Let $k$ be an algebraically closed field of positive characteristic $p$, and $F$ be an algebraically closed field of characteristic 0. In this talk, we consider the $F$-linear category $F_{pp}^\Delta_k$ of finite groups, in which the set of morphisms from $G$ to $H$ is the $F$-linear extension of the Grothendieck group of $p$-permutation $(kH, kG)$-bimodules with (twisted) diagonal vertices. We call the $F$-linear functors from $F_{pp}^\Delta_k$ to $F$-Mod as *diagonal $p$-permutation functors*. They form an abelian category $\mathcal{F}_{pp}^\Delta_k$. We focus in particular the functor that sends a finite group $G$ to the Grothendieck group of $p$-permutation $kG$-modules and show that it is a semisimple object of $\mathcal{F}_{pp}^\Delta_k$. This is a joint work with Serge Bouc. (Received August 19, 2019)