Supplementary Online Content

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eTable 1. Patient Demographics
eTable 2. Surgical Characteristics
eTable 3. Reasons for Reoperation in the Cases Operated on by Fellows
eTable 4. Univariate and Multivariable Hierarchical Logistic Regression Model of 30-Day Readmission

This supplementary material has been provided by the authors to give readers additional information about their work.
## eTable 1. Patient Demographics

| Variable                        | Fellow     | Assistant Professor | Associate Professor | Professor   | P value |
|---------------------------------|------------|---------------------|---------------------|-------------|---------|
| Number of patients              | 118        | 276                 | 169                 | 157         |         |
| Age                             | 57.55 +/- 12.75 | 59.55 +/- 11.86 | 61.72 +/- 10.33 | 59.86 +/- 10.93 | 0.026   |
| Body mass index                 | 32.32 +/- 6.93 | 31.25 +/- 6.87 | 30.49 +/- 6.34 | 31.99 +/- 6.23 | 0.027   |
| Length of follow up (months)    |            |                     |                     |             | 0.099   |
| Mean +/- SD                     | 40.87 +/- 27.9 | 44.12 +/- 28.06 | 38.83 +/- 26.58 | 40.88 +/- 31.98 |         |
| Median (IQR)                    | 33.19 (18.71, 54.12) | 38.1 (21.4, 58.03) | 31.74 (21.06, 50.58) | 32.3 (14.84, 54.58) |         |
| Gender                          |            |                     |                     |             | 0.039   |
| Female                          | 61 (51.7)  | 158 (57.2)          | 73 (43.2)           | 83 (52.9)   |         |
| Male                            | 57 (48.3)  | 118 (42.8)          | 96 (56.8)           | 74 (47.1)   |         |
| Obesity                         | 72 (61)    | 147 (53.3)          | 79 (46.7)           | 103 (65.6)  | 0.003   |
| Tobacco use                     | 11 (9.3)   | 20 (7.2)            | 11 (6.5)            | 12 (7.6)    | 0.841   |
| Any comorbidity                 | 77 (65.3)  | 174 (63)            | 116 (68.6)          | 102 (65)    | 0.694   |
| Coronary artery disease         | 13 (11)    | 24 (8.7)            | 14 (8.3)            | 11 (7)      | 0.704   |
| Diabetes mellitus               | 21 (17.8)  | 48 (17.4)           | 45 (26.6)           | 34 (21.7)   | 0.103   |
| Hypertension                    | 65 (55.1)  | 148 (53.6)          | 87 (51.5)           | 89 (56.7)   | 0.811   |
| Pulmonary disease               | 14 (11.9)  | 26 (9.4)            | 15 (8.9)            | 12 (7.6)    | 0.689   |
| Renal disease                   | 16 (13.6)  | 25 (9.1)            | 12 (7.1)            | 8 (5.1)     | 0.079   |
| Preoperative abdominal radiotherapy | 30 (25.4) | 73 (26.4) | 36 (21.3) | 47 (29.9) | 0.354 |
|                          | 9 (7.6) | 14 (5.1) | 9 (5.3) | 1 (0.6) | 0.037 |
|--------------------------|---------|----------|---------|---------|-------|
| Postoperative abdominal wall radiotherapy | 68 (57.6) | 184 (66.7) | 106 (62.7) | 96 (61.1) | 0.349 |
| Preoperative chemotherapy | 2 (1.7)  | 9 (3.3)  | 6 (3.6)  | 5 (3.2)  | 0.819 |
| Intraoperative chemotherapy | 38 (32.2) | 57 (20.7) | 33 (19.5) | 37 (23.6) | 0.053 |
| Postoperative chemotherapy | 10 (8.5) | 32 (11.6) | 20 (11.8) | 14 (8.9)  | 0.349 |
| ASA status | unknown | 2 (1.7) | 6 (2.2) | 7 (4.1) | 6 (3.8) |
| 3 | 109 (91.9) | 296 (87.7) | 164 (96.1) | 156 (97.3) | 0.651 |
| 4 | 7 (5.9) | 13 (4.7) | 7 (4.1) | 4 (2.5) | 0.651 |
| 3/4 | 106 (89.8) | 238 (86.2) | 142 (84) | 137 (87.3) | 0.651 |
| Would classification | Clean | 45 (38.1) | 105 (38) | 75 (44.4) | 74 (47.1) |
| Clean-contaminated | 56 (47.5) | 128 (46.4) | 73 (43.2) | 65 (41.4) |
| Contaminated | 13 (11) | 30 (10.9) | 10 (5.9) | 13 (8.3) |
| Infected | 4 (3.4) | 13 (4.7) | 11 (6.5) | 5 (3.2) |

IQR, interquartile range; ASA, American Society of Anesthesiologists
### eTable 2. Surgical Characteristics

| Variable                          | Fellow       | Assistant Professor | Associate Professor | Professor     | P value |
|----------------------------------|--------------|---------------------|---------------------|--------------|---------|
| Defect Width                     | 13.36 +/- 8.23 | 13.12 +/- 8.21      | 14.09 +/- 9.42      | 15.67 +/- 10.18 | 0.234   |
| Defect size                      | 167.04 +/- 166 | 146.24 +/- 137.61   | 180.78 +/- 169.29   | 247.87 +/- 215.95 | <0.001  |
| Mesh size                        | 430.57 +/- 255.35 | 408.93 +/- 194.02   | 387.79 +/- 176.17   | 435.71 +/- 201.67 | 0.324   |
| Rectus muscle violation          | 25 (21.2)    | 71 (25.7)           | 35 (20.7)           | 53 (33.8)    | 0.032   |
| Parastomal hernia                | 5 (4.2)      | 25 (9.1)            | 11 (6.5)            | 27 (17.2)    | 0.001   |
| Prior abdominal surgery          | 112 (94.9)   | 263 (95.3)          | 168 (99.4)          | 151 (96.2)   | 0.105   |
| Prior hernia repair              | 29 (24.6)    | 60 (21.7)           | 45 (26.6)           | 44 (28)      | 0.463   |
| Number of prior abdominal surgeries |             |                     |                     |              | 0.328   |
| 0                                | 6 (5.1)      | 13 (4.7)            | 2 (1.2)             | 6 (3.8)      |         |
| 1                                | 40 (33.9)    | 87 (31.5)           | 50 (29.6)           | 43 (27.4)    |         |
| 2                                | 35 (29.7)    | 97 (35.1)           | 51 (30.2)           | 53 (33.8)    |         |
| 3                                | 37 (31.4)    | 79 (28.6)           | 66 (39.1)           | 55 (35)      |         |
| Number of prior hernia repairs   |             |                     |                     |              | 0.496   |
| 0                                | 90 (76.3)    | 215 (77.9)          | 125 (74)            | 113 (72)     |         |
| 1                                | 21 (17.8)    | 47 (17)             | 36 (21.3)           | 32 (20.4)    |         |
| 2                                | 5 (4.2)      | 8 (2.9)             | 8 (4.7)             | 10 (6.4)     |         |
| 3                                | 2 (1.7)      | 6 (2.2)             | 0 (0)               | 2 (1.3)      |         |
| Indication for repair            |             |                     |                     |              | 0.165   |
| Extirpative defect               | 40 (33.9)    | 84 (30.4)           | 37 (21.9)           | 33 (21)      |         |
| Initial hernia                   | 60 (50.8)    | 160 (58)            | 110 (65.1)          | 100 (63.7)   |         |
| Recurrent hernia                 | 13 (11)      | 23 (8.3)            | 18 (10.7)           | 20 (12.7)    |         |
| Other          | 5 (4.2) | 9 (3.3) | 4 (2.4) | 4 (2.5) |      |
|---------------|---------|---------|---------|---------|------|
| Defect width   |         |         |         |         | 0.209|
| <=15 cm       | 79 (66.9) | 194 (70.3) | 117 (69.2) | 97 (61.8) |      |
| >15 cm        | 39 (33.1) | 82 (29.7) | 52 (30.8) | 60 (38.2) |      |
| Component separation | 61 (51.7) | 185 (67) | 114 (67.5) | 97 (61.8) | 0.019|
| unilateral     | 28 (23.7) | 57 (20.7) | 34 (20.1) | 23 (14.6) |      |
| bilateral      | 33 (28) | 128 (46.4) | 80 (47.3) | 74 (47.1) |      |
| Bridged repair | 11 (9.3) | 32 (11.6) | 14 (8.3) | 23 (14.6) | 0.283|
| Panniculectomy | 23 (19.5) | 82 (29.7) | 95 (56.2) | 61 (38.9) | <0.001|

*43 patients (6%) had missing defect size values, 8 patients had missing mesh size values.*
**eTable 3. Reasons for Reoperation in the Cases Operated on by Fellows**

| Patient | Indication for AWR                                      | Timing of Reoperation | Reoperation due to SSO/SSI? | Reason for reoperation                                      | Senior surgeon scrubbed? |
|---------|--------------------------------------------------------|-----------------------|-----------------------------|-------------------------------------------------------------|--------------------------|
| 1       | Pancreatectomy and Whipple procedure                   | 4 months              | Y                           | Seroma & abscess incision and drainage                      | Y                        |
| 2       | Incarcerated ventral hernia                            | 2 months              | Y                           | Abscess incision and drainage                               | N                        |
| 3       | Small bowel resection and ileostomy                    | 7 months              | Y                           | Ileostomy reversal due to anastomotic leakage               | N                        |
| 4       | Appendiceal adenocarcinoma resection                   | 8 years               | N                           | Tumor recurrence                                            | N/A*                     |
| 5       | salpingo-oophorectomy                                  | 2 weeks               | Y                           | Abscess incision and drainage                               | N                        |
| 6       | Invasive bladder carcinoma                             | 1 month               | Y                           | Wound dehiscence                                            | N                        |
| 7       | Gastroesophageal junction adenocarcinoma               | 1 week                | Y                           | Wound dehiscence                                            | Y                        |
| 8       | Radical nephrectomy                                    | 4 days                | Y                           | Subcutaneous hematoma evacuation                            | N                        |
| 9       | Abdominal wall sarcoma                                 | 2 years               | N                           | Hernia recurrence                                           | N/A*                     |
| 10      | Invasive bladder carcinoma                             | 8 months              | Y                           | Abscess incision and drainage                               | N/A*                     |
| 11      | Metastatic colorectal carcinoma                        | 6 months              | Y                           | Abscess incision and drainage                               | N/A*                     |
| 12      | Radical nephrectomy                                    | 2 months              | Y                           | Abscess incision and drainage                               | N                        |
| 13      | Metastatic colorectal carcinoma                        | 1 month               | Y                           | Abscess incision and drainage                               | Y                        |

AWR, abdominal wall reconstruction. SSO, surgical site occurrences. SSI, surgical site infections. * reoperation occurred outside of fellowship time frame.
**eTable 4. Univariate and Multivariable Hierarchical Logistic Regression Model of 30-Day Readmission**

| Variables                                      | Univariate model | Multivariable model |
|------------------------------------------------|------------------|---------------------|
| **OR (95%CI)** | **p** | **OR (95%CI)** | **p** |
| Academic rank |               |                    |                    |
| Fellow | Ref |                    | Ref | |
| Assistant professor | 0.80 (0.36 - 1.76) | 0.577 | 0.62 (0.26 - 1.46) | 0.273 |
| Associate professor | 1.14 (0.49 - 2.69) | 0.759 | 0.64 (0.22 - 1.85) | 0.413 |
| Senior-level professor | 0.87 (0.33 - 2.28) | 0.775 | 0.41 (0.13 - 1.27) | 0.122 |
| Wound Classification |               |                    |                    |
| Clean |                |                    | 3.02 (1.70 - 5.39) | <0.001 |
| Clean-contaminated/contaminated/infected | 1.00 (0.98 - 1.02) | 0.778 | 2.16 (1.16 - 3.99) | 0.015 |
| Age, y |                |                    | 1.00 (0.98 - 1.02) | 0.778 |
| Sex, male | 0.98 (0.61 - 1.58) | 0.941 | |
| Body mass index | 1.01 (0.97 - 1.05) | 0.611 | |
| Obesity | 0.87 (0.54 - 1.40) | 0.558 | |
| Tobacco use | 0.29 (0.07 - 1.22) | 0.091 | |
| Any comorbidity | 1.24 (0.74 - 2.08) | 0.407 | |
| Coronary artery disease | 1.74 (0.83 - 3.65) | 0.143 | |
| Diabetes mellitus | 1.30 (0.74 - 2.29) | 0.353 | |
| Pulmonary disease | 1.56 (0.75 - 3.24) | 0.237 | |
| Renal disease | 0.87 (0.36 - 2.13) | 0.768 | |
| Preoperative radiotherapy | 1.13 (0.66 - 1.93) | 0.653 | |
| Preoperative chemotherapy | 1.25 (0.75 - 2.09) | 0.388 | |
| ASA status |               |                    |                    |
| 2 | Ref | 2.33 (0.82 - 6.62) | 0.112 | |
| 3, 4 |               |                    | 3.65 (0.47 - 28.1) | 0.213 | |
| Rectus muscle violation | 2.10 (1.28 - 3.45) | 0.004 | 1.57 (0.92 - 2.68) | 0.097 | |
| Parastomal hernia | 1.74 (0.85 - 3.54) | 0.129 | |
| Prior abdominal surgery (yes vs. no) | 3.65 (0.47 - 28.1) | 0.213 | |
| Prior hernia repair (yes vs. no) | 0.77 (0.43 - 1.38) | 0.379 | |
| Indication for AWR (primary hernia vs. extirpative defect) | 0.85 (0.50 - 1.44) | 0.550 | |
| Defect width, by 5 cm | 0.82 (0.69 - 0.97) | 0.018 | |
| Defect length, by 5 cm | 1.00 (0.81 - 1.23) | 0.967 | |
| Defect size, by 50 cm² | 0.92 (0.84 - 1.01) | 0.069 | 0.92 (0.86 - 1.00) | 0.050 | |
| Defect width >15 cm | 0.52 (0.29 - 0.95) | 0.034 | |
| Component separation (yes vs. no) | 1.04 (0.62 - 1.73) | 0.893 | |
| Bridged repair | 1.65 (0.84 - 3.21) | 0.144 | |
| Panniculectomy | 0.77 (0.43 - 1.37) | 0.373 | |
| Mesh width, by 5 cm | 1.49 (1.15 - 1.93) | 0.003 | |
| Mesh length, by 5 cm | 1.49 (1.26 - 1.78) | <0.001 | |
| Mesh size, by 50 cm² | 1.12 (1.07 - 1.18) | <0.001 | 1.12 (1.06 - 1.19) | <0.001 | |

OR, odds ratio; CI, confidence interval; ASA, American Society of Anesthesiologists; AWR, abdominal wall reconstruction.