List of courses available for graduate students (Wakayama Medical University)

	Course name (Press the name to jump to the link)	Professor name (Press the name to jump to the link)		Acceptable number of people	Research theme	Massege from Professor
	Molecular Pathology	Prof. Shogo Ehata, M.D., Ph. D.	No image	1	1) Molecular mechanisms of cancer metastasis by mouse tumor models 2) Role of cancer microenvironment during cancer progression 3) Role of TGF-β family members in cancer progression 4) Analysis of sarcoma-specific chimeric oncoproteins	In the present course, the role of the cancer microenvironment is focused on. By use of various mouse tumor models, the interaction between cancer cells and the cancer microenvironment is reproduced, which thereby leads to the alterations in genetic or epigenetic alterations within cancer cells. We will also aim to elucidate how these changes are involved in cancer progression and metastasis. Recent Publications 1) Ehata S*, Miyazono K. Bone morphogenetic protein signaling in cancer; some topics in the recent 10 years. Front Cell Dev Biol. 2022 ;10:883523. 2) Nishida J, Miyakuni K, Miyazono K, Ehata S*. An in vivo orthotopic serial passaging model for a metastatic renal cancer study. STAR Protoc. 2022 ;3(2):101306. 3) Miyakuni K, Nishida J, Koinuma D, Nagae G, Aburatani H, Miyazono K, Ehata S*. Genome-wide analysis of DNA methylation identifies the apoptosis-related gene UQCRH as a tumor suppressor in renal cancer. Mol Oncol. 2022 ;16(3):732-749. 4) Momoi Y, Nishida J, Miyakuni K, Kuroda M, Kubota SI, Miyazono K, Ehata S*. Heterogenous expression of endoglin marks advanced renal cancer with distinct tumor microenvironment fitness. Cancer Sci. 2021 ;112(8):3136-3149.
		mail ehata@wakayama-med.ac.jp				

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	Molecular Pathology				5) Kubota SI, Takahashi K, Mano T, Matsumoto K, Katsumata T, Shi S, Tainaka K, Ueda HR, Ehata S*, Miyazono K. Whole-organ analysis of TGF-β-mediated remodelling of the tumour microenvironment by tissue clearing. Commun Biol. 2021 ;4(1):294. 6) Takahashi K, Ehata S*, Miyauchi K, Morishita Y, Miyazawa K, Miyazono K. Neurotensin receptor 1 signaling promotes pancreatic cancer progression. Mol Oncol. 2021 ;15(1):151-166. 7) Nishida J, Momoi Y, Miyakuni K, Tamura Y, Takahashi K, Koinuma D, Miyazono K, Ehata S*. Epigenetic remodelling shapes inflammatory renal cancer and neutrophil-dependent metastasis. Nat Cell Biol. 2020 ;22(4):465-475. 8) Taguchi L, Miyakuni K, Morishita Y, Morikawa T, Fukayama M, Miyazono K, Ehata S*. c-Ski accelerates renal cancer progression by attenuating transforming growth factor β signaling. Cancer Sci. 2019 ;110(6):2063-2074. 9) Miyazono K, Katsuno Y, Koinuma D, Ehata S, Morikawa M. Intracellular and extracellular TGF-β signaling in cancer: some recent topics. Front Med. 2018 ;12(4):387-411. 10) Takahashi K, Ehata S, Koinuma D, Morishita Y, Soda M, Mano H, Miyazono K. Pancreatic tumor microenvironment confers highly malignant properties on pancreatic cancer cells. Oncogene. 2018 ;37(21):2757-2772. 11) Nishida J, Miyazono K, Ehata S. Decreased TGFBR3/Betaglycan expression enhances the metastatic abilities of renal cell carcinoma cells through TGF-β-dependent and independent mechanisms. Oncogene. 2018 ;37(16):2197-2212. 12) Yokoyama Y, Watanabe T, Tamura Y, Hashizume Y, Miyazono K,

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	Molecular Pathology				Ehata S*. Autocrine BMP-4 signaling is a therapeutic target in colorectal cancer. Cancer Res. 2017 ;77(15):4026-4038.