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**Table 1** Proposed areas for future international collaborative research, and ongoing trials.

	<b>Unresolved area</b>	<b>Trial</b>
Etiology	Mechanism of carcinogenesis of HPV-positive and HPV-negative SCCA	
	Potential role of HPV vaccination in patients who have developed SCCA or in the treatment of SCCA	
Biology	Increase understanding of SCCA biology, guide development of clinical trials with novel or targeted agents, develop clinical biomarkers	
Staging	Determine the best staging procedures, the role of MRI (and diffusion weighted MRI) and PET/CT	
	Improve discrimination between involved and uninvolved regional lymph nodes	
Response evaluation and follow-up	Determine the role of MRI and PET/CT for response evaluation Prognostic and predictive role of MRI and PET/CT Determining the optimal follow-up program	Planned NOAC9
Treatment of localized disease <ul style="list-style-type: none"> <li>• Radiotherapy dose</li> <li>• Proton therapy</li> <li>• Adding check point inhibition to CRT</li> <li>• HPV negative tumours</li> <li>• Elderly patients</li> </ul>	Optimal radiation dose according to stage and known risk factors	
	Role of postoperative CRT after surgical resection for T1N0 perianal tumour	PLATO ACT3
	Optimal/lower radiation dose for early-stage T1-2N0 SCCA	PLATO ACT4, EA2182 DECREASE
	Optimal/higher radiation dose to locally advanced T3-4 or N1 SCCA	PLATO ACT5
	Possible role of high-dose boost to tumour regions	
	Role of proton therapy	SWANCA, Planned DACG ReRad-III
	Role of PD-1 inhibition in combination with CRT Translational research of immune response in relation to CRT	CORINTH, RADIANCE, EA2165
	Improve outcomes for HPV negative tumours	
	Optimal treatment for elderly SCCA population	
Treatment of metastatic disease <ul style="list-style-type: none"> <li>• Limited metastatic disease</li> </ul>	Role of extended-field CRT, chemotherapy, surgery, or stereotactic body radiotherapy for limited metastatic disease	

<ul style="list-style-type: none"> <li>• Chemotherapy</li> </ul>	Optimal or novel systemic therapy Biology-driven trials for HPV-positive and HPV-negative metastatic SCCA	
<ul style="list-style-type: none"> <li>• Check point inhibition</li> </ul>	Effect of immune check point inhibition in combination with chemotherapy or combinations of check point inhibition	POD1UM-303/InterAACT2, EA2176, SCARCE, NCI9673
<ul style="list-style-type: none"> <li>• Biology</li> </ul>	Importance of HPV positivity/negativity and PD-1 expression	
Late effects and QOL	Assess outcomes after treatment for SCCA including functional outcomes and QOL	
Psychosocial impact	Understand impact at diagnosis and in the context of cancer survivorship; understand differences in various demographics groups such as elderly, HIV positive vs HIV negative	

Legends: SCCA: squamous cell carcinoma of the anus; HPV: Human Papilloma Virus; MRI: magnetic resonance imaging; PET/CT: positron emission tomography/computed tomography; CRT: concurrent chemoradiotherapy; PD-1: Programmed Death-1; HIV: Human Immunodeficiency Virus; QOL: quality of life.