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Jie Du, Brian Parshall* (bjp8w@virginia.edu) and **Leonard Scott.** *Hecke endomorphism algebras and Kazhdan-Lusztig cell theory.* Preliminary report.

Let \mathcal{H} be the generic Hecke algebra over $\mathcal{Z} := \mathbb{Z}[t, t^{-1}]$ associated to a finite group G of Lie type with Weyl group W . For each subset J of the set S of fundamental reflections for W , form the q -permutation module $x_J\mathcal{H}$, and let $T := \bigoplus_J x_J\mathcal{H}$. When G is a finite general linear group, the q -Schur algebra $A := \text{End}_{\mathcal{H}}(T)$ plays an important role in the cross-characteristic representation theory of G (Dipper-James theory). This talk discusses recent work by the authors DPS to develop new approaches applicable to all types (involving Kazhdan-Lusztig cell theory, homological methods, etc.). (Received January 27, 2019)