

TABLE E-1
Postoperative Clinical Results at 3.2 and 7.6 Years

| Case | Postoperative Constant Score (%) [*] | | Postoperative Subjective Shoulder Value (%) ^{**} | | Postoperative Patient Satisfaction | |
|------|---|---------|---|---------|------------------------------------|----------------|
| | 3.2 yrs | 7.6 yrs | 3.2 yrs | 7.6 yrs | 3.2 yrs | 7.6 yrs |
| 1 | 100 | 100 | 100 | 100 | very satisfied | very satisfied |
| 2 | 100 | 94 | 90 | 95 | very satisfied | very satisfied |
| 3 | 79 | 87 | 50 | 40 | satisfied | very satisfied |
| 4 | 80 | 82 | 60 | 60 | very satisfied | very satisfied |
| 5 | 100 | 100 | 100 | 90 | very satisfied | very satisfied |
| 6 | 100 | 100 | 90 | 90 | satisfied | very satisfied |
| 7 | 100 | 100 | 100 | 95 | very satisfied | very satisfied |
| 8 | 74 | 100 | 80 | 75 | disappointed | satisfied |
| 9 | 94 | 92 | 100 | 100 | very satisfied | very satisfied |
| 10 | 88 | 86 | 90 | 80 | very satisfied | very satisfied |
| 11 | 54 | 57 | 50 | 50 | satisfied | satisfied |
| 12 | 61 | 87 | 50 | 80 | satisfied | satisfied |
| 13 | 88 | 100 | 80 | 70 | very satisfied | very satisfied |
| 14 | 96 | 94 | 80 | 80 | very satisfied | very satisfied |
| 15 | 100 | 100 | 90 | 85 | satisfied | satisfied |
| 16 | 100 | 100 | 70 | 70 | very satisfied | very satisfied |
| 17 | 49 | 40 | 50 | 45 | not satisfied | not satisfied |
| 18 | 73 | 81 | 50 | 30 | satisfied | satisfied |
| 19 | 78 | 84 | 70 | 90 | very satisfied | very satisfied |
| 20 | 54 | 82 | 50 | 60 | disappointed | satisfied |

* Relative Constant score is the percent of an age and gender-related normal value^{12,13}

** Patient's estimation of the operatively treated shoulder as a percentage of the value of an entirely normal shoulder

TABLE E2
Comparison of Structural Parameters as Seen on Magnetic Resonance Imaging Preoperatively and at 3.2 and 7.6 Years Postoperatively

| Case | Size of Tear (mm ²) | | | | | | Fatty Degeneration | | | | | |
|-------------|------------------------------------|--------------------|--------------------|------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------|--------------------|--------------------|
| | Torn Tendons | | | | | | Supraspinatus* | | | Infraspinatus* | | |
| | Preop. | Postop. 3.2 yrs | Postop. 7.6 yrs | Preop. | Postop. 3.2 yrs | Postop. 7.6 yrs | Preop. | Postop. 3.2 yrs | Postop. 7.6 yrs | Preop. | Postop. 3.2 yrs | Postop. 7.6 yrs |
| 1 | SSP | SSP | no | 236 | 25 | 0 | 1 | 1 | 1 | 0 | 1 | 1 |
| 2 | SSP | SSP | SSP | 603 | 38 | 20 | 1 | 1 | 0 | 1 | 1 | 1 |
| 3 | SSP | SSP | SSP | 393 | 38 | 20 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | SSP [#] | SSP | no | 550 [#] | 80 | 0 | 2 [#] | 2 | 3 | 2 | 2 | 3 |
| 5 | SSP | SSP | no | 589 | 94 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6 | SSP | SSP | no | 294 | 251 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 7 | SSP | SSP | no | 1374 | 353 | 0 | 2 | 4 | 4 | 1 | 1 | 2 |
| 8 | SSP | SSP | SSP | 314 | 785 | 628 | 1 | 3 | 3 | 1 | 2 | 2 |
| 9 | SSP, SSC | SSP, ISP | no | 1413 | 50 | 0 | 1 | 1 | 1 | 1 | 2 | 2 |
| 10 | SSP, SSC | SSP, SSC | SSP, SSC | 2159 | 565 | 942 | 4 | 4 | 4 | 1 | 2 | 2 |
| 11 | SSP, SSC | SSP | SSP, ISP | 2159 | 589 | 294 | 2 | 2 | 2 | 1 | 2 | 3 |
| 12 | SSP, SSC | SSP, ISP | SSP, ISP | 471 | 1295 | 2002 | 1 | 2 | 4 | 2 | 2 | 4 |
| 13 | SSP, SSC | SSP, SSC | SSP, SSC | 2355 | 1963 | 1963 | 1 | 2 | 2 | 1 | 2 | 2 |
| 14 | SSP, ISP | SSP | no | 2159 | 392 | 0 | 3 | 4 | 4 | 2 | 3 | 4 |
| 15 | SSP, ISP | SSP, ISP | SSP, ISP | 687 | 471 | 471 | 1 | 2 | 3 | 2 | 3 | 4 |
| 16 | SSP, ISP | SSP | SSP | 1766 | 1099 | 314 | 1 | 4 | 4 | 2 | 2 | 3 |
| 17 | SSP, ISP | SSP, ISP | SSP, ISP | 1570 | 2159 | 1766 | 2 | 4 | 4 | 1 | 4 | 4 |
| 18 | SSP, ISP | SSP, ISP | SSP, ISP | 707 | 2355 | 1963 | 1 | 2 | 2 | 1 | 4 | 4 |
| 19 | SSP, ISP, SSC | SSP, ISP | SSP, ISP | 1178 | 942 | 2159 | 2 | 3 | 4 | 2 | 4 | 4 |
| 20 | SSP, ISP, SSC | SSP | no | 2159 | 1256 | 0 | 2 | 2 | 3 | 2 | 3 | 3 |
| Mean | | | | 1157 | 740 | 627 | 1.5 | 2.3 | 2.5 | 1.3 | 2.1 | 2.5 |
| P | | | | 0.045 | 0.066 | | 0.002 | 0.156 | | 0.0005 | 0.015 | |
| | | | | | | 0.031 | | 0.001 | | | 0.0003 | |

* Stages according to Goutallier et al.³

Preoperative CT scan

TABLE E3
Comparison of Fatty Muscle Infiltration as Seen on Magnetic Resonance Imaging:
Healed versus Persistent Reruptures at 7.6 Year Follow-up

| | Muscle | Fatty Infiltration* Healed Reruptures (n=8) | <i>P</i> + | Fatty Infiltration* Persistent Reruptures* (n=12) |
|--------------|---------------|---|------------|---|
| Preoperative | Supraspinatus | 1.6 | 0.4792 | 1.4 |
| <i>P</i> ++ | | 0.5 | | 0.0078 |
| 3.2 years | Supraspinatus | 2 | 0.3716 | 2.4 |
| <i>P</i> ++ | | 0.5 | | 0.375 |
| 7.6 years | Supraspinatus | 2.2 | 0.5097 | 2.7 |
| <i>P</i> ++ | | 0.125 | | 0.0117 |
| Preoperative | Supraspinatus | 1.6 | 0.4792 | 1.4 |
| Preoperative | Infraspinatus | 1.2 | 1 | 1.2 |
| <i>P</i> ++ | | 0.1250 | | 0.008 |
| 3.2 years | Infraspinatus | 1.8 | 0.2599 | 2.3 |
| <i>P</i> ++ | | 0.25 | | 0.125 |
| 7.6 years | Infraspinatus | 2.1 | 0.2606 | 2.8 |
| <i>P</i> ++ | | 0.0031 | | 0.002 |
| Preoperative | Infraspinatus | 1.2 | 1 | 1.2 |
| Preoperative | Subscapularis | 0.6 | 0.5066 | 1 |
| <i>P</i> ++ | | 0.1563 | | 0.3125 |
| 3.2 years | Subscapularis | 1.1 | 0.8444 | 1.3 |
| <i>P</i> ++ | | 0.5 | | 0.1875 |
| 7.6 years | Subscapularis | 1.4 | 0.7260 | 1.7 |
| <i>P</i> ++ | | 0.0625 | | 0.0547 |
| Preoperative | Subscapularis | 0.6 | 0.5066 | 1 |

* Stages according to Goutallier et al.³

+ Mann-Whitney test

++ Wilcoxon test

Table E4
Correlations Between Selected Preoperative and Postoperative Functional and Imaging Parameters

| Component 1 | Component 2 | Spearman Rank Correlation (r) |
|--|--|-------------------------------|
| Rx Acromiohumeral Distance (7.6 years) | MRI Preoperative Tear Size | -0.53 |
| Rx Acromiohumeral Distance (7.6 years) | MRI Rerupture Size (7.6 years) | -0.58 |
| Rx Acromiohumeral Distance (7.6 years) | MRI Fatty Infiltration SSP (7.6 years) | -0.51 |
| Rx Acromiohumeral Distance (7.6 years) | MRI Fatty Infiltration ISP (7.6 years) | -0.65 |
| Rx Acromiohumeral Distance (7.6 years) | MRI Fatty Infiltration SSC (7.6 years) | 0.15 |
| Rx Glenohumeral Osteoarthritis (7.6 years) | MRI Preoperative Tear Size | 0.58 |
| Abduction Strength (7.6 years) | MRI Fatty Infiltration SSP (7.6 years) | -0.52 |
| Abduction Strength (7.6 years) | MRI Fatty Infiltration ISP (7.6 years) | -0.53 |
| Abduction Strength (7.6 years) | MRI Fatty Infiltration SSC (7.6 years) | 0.05 |

Rx Radiographs

MRI Magnetic Resonance Imaging

SSP Supraspinatus

ISP Infraspinatus

SSC Subscapularis