

AppendixTABLE E-1 Distribution by OTA/AO Fracture Classification¹³: Nonsignificant Group Difference

| | Self-Reported Marijuana Use | | | P Value |
|-------------------------------------------|-----------------------------|-------------|----------------------|---------|
| | Never User | Prior User | User During Recovery | |
| No. (%) of patients (n = 500) | 199 (39.8%) | 232 (46.4%) | 69 (13.8%) | |
| Classification (<i>no. of patients</i>) | | | | 0.321 |
| Soft-tissue injury | 5 | 9 | 1 | |
| 11-Proximal humerus | 18 | 11 | 4 | |
| 12-Diaphyseal humerus | 1 | 0 | 0 | |
| 13-Distal humerus | 2 | 2 | 0 | |
| 21-Proximal radioulnar | 3 | 6 | 0 | |
| 22-Diaphyseal radioulnar | 1 | 3 | 2 | |
| 23-Distal radioulnar | 18 | 10 | 3 | |
| 31-Proximal femur | 23 | 17 | 5 | |
| 32-Diaphyseal femur | 23 | 15 | 6 | |
| 33-Distal femur | 4 | 4 | 0 | |
| 41-Proximal tibial | 11 | 27 | 4 | |
| 42-Diaphyseal tibia | 13 | 22 | 10 | |
| 43-Distal tibia | 6 | 10 | 2 | |
| 44-Ankle | 26 | 43 | 11 | |
| 61-Pelvis | 9 | 7 | 5 | |
| 62-Acetabulum | 2 | 2 | 1 | |
| Other upper-extremity fracture | 6 | 8 | 3 | |
| Other lower-extremity fracture | 12 | 11 | 4 | |
| Polytrauma | 16 | 25 | 8 | |

TABLE E-2 Distribution by Injury Mechanism: Nonsignificant Group Difference

| | Self-Reported Marijuana Use | | | P Value |
|------------------------------------------------|-----------------------------|-------------|---------------------|---------|
| | Never User | Prior User | Use During Recovery | |
| No. (%) of patients (n = 500) | 199 (39.8%) | 232 (46.4%) | 69 (13.8%) | |
| Mechanism of injury (<i>no. of patients</i>) | | | | 0.220 |
| Bike fall | 5 | 10 | 3 | |
| Blunt trauma | 3 | 5 | 1 | |
| Crush injury | 0 | 2 | 0 | |
| Fall of ≤15 ft (≤4.6 m) | 119 | 141 | 32 | |
| Fall of >15 ft (>4.6 m) | 5 | 5 | 2 | |
| Gunshot | 0 | 1 | 0 | |
| Motorcycle collision (non-high-energy) | 3 | 6 | 2 | |
| High-energy motorcycle collision | 5 | 12 | 4 | |
| Motor-vehicle collision (non-high-energy) | 2 | 5 | 0 | |
| High-energy motor-vehicle collision | 11 | 11 | 11 | |
| Pedestrian struck | 13 | 7 | 4 | |
| Ski fall | 11 | 4 | 3 | |
| Other sports fall or injury | 5 | 8 | 1 | |
| Twisting injury | 8 | 4 | 3 | |
| Other | 9 | 11 | 3 | |

TABLE E-3 Likelihood of High-Energy Injury Mechanism, N = 500*

| | OR (95% CI) | P Value |
|-----------------------------|-------------------|---------|
| Self-reported marijuana use | | 0.08 |
| Never user | — | |
| Prior user | 0.79 (0.69, 2.59) | |
| User during recovery | 1.62 (0.87, 3.03) | |

*Multivariate logistic regression model. Self-reported marijuana use was not associated with higher-energy injuries.

TABLE E-4 Sensitivity Analysis Including Soft-Tissue Injuries in Regression Analysis of Self-Reported Marijuana Use and Persistent Opioid Use, Total Prescribed Opioids, and Duration of Opioid Use

| | Persistent Use for >90 Days: OR (95% CI)* | Total Prescribed Opioids: Coefficient (95% CI)† (MME) | Duration of Opioid Use: Coefficient (95% CI)‡ (days) |
|-----------------------------------|----------------------------------------------|----------------------------------------------------------|---------------------------------------------------------|
| Self-reported marijuana use | | | |
| Never user | — | — | — |
| Prior user | 1.34 (0.70, 2.54) | 98 (-27, 224) [p = 0.078] | 2.4 (-2.5, 7.3) |
| Use during recovery | 0.7 (0.25, 1.93) | 333 (89, 576) [p = 0.028] | 12.1 (3.3, 20.8) [p = 0.027] |
| Age in years | 0.97 (0.95, 0.99) [p = 0.002] | -6 (-11, -0.9) [p = 0.037] | -0.003 (-0.7, 0.7) |
| Male sex | 0.56 (0.29, 1.07) | 181 (-194, 556) | -0.2 (-10.0, 9.7) |
| Charlson Comorbidity Index | 1.34 (1.09, 1.66) [p = 0.006] | -18 (-79, 43) | 0.6 (-7.3, 8.6) |
| Operative treatment | 1.19 (0.56, 2.50) | 510 (97, 924) [p = 0.034] | 4.2 (-2.3, 10.8) |
| Prior opioid use | 21.4 (9.39, 48.72) [p < 0.001] | 78 (-48, 203) | 3.6 (-24.1, 31.4) |
| Injury location | | | |
| Soft-tissue injury | — | — | — |
| Upper-extremity fracture | 2.48 (0.41, 15.2) | -163 (-803, 476) | -1.4 (-20.3, 17.5) |
| Lower-extremity fracture | 6.04 (1.14, 32.14) [p = 0.035] | 39 (-459, 537) | 3.5 (-10.7, 17.8) |
| Polytrauma | 9.20 (1.54, 54.83) [p = 0.015] | 179 (-328, 687) | 1.3 (-39.9, 42.5) |
| Injury severity (high/low-energy) | 1.98 (1.00, 3.92) [p = 0.050] | 144 (-696, 984) | 4.4 (-5.2, 13.9) |
| Mental health factors | | | |
| Pain catastrophizing score | 1.02 (0.99, 1.05) | -1.6 (-21, 18) | -0.0004 (-0.8, 0.8) |
| PROMIS Anxiety score | 0.96 (0.89, 1.05) | -12 (-57, 34) | 1.7 (-5.3, 8.7) |
| Benzodiazepine use | 1.23 (0.51, 2.93) | 135 (-437, 707) | -1.3 (-13.5, 10.9) |
| Antidepressant use | 1.24 (0.60, 2.57) | -4 (-527, 518) | 1.0 (-21.4, 23.5) |

*Multivariate logistic regression model, n = 462. †Multivariate linear regression model, n = 462. ‡Multivariate linear regression model, n = 329. Does not include persistent users.

TABLE E-5 Sensitivity Analysis Including OTA/AO Fracture Classification in Regression Analysis of Self-Reported Marijuana Use and Persistent Opioid Use, Total Prescribed Opioids, and Duration of Opioid Use

| | Persistent Use for >90 Days: OR (95% CI)* | Total Prescribed Opioids: Coefficient (95% CI)† (MME) | Duration of Opioid Use: Coefficient (95% CI)‡ (days) |
|------------------------------------------|-------------------------------------------|-------------------------------------------------------|------------------------------------------------------|
| Self-reported marijuana use | | | |
| Never used | — | — | — |
| Prior user | 1.45 (0.75, 2.81) | 78 (-125, 282) | 3.8 (-2.9, 10.6) |
| Use during recovery | 0.76 (0.28, 2.12) | 307 (7, 607) [p = 0.045] | 12.8 (2.6, 23.0) [p = 0.014] |
| Controls | | | |
| Demographic controls | Included | Included | Included |
| Injury location by OTA/AO classification | Included | Included | Included |
| Injury severity (high/low energy) | Included | Included | Included |
| Mental health factors | Included | Included | Included |

*Multivariate logistic regression model, n = 462. †Multivariate linear regression model, n = 462. ‡Multivariate linear regression model, n = 329. Does not include persistent users.

TABLE E-6 Sensitivity Analysis Including Detailed Injury Mechanism in Regression Analysis of Self-Reported Marijuana Use and Persistent Opioid Use, Total Prescribed Opioids, and Duration of Opioid Use

| | Persistent Use for >90 Days: OR (95% CI)* | Total Prescribed Opioids: Coefficient (95% CI)† (MME) | Duration of Opioid Use: Coefficient (95% CI)‡ (days) |
|------------------------------------------|-------------------------------------------|-------------------------------------------------------|------------------------------------------------------|
| Self-reported marijuana use | | | |
| Never user | — | — | — |
| Prior user | 1.33 (0.69, 2.59) | 93 (-93, 280) | 3.8 (-2.9, 10.6) |
| Use during recovery | 0.74 (0.26, 2.10) | 322 (15, 629) [p = 0.046] | 13.1 (4.7, 21.4) [p = 0.021] |
| Controls | | | |
| Demographic controls | Included | Included | Included |
| Injury location by OTA/AO classification | Included | Included | Included |
| Injury severity (high/low-energy) | Included | Included | Included |
| Mental health factors | Included | Included | Included |

*Multivariate logistic regression model, n = 462. †Multivariate linear regression model, n = 462. ‡Multivariate linear regression, n = 329. Does not include persistent users.