慶 應 医 学 会 例 会

下記により例会を開催いたしますので、多数ご来聴ください。

記

日　時　2026 年 10 月 21 日 （水） 17 ： 00
場　所　総合医科学研究棟１階ラウンジ

演　題

Teaching T cells to see transcriptional dysregulation: TCR-T and cancer vaccines in Ewing sarcoma

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The search for cancer antigens eliciting T cell responses typically focus on somatic mutations, oncogenic viruses, and aberrant expression of normal genes usually restricted to immune privileged tissues. However it is also clear that these sources are incomplete to explain the full specificity of tumor reactive T cell repertoires. In the case of Ewing sarcoma, an aggressive cancer of adolescents and young adults, we identify a new source of powerful T cell antigens. Every case of Ewing sarcoma is driven by an oncogenic chimeric transcription factor, most commonly EWSR1::FLI1. In addition to causing quantitative misregulation of expression levels for many genes throughout the genome, we have shown that these oncogenic transcription factors also drive the expression of a highly stereotypical set of cryptic germline encoded gene-like sequences usually silenced in normal tissues, which we term neogenes. A subset of these neogenes are also translated into small and short-lived protein products. Peptides derived from these neoproteins are efficiently presented by HLA complexes on the tumor cell surface and cognate specific TCRs can be identified. These clonal, public, tumor specific and immunogenic antigens are now being translated into the clinic through both TCR-T adoptive cell therapy and mRNA LNP therapeutic vaccines.

担　当
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