## (a) Shortcomings of existing methods: mAP mAP More time **Images** Expected category Class Pedicle Edge Drediction category confidence confidence category 267 72 Xmin Annotated Ymin | 206 200 206 **Pedicle** 353 224 199 location 350 ■ mAP 336 419 Need coordinate Imperfect prediction Hard Annotation Inappropriate category evaluation Advance 2 | Advance 3 Advance 1 (b) Task of our work: mAP Less money Edge:91% Pedicle:89 **Images Evaluate** category Class Edge Pedicle Annotated confidence Pedicle Edge Just class location ■ mAP Perfect prediction Appropriate category evaluation Easy Annotation Challenge 1 (c) Challenges of our task: Ground truth Wrong location Flat Selective search Pedicle Unwanted background noise Image Edge Inaccurate Proposals Indistinguishable shape Unexpected false positives **Contribution 3 Contribution 2 Contribution 1** (d) Our contributions: Selective

Space category module

Category filter

Dual-threshold Postprocessing Strategy

Region filter

search

PraNet backbone

Cross-reference module

	Images				Adenoma
ediction	information	category	×	×	$\checkmark$
		confidence	×	$\checkmark$	×
P	inf	location	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$

I	mages	Flat:77%	Pedicle:89%	Edge:91%
on ion	category	$\sqrt{}$	$\checkmark$	$\checkmark$
Prediction information	confidence	$\sqrt{}$	$\checkmark$	$\checkmark$
Pr inf	location	$\sqrt{}$	$\sqrt{}$	$\sqrt{}$