body rotation is seen in the upper, mid and lower thoracic spine. There are interruptions of George's Line at T3/T4, T5/T6, T5/T7, T9/T10, T10/T11 and T11/T12, indicative of ligamentous laxity. There is abnormal lateral Vertebral Offset at T9 and T10.

### ***IMPRESSIONS:***

1. Ligamentous laxity is suggested in the thoracic spine.
2. Cobb's Angle is measured at T6/T4=8.2 degrees (RT.).
3. AP Thoracic Stress lines indicate 2.3 degrees of displacement.
4. George's Line is interrupted at T3/T4, T5/T6, T6/T7, T9/T10, T10/T11 and T11/T12 indicative of ligamentous laxity.
5. Lateral Vertebral Offset at T10.
6. Lateral Anterior Vertebral Offset (Spondylolisthesis, Grade I) at T9, which is a ratable impairment at 3% whole body. Anterior Offsets are considered to be extremely unstable motor units.



## **International Diagnostic Technologies**

**PATIENT'S NAME:** Bruce Sample

**AGE:** 45

**REFERRED BY:** Dr. Good Guy

**ANALYSIS:** 07/01/04

**DATE OF FILMS:** 06/30/04

**REPORT:** 07/02/04

### **RADIOGRAPHIC BIOMECHANICAL REPORT**

This report is based upon biomechanical analysis and protocols that have been established for roentgenological digitization of the spine. This evaluation will not include a pathological report. Radiographs used were of acceptable quality and in compliance with normal protocols for x-ray digitization. This report is based on the digitization printout.

**AP and Lateral Lumbar Spine:** There are abnormal AP and lateral baselines. Anisomelia 5.6mm (RT). Pelvic Rotation 4.9mm (LT). Cobb's angle is measured at L4/L3=2.9 degrees (RT). The AP sacral angle is altered 0.2 degrees (LT). AP Lumbar Stress lines indicate 1.2 degrees of displacement. Abnormal vertebral body rotation is seen in the entire lumbar spine. Scoliosis is indicated in the lumbar spine. Ferguson's angle appears to be increased. There are interruptions of George's Line at L1/L2, L2/L3, L3/L4, L4/L5 and L5/S1 indicative of ligamentous laxity. There is an abnormal line of weight bearing of 6.2mm posterior. Retrolisthesis at L2. Spondylolisthesis shows a Grade I at L5. There is an abnormal lateral Vertebral Offset at L1, L2, L3 and L5.

**Lumbar Motion Study:** There are abnormal lateral baselines. There appears to be abnormal stress lines in the flexion at L1, L2, L3 and L4 also in the extension at L1, L2, L4 and L5. The angular and translation motion segment integrity appears to be compromised at L2 and L3 respectively.

### **IMPRESSIONS:**

1. Lumbar (SR-L1) motion study indicates translation and angular motion segment integrity change at L2 and L3 respectively. The impairment of the lumbar region is due to loss of motion segment integrity and is ratable at 20% for the lumbosacral spine (AMA Guides, Fifth Edition). This patient's digital analysis reveals such loss of motion integrity at L2=4.8mm posterior and L3=11.5 degrees inferior, yielding an impairment estimate based on plain film forensics at 20% whole body.
2. Ligamentous laxity is suggested in the lumbar spine.
3. Anisomelia 5.6mm (RT).
4. Pelvic Rotation 4.9mm (LT).
5. Cobb's angle is measured at L4/L3=2.9 degrees (RT).
6. The AP sacral angle is altered 0.2 degrees (LT).
7. AP Lumbar Stress lines indicate 1.2 degrees of displacement.
8. George's Line is interrupted at L1/L2, L2/L3, L3/L4, L4/L5 and L5/S1 indicative of ligamentous laxity.
9. Increased lateral sacral angle with abnormal weight bearing of 6.2mm posterior
10. Lateral Vertebral Offset at L1, L3 and L2=4.72mm posterior, which is a ratable impairment at 5% whole body.
11. Retrolisthesis at L2.
12. Spondylolisthesis shows a Grade I at L5, which is a ratable impairment at 7% whole body.