Table C-7. Reported data: CT versus ERUS for preoperative primary rectal staging T

| **Study, N patients, Author’s Conclusion** | **Outcomes** | **CT****Reported T Stage Data** | **ERUS****Reported T Stage Data** | **T stage by Pathology** | **CT****T1** | **CT****T2** | **CT****T3** | **CT****T4** | **ERUS****T1** | **ERUS****T2** | **ERUS****T3** | **ERUS****T4** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ju et al. 20099978 patientsConclusion: **ERUS is better** | Accuracy | 70.5% | 84.6% | pT1 | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 |
| T1/T2 vs. T3/T4Sensitivity | 84.8% | 93.4% | pT2 | 0 | 16 | 9 | 0 | 2 | 21 | 2 | 0 |
| T1/T2 vs. T3/T4Specificity | 71.9% | 93.8% | pT3 | 0 | 7 | 22 | 4 | 0 | 2 | 27 | 2 |
| pT4 | 0 | 0 | 3 | 10 | 0 | 0 | 2 | 11 |
| Kim et al. 199910089 patients had ERUS, of these 69 also had CTConclusion: **ERUS is better** | Accuracy | 65.2% | 81.1% | pT1 | NR | NR | NR | NR | NR | NR | NR | NR |
| Overstaging | 12/69 (17.4%) | 9/89 (10.0%) | pT2 | NR | NR | NR | NR | NR | NR | NR | NR |
| Understaging | 12/69 (17.4%) | 8/89 (8.9%) | pT3 | NR | NR | NR | NR | NR | NR | NR | NR |
| pT4 | NR | NR | NR | NR | NR | NR | NR | NR |
| Ramana et al. 199710210 patientsConclusion: **ERUS is better for early disease; CT is better for advanced disease** | Accuracy | 10% | 90% | pT1 | NR | NR | NR | NR | 4 | 0 | 0 | 0 |
| T1/T2 vs. T3/T4Sensitivity | Not reported | 100% | pT2 | NR | NR | NR | NR | 0 | 1 | 0 | 0 |
| T1/T2 vs. T3/T4Specificity | Not reported | 100% | pT3 | NR | NR | NR | NR | 0 | 0 | 4 | 0 |
| pT4 | NR | NR | NR | 1 | 0 | 0 | 1 | 0 |

| Table C-7. Reported data: CT versus ERUS for preoperative primary rectal staging T (continued) |
| --- |
| Study, N patients, Author’s Conclusion | **Outcomes** | **CT****Reported T Stage Data** | **ERUS****Reported T Stage Data** | **T stage by Pathology** | **CT****T1** | **CT****T2** | **CT****T3** | **CT****T4** | **ERUS****T1** | **ERUS****T2** | **ERUS****T3** | **ERUS****T4** |
| Osti et al. 199710163 patientsConclusion: **ERUS is better** | Accuracy | 74% | 83% | pT1 | 0 | 3 | 0 | 0 |  |  | 0 | 0 |
| T1/T2 vs. T3/T4Sensitivity | 83% | 91% | pT2 | 0 | 0 | 11 | 0 |  |  | 7 | 0 |
| T1/T2 vs. T3/T4Specificity | 62% | 67% | pT3 | 0 | 0 | 4 | 0 |  |  | 32 | 0 |
| pT4 | 0 | 0 | 0 | 5 |  |  | 0 | 6 |
| Goldman et al. 199110329 patientsConclusion: **ERUS is better** | Accuracy | 52% | 81% | pT1 | NR | NR | NR | NR | NR | NR | NR | NR |
| T1/T2 vs. T3/T4Sensitivity | 67% | 90% | pT2 | NR | NR | NR | NR | NR | NR | NR | NR |
| T1/T2 vs. T3/T4Specificity | 27% | 67% | pT3 | NR | NR | NR | NR | NR | NR | NR | NR |
| OverstagingUnderstaging | 8/29 (27.6%)6/29 (20.7%) | 4/29 (13.8%)2/29 (6.9%) | pT4 | NR | NR | NR | NR | NR | NR | NR | NR |
| Pappalardo et al. 199010414 patientsConclusion: **ERUS is better** | Accuracy | 77.8% | 100% | pT1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| T1/T2 vs. T3/T4Sensitivity | 77.8% | 100% | pT2 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 0 |
| T1/T2 vs. T3/T4Specificity | 100% | 100% | pT3 | 0 | 2 | 6 | 0 | 0 | 0 | 7 | 0 |
| pT4 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| Rotte et al. 198910525 patientsConclusion: **ERUS is better** | Accuracy | 76% | 84% | pT1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| T1/T2 vs. T3/T4Sensitivity | 84.6% | 81.3% | pT2 | 0 | 9 | 3 | 0 | 0 | 8 | 1 | 0 |
| T1/T2 vs. T3/T4Specificity | 75.0% | 88.9% | pT3 | 0 | 2 | 9 | 1 | 0 | 3 | 11 | 0 |
| pT4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| Waizer et al. 198910658 had CT, of these 42 also had ERUSConclusion: **ERUS is better** | Accuracy | 65.5% | 76.8% | pT1 | NR | NR | NR | NR | NR | NR | NR | NR |
| T1/T2 vs. T3/T4Sensitivity | 82.6% | 88.8% | pT2 | NR | NR | NR | NR | NR | NR | NR | NR |
| T1/T2 vs. T3/T4Specificity | NR | NR | pT3 | NR | NR | NR | NR | NR | NR | NR | NR |
| pT4 | NR | NR | NR | NR | NR | NR | NR | NR |
| Beynon et al. 198610744 patientsConclusion: **ERUS is better** | Accuracy | 82% | 91% | pT1 | NR | NR | NR | NR | NR | NR | NR | NR |
| T1/T2 vs. T3/T4Sensitivity | 86% | 94% | pT2 | NR | NR | NR | NR | NR | NR | NR | NR |
| T1/T2 vs. T3/T4Specificity | 62% | 87% | pT3 | NR | NR | NR | NR | NR | NR | NR | NR |
| OverstagingUnderstaging | 3/44 (6.8%)5/44 (11.4%) | 2/44 (4.5%)2/44 (4.5%) | pT4 | NR | NR | NR | NR | NR | NR | NR | NR |
| Kramann and Hildebrandt 198610829 patientsConclusion: **ERUS is better** | Accuracy | 75.9% | 93.1% | pT1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| T1/T2 vs. T3/T4Sensitivity | 95.0% | 100.0% | pT2 | 0 | 4 | 5 | 0 | 0 | 7 | 2 | 0 |
| T1/T2 vs. T3/T4Specificity | 44.4% | 77.8% | pT3 | 0 | 1 | 17 | 1 | 0 | 0 | 19 | 0 |
| pT4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Rifkin and Weschler. 1986110a79 had ERUS, and 71 of these also had CTConclusion: **ERUS is better** | Accuracy | 69.0% | 86.1% | pT1 | NR | NR | NR | NR | NR | NR | NR | NR |
| T1/T2 vs. T3/T4Sensitivity | 55% | 83% | pT2 | NR | NR | NR | NR | NR | NR | NR | NR |
| T1/T2 vs. T3/T4Specificity | 79% | 84% | pT3 | NR | NR | NR | NR | NR | NR | NR | NR |
| pT4 | NR | NR | NR | NR | NR | NR | NR | NR |
| Rifkin et al. 1986110a54 had ERUS, and 51 of these also had CTConclusion: **ERUS is better** | Accuracy | 69% | 93% | pT1 | NR | NR | NR | NR | NR | NR | NR | NR |
| T1/T2 vs. T3/T4Sensitivity | 55% | 89% | pT2 | NR | NR | NR | NR | NR | NR | NR | NR |
| T1/T2 vs. T3/T4Specificity | 81% | 86% | pT3 | NR | NR | NR | NR | NR | NR | NR | NR |
| pT4 | NR | NR | NR | NR | NR | NR | NR | NR |
| Romano et al. 198511123 patientsConclusion: **ERUS is better** | Accuracy | 82.6% | 87.0% | pT1 | NR | NR | NR | NR | NR | NR | NR | NR |
| Overstaging | 2/23 (8.7%) | 1/23 (4.4%) | pT2 | NR | NR | NR | NR | NR | NR | NR | NR |
| Understaging | 2/23 (8.7%) | 2/23 (8.7%) | pT3 | NR | NR | NR | NR | NR | NR | NR | NR |
| pT4 | NR | NR | NR | NR | NR | NR | NR | NR |

a It is possible that these two studies are reporting on an overlapping patient population.

CT=Computed tomography; ERUS=endorectal ultrasound; NR=not reported; pT=pathologic tumor stage; T=tumor stage.