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TABLE E-1 Outcomes Following Microfracture for Isolated Articular Cartilage Lesions

|                                |          |             | Average<br>Duration of | Average Size |   |
|--------------------------------|----------|-------------|------------------------|--------------|---|
|                                | No. of   | Average Age | Follow-up              | of Lesion    |   |
| Study                          | Patients | (yr)        | (yr)                   | $(cm^2)$     | Outcome*  |
| Steadman et al. <sup>20</sup>  | 71       | 30.4        | 11.3                   | 2.774        | Lysholm score <sup>27,28</sup> : 59→89;         |
| (2003)                         |          |             |                        |              | Tegner score $^{27,28}$ : $3 \rightarrow 6$     |
| Steadman et al. <sup>15</sup>  | 25       | 28.2        | 4.5                    | Not recorded | Lysholm score <sup>27,28</sup> : 68→90;         |
| (2003)                         |          |             |                        |              | 76% returned to NFL in 1 yr                     |
| Knutsen et al. <sup>23</sup>   | 40       | 32.2        | 2                      | 4.80         | Lysholm score $^{27,28}$ : 53 $\rightarrow$ 76; |
| (2004)                         |          |             |                        |              | SF-36 physical score: 36→46                     |
| Mithoefer et al. <sup>22</sup> | 48       | 41.7        | 3.6                    | 4.82         | Good to excellent: 67%                          |
| (2005)                         |          |             |                        |              |   |
| Gudas et al. <sup>24</sup>     | 29       | 24.3        | 3.1                    | 2.80         | Good to excellent: 52%                          |
| (2005)                         |          |             |                        |              |   |
| Gobbi et al. <sup>25</sup>     | 53       | 38          | 6                      | 4.00         | Lysholm score $^{27,28}$ : 56 $\rightarrow$ 87; |
| (2005)                         |          |             |                        |              | Tegner score $^{27,28}$ : 3.2 $\rightarrow$ 5;  |
|                                |          |             |                        |              | IKDC score <sup>26</sup> : 70% nearly           |
|                                |          |             |                        |              | normal  |

<sup>\*</sup>The values before and after the arrows indicate the preoperative and follow-up scores (in points), respectively.

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TABLE E-2 Outcomes Following Osteochondral Autograft Transplantation for Isolated Articular Cartilage Lesions

|                                 | 1        |             |             |                  |  |
|---------------------------------|----------|-------------|-------------|------------------|--|
|                                 |          |             | Average     |                  |  |
|                                 |          |             | Duration of |                  |  |
|                                 | No. of   | Average Age | Follow-up   | Average Size of  |  |
| Study                           | Patients | (yr)        | (yr)        | Lesion $(cm^2)$  | Outcome*   |
| Hangody and                     | 831      | Unknown     | 10          | Unknown          | Good to excellent: 92% of                          |
| Füles <sup>58</sup> (2003)      |          |             |             |                  | femoral lesions, 87% of                            |
|                                 |          |             |             |                  | tibial lesions, 79% of                             |
|                                 |          |             |             |                  | patellofemoral lesions                             |
| Marcacci et al. 125             | 30       | 29.3        | 7           | <2.5             | Good to excellent: 77%;                            |
| (2007)                          |          |             |             |                  | IKDC score <sup>26</sup> : $35 \rightarrow 72$     |
| Oztürk et al. <sup>59</sup>     | 19       | 33.1        | 2.7         | 1-2.5            | Good to excellent: 85%;                            |
| (2006)                          |          |             |             |                  | Lysholm score <sup>27,28</sup> : 46→88             |
| Chow et al. 126                 | 30       | 44.6        | 3.7         | 1-2.5            | Good to excellent: 83%;                            |
| (2004)                          |          |             |             |                  | Lysholm score <sup>27,28</sup> : 44→88             |
| Miniaci and                     | 20       | 14.3        | 3.4         | Unknown          | Clinically normal by 18 mo;                        |
| Tytherleigh-                    |          |             |             | (osteochondritis | healing of osteochondritis                         |
| Strong <sup>61</sup> (2007)     |          |             |             | dissecans)       | dissecans lesions by 6 mo                          |
| Nho et al. <sup>62</sup> (2008) | 22       | 30          | 2.1         | 1.7              | IKDC score <sup>26</sup> : $47 \rightarrow 74$ for |
|                                 |          |             |             |                  | isolated patellar lesions; 71%                     |
|                                 |          |             |             |                  | with complete incorporation                        |
|                                 |          |             |             |                  | on magnetic resonance                              |
|                                 |          |             |             |                  | imaging  |

<sup>\*</sup>The values before and after the arrows indicate the preoperative and follow-up scores (in points), respectively.

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TABLE E-3 Outcomes Following Osteochondral Allograft Transplantation for Isolated Articular Cartilage Lesions

|  |                 |                  | Average<br>Duration of |   | Solution Third and Curtilage Lesio   |
|--|-----------------|------------------|------------------------|---|--|
| Study                                      | No. of Patients | Average Age (yr) | Follow-up (yr)         | Average Size of Lesion (cm <sup>2</sup> ) | Outcome*   |
| Chu et al. <sup>80</sup> (1999)            | 55              | 82% <45          | 6.3                    | Unknown                                   | Good to excellent according to Merle d'Aubigné and Postel scale <sup>81</sup> : 76%; good to excellent for bipolar lesions: 50%                  |
| Ghazavi et al. <sup>82</sup> (1997)        | 126             | 35               | 7.5                    | Unknown                                   | Good to excellent: 85%; poor results with lower-extremity malalignment: 9/29   |
| Bugbee and<br>Convery <sup>83</sup> (1999) | 97              | Unknown          | 4.2                    | 8   | Good to excellent for<br>unipolar lesions: 86%; good<br>to excellent for bipolar: 54%  |
| Görtz and<br>Bugbee <sup>87</sup> (2007)   | 43              | 35               | 4.5                    | Unknown                                   | Good to excellent: 88%   |
| Davidson et al. <sup>84</sup> (2007)       | 67              | 32.6             | 3.3                    | 4.6                                       | IKDC score <sup>26</sup> : $27 \rightarrow 79$ ; SF-<br>36 score: $38 \rightarrow 51$ ; Tegner<br>score <sup>27,28</sup> : $4.3 \rightarrow 5.3$ |
| Emmerson et al. 86 (2007)                  | 66              | 28.6             | 7.7                    | 7.5 (osteochondritis dissecans)           | Good to excellent: 72%   |
| Garrett <sup>127</sup> (1994)              | 17              | 16-46            | 2-9                    | 3-8                                       | Symptomatic relief: 16/17  |
| Jamali et al. <sup>88</sup> (2005)         | 20              | 42               | 7.8                    | Unknown                                   | Good to excellent for patellofemoral lesions: 60%  |
| McCulloch et al. <sup>90</sup> (2007)      | 25              | 35               | 2                      | 5.24                                      | Satisfied with outcome: 84%  |
| LaPrade et al. <sup>91</sup> (2009)        | 23              | 30.9             | 3                      | 4.8                                       | IKDC score <sup>26</sup> : 52→69; good incorporation: 22/23  |

<sup>\*</sup>The values before and after the arrows indicate the preoperative and follow-up scores (in points), respectively.

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TABLE E-4 Outcomes Following Autologous Chondrocyte Implantation for Isolated Articular Cartilage Lesions

|                                |          |          | I .         |              | The state of the s |
|--------------------------------|----------|----------|-------------|--------------|--|
|                                |          |          | Average     |              |  |
|                                |          |          | Duration of | Average Size |  |
|                                | No. of   | Average  | Follow-up   | of Lesion    |  |
| Study                          | Patients | Age (yr) | (yr)        | $(cm^2)$     | Outcome*   |
| Brittberg et al. <sup>93</sup> | 23       | 27       | 3.7         | 1.6-6.5      | Good to excellent: 14/16   |
| (1994)                         |          |          |             |              |  |
| Peterson et al. 101            | 25       | 32.2     | 4.2         | 4.2          | Good to excellent for femoral  |
| (2000)                         |          |          |             |              | condyles: 92%  |
| Peterson et al. <sup>128</sup> | 18       | 40.8     | 7.4         | 1.3-12       | Tegner score $^{27,28}$ : 6 $\rightarrow$ 9.8; good to   |
| (2002)                         |          |          |             |              | excellent: 17/18   |
| Bentley et al. <sup>99</sup>   | 50       | 31       | 1.5         | 4.7          | Good to excellent: 88%   |
| (2003)                         |          |          |             |              |  |
| Zaslav et al. <sup>96</sup>    | 126      | 34.5     | 3.9         | 4.6          | Treatment success: 76%;  |
| (2009)                         |          |          |             |              | modified Cincinnati score <sup>27,28</sup> :   |
|                                |          |          |             |              | 3.3→6.3  |

<sup>\*</sup>The values before and after the arrows indicate the preoperative and follow-up scores (in points), respectively.