

# Experiments

- NC+R batch=1
- NC+R batch=4
- NC+R noise=2
- C+R
- NC+R whole data
- C+R whole data

# Dataset

Main trial dataset (mainly use **thyroid** class)

- Train: 252 thyroid pair
- Valid: 39 thyroid pair

Whole dataset training

- Train: 1011 breast, carotid, kidney, river, thyroid pair
- Valid: 39 thyroid pair

# Batch size

## 1. NC+R batch 4

- Main trial dataset , 80 epoch
- Batch size 4
- MAE: 0.13369263211886087
- PSNR: 11.636956647704261
- SSIM: 0.18182664182709227

## 2. NC+R batch 1

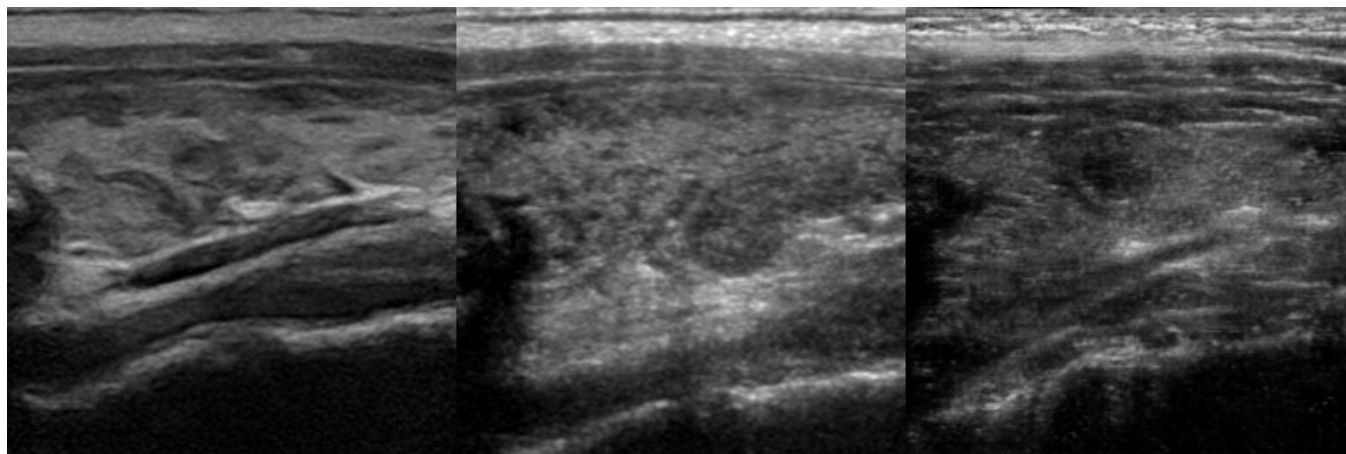
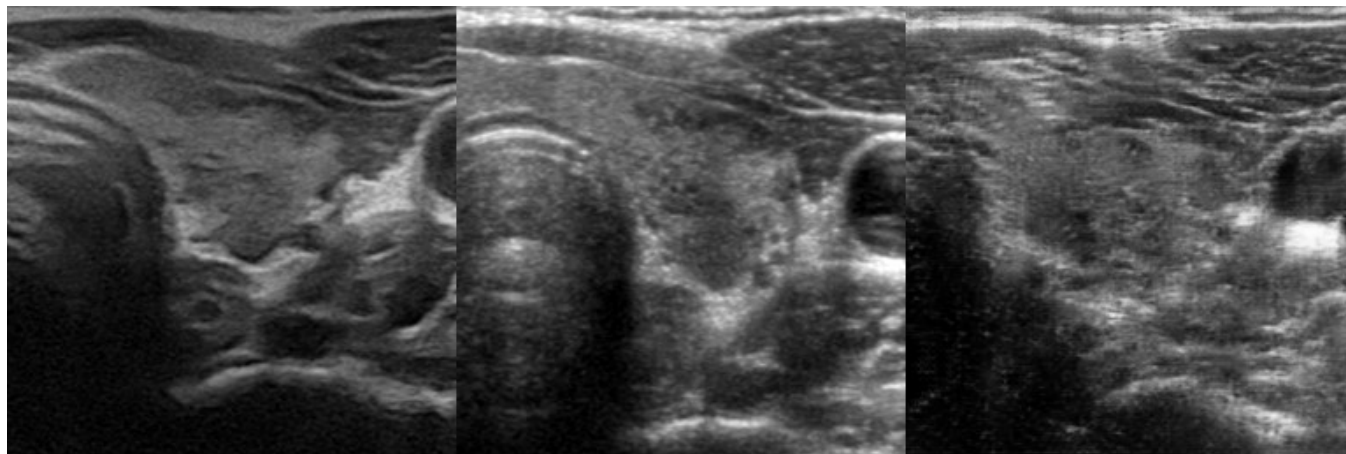
- Main trial dataset , 80 epoch
- Batch size 1
- MAE: 0.13270953469551527
- PSNR: 14.118878271793124
- SSIM: 0.18869430242236998

## NC+R batch 4

LQ

HQ

Generate

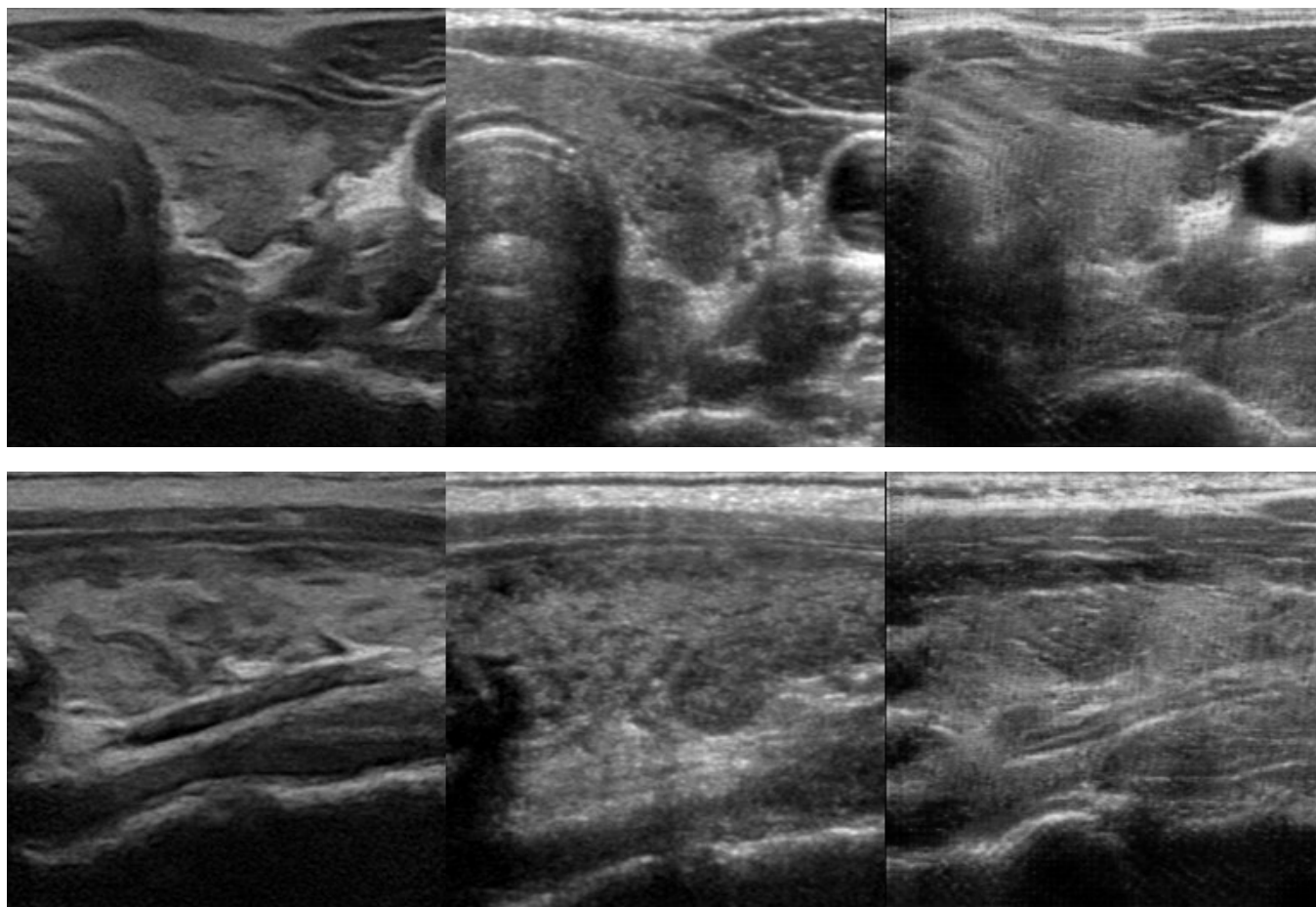


# NC+R batch 1

LQ

HQ

Generate



# Noise option

## 1. NC+R batch 1

- Main trial dataset , 80 epoch
- Batch size 1, noise level 0
- MAE: 0.13270953469551527
- PSNR: 14.118878271793124
- SSIM: 0.18869430242236998

## 2. NC+R noise 2

- Main trial dataset , 80 epoch
- Batch size 1, noise level 2
- MAE: 0.14832085562057984
- PSNR: 6.77887887785504
- SSIM: 0.17159454863378318

# Cycle consistency

## 1. NC+R batch 1

- Main trial dataset , 80 epoch
- Batch size 1
- MAE: 0.13270953469551527
- PSNR: 14.118878271793124
- SSIM: 0.18869430242236998

## 2. C+R

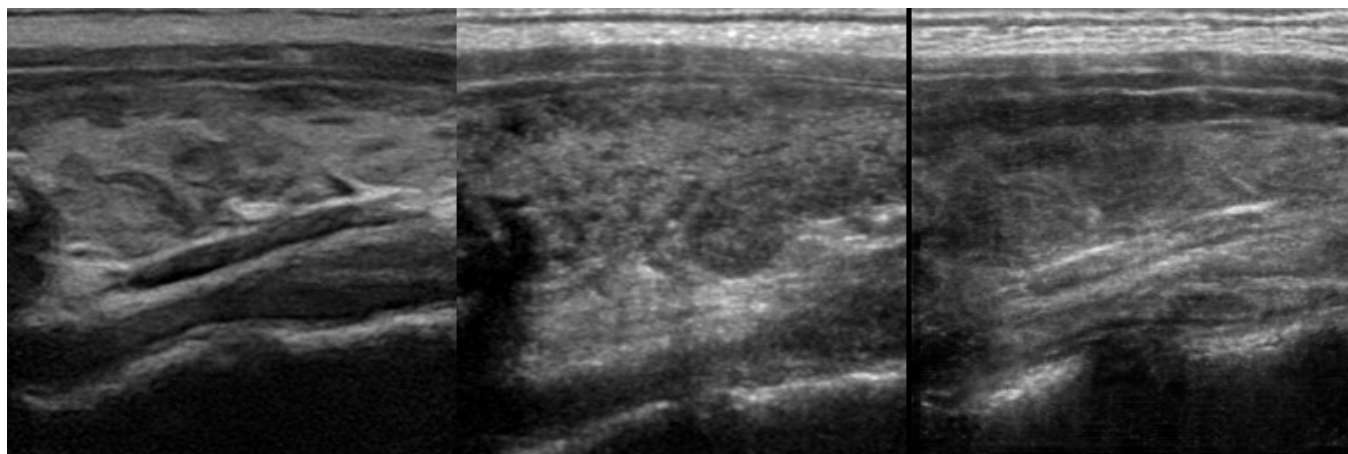
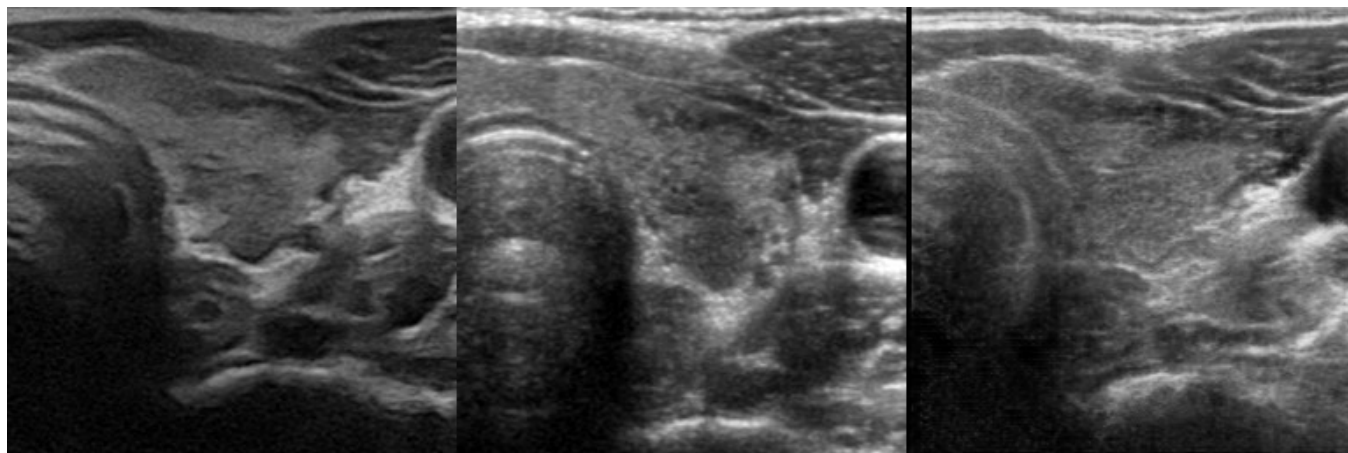
- Main trial dataset , 80 epoch
- Batch size 1
- MAE: 0.13233038802177477
- PSNR: 14.84458532760756
- SSIM: 0.1855745471387556

**C+R**

**LQ**

**HQ**

**Generate**





# Train whole dataset

## 1. NC+R batch 1

- Main trial dataset , 80 epoch
- Batch size 1
- MAE: 0.13270953469551527
- PSNR: 14.118878271793124
- SSIM: 0.18869430242236998

## 2. NC+R whole data

- Whole dataset , 80 epoch
- Batch size 1
- MAE: 0.13151963647359458
- PSNR: 14.974798179576409
- SSIM: 0.19394490551454466

# Train whole dataset

## 1. C+R

- Main trial dataset , 80 epoch
- Batch size 1
- MAE: 0.13233038802177477
- PSNR: 14.84458532760756
- SSIM: 0.1855745471387556

## 2. C+R whole data

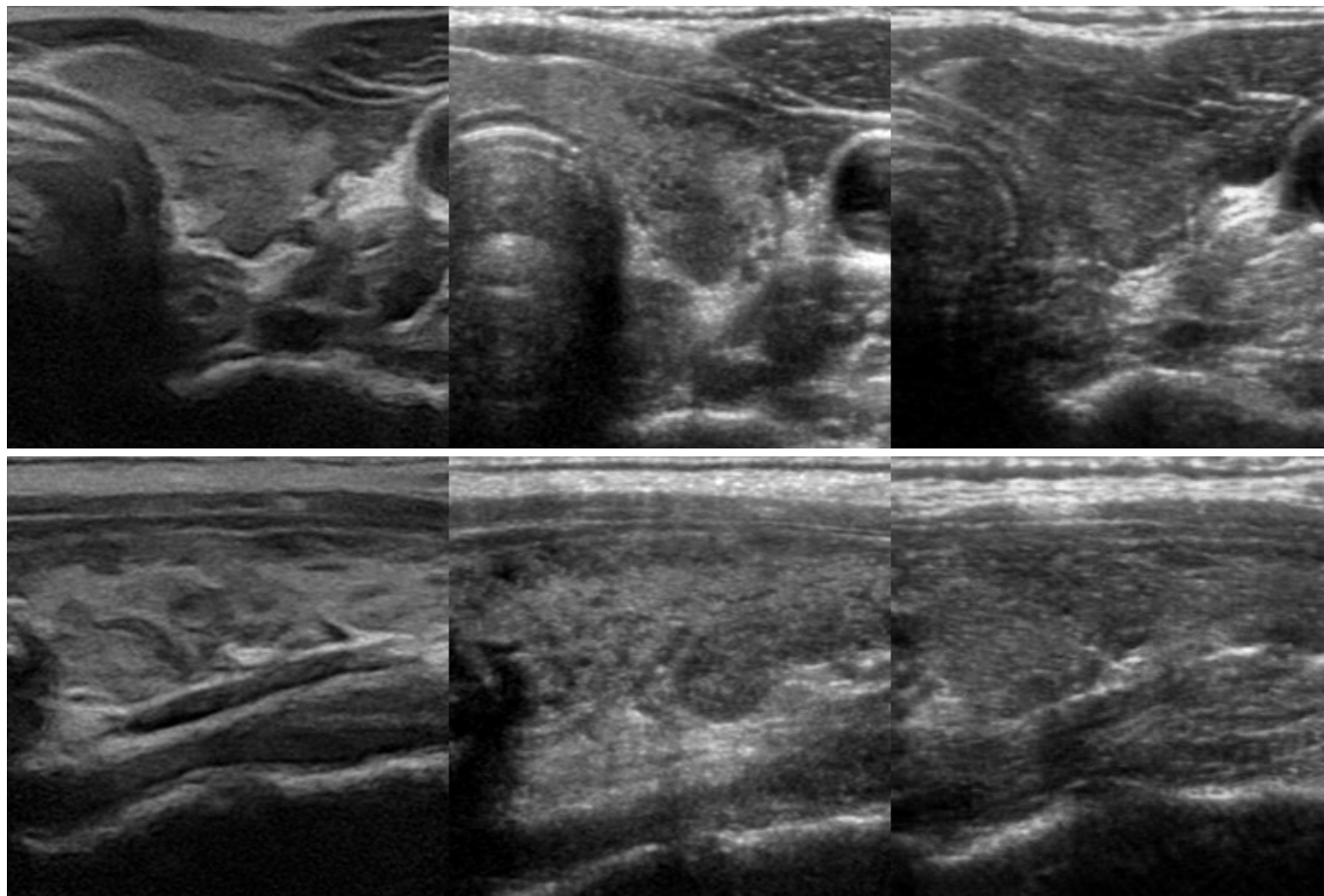
- Whole dataset , 80 epoch
- Batch size 1
- MAE: 0.13773907205233207
- PSNR: 15.722188268141261
- SSIM: 0.18083745389988226

# NC+R whole data

LQ

HQ

Generate

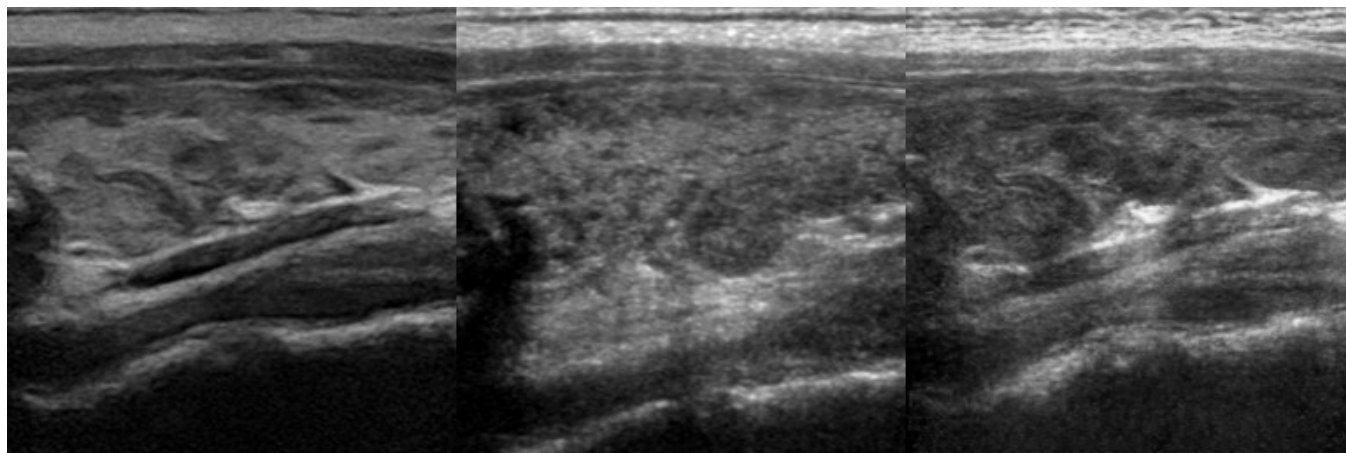
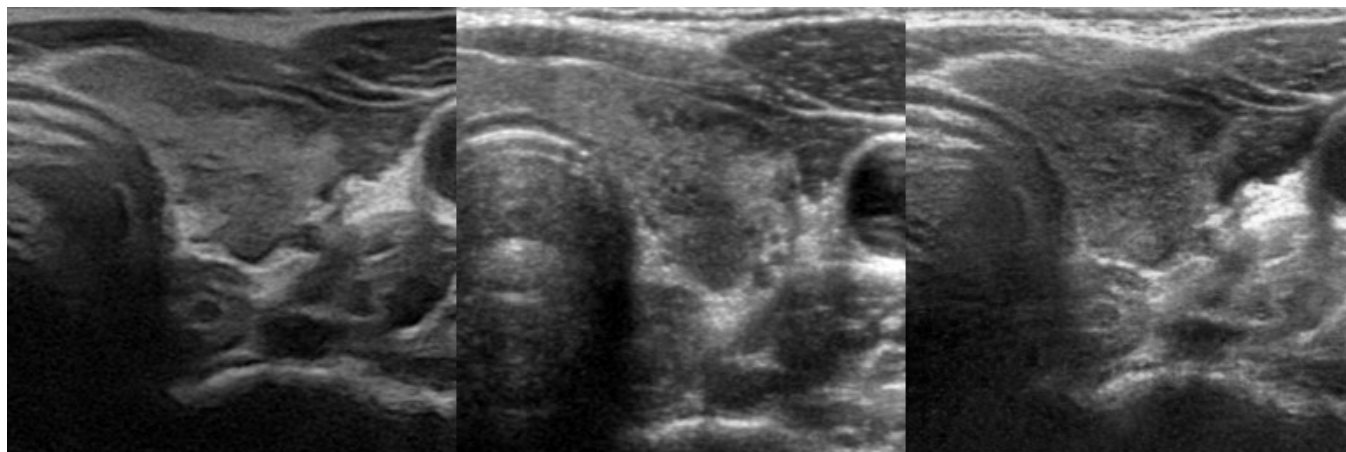


## C+R whole data

LQ

HQ

Generate

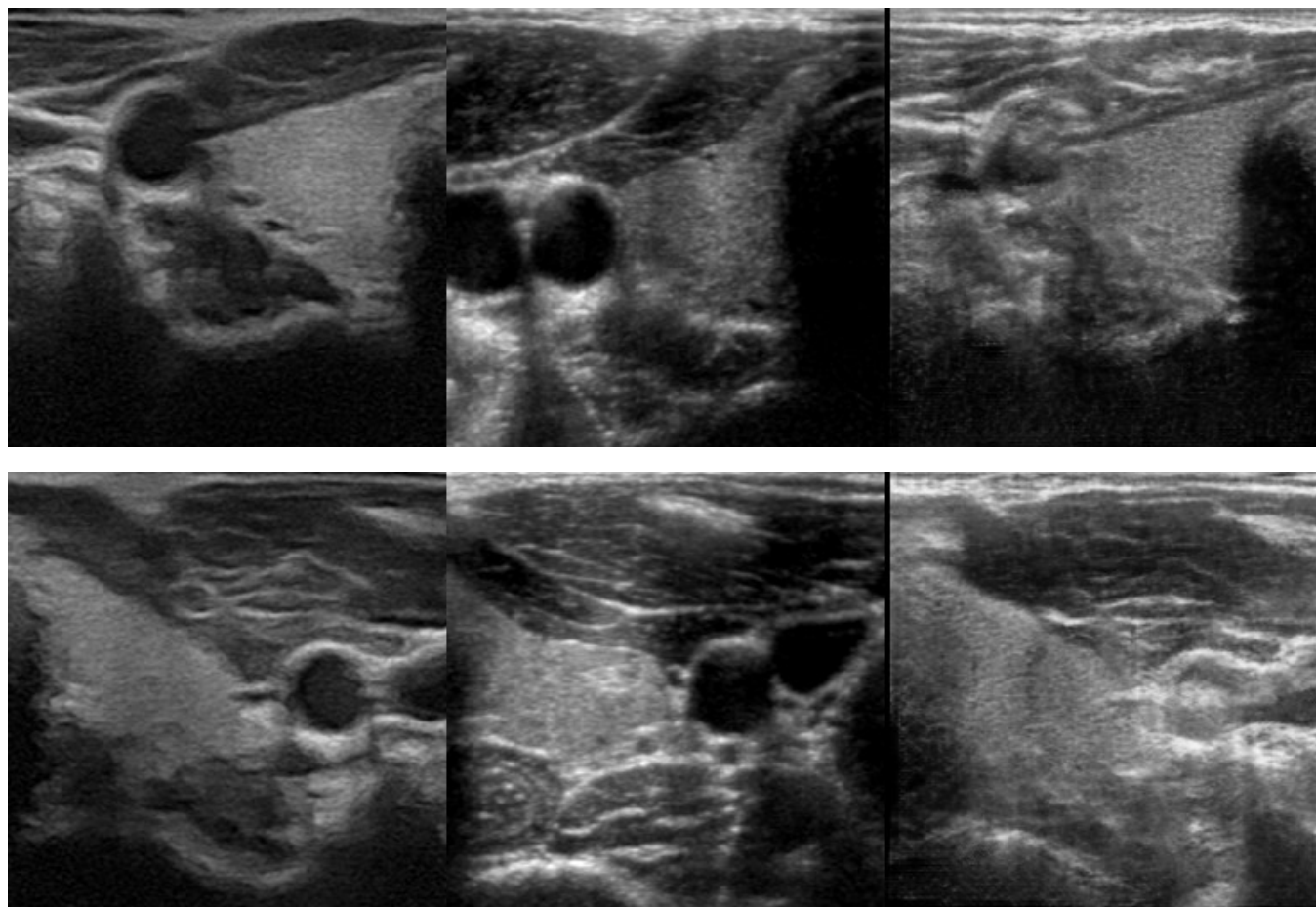


## C+R, NC+R pattern removed

LQ

HQ

Generate

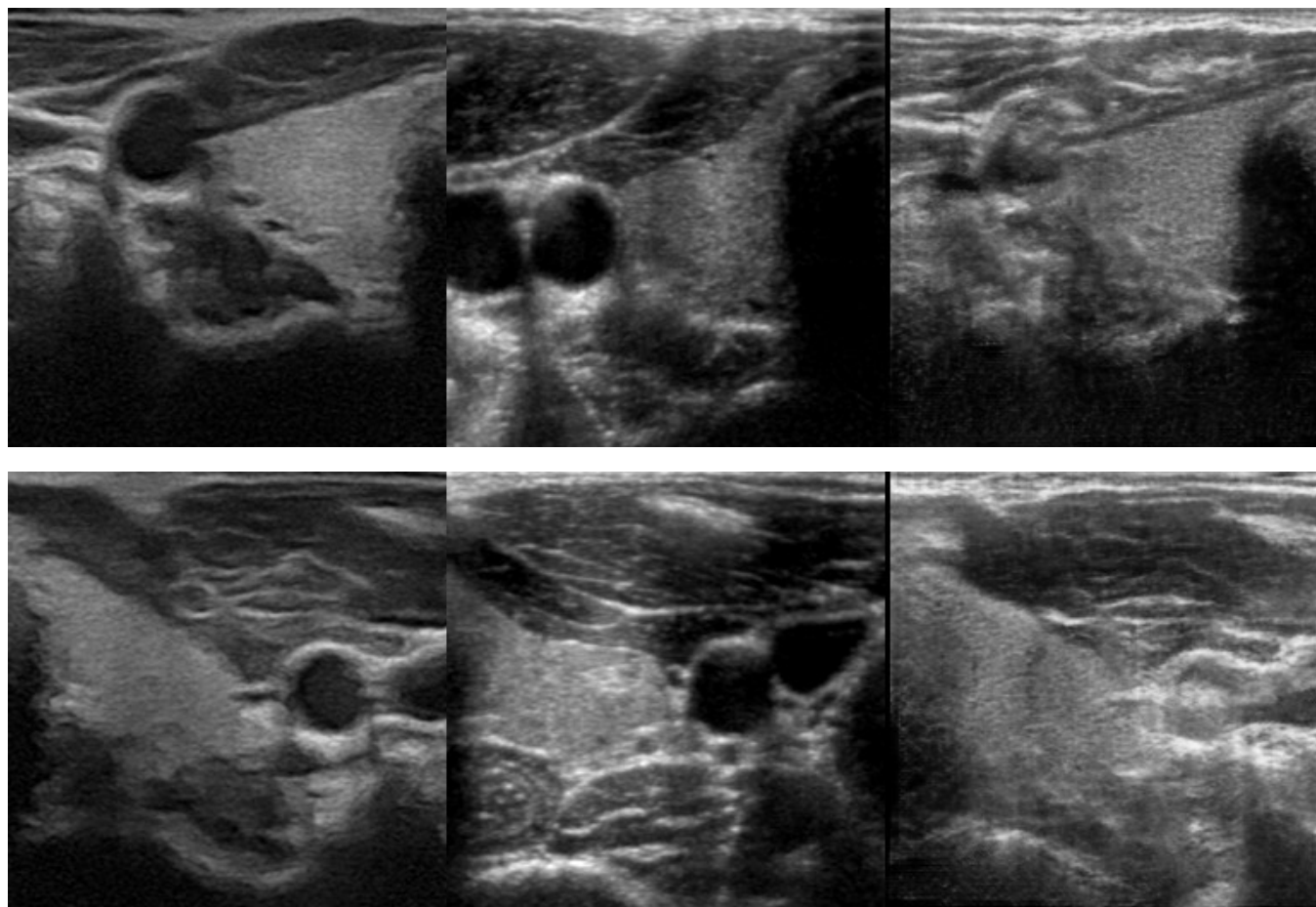


# C+R pattern removed

LQ

HQ

Generate

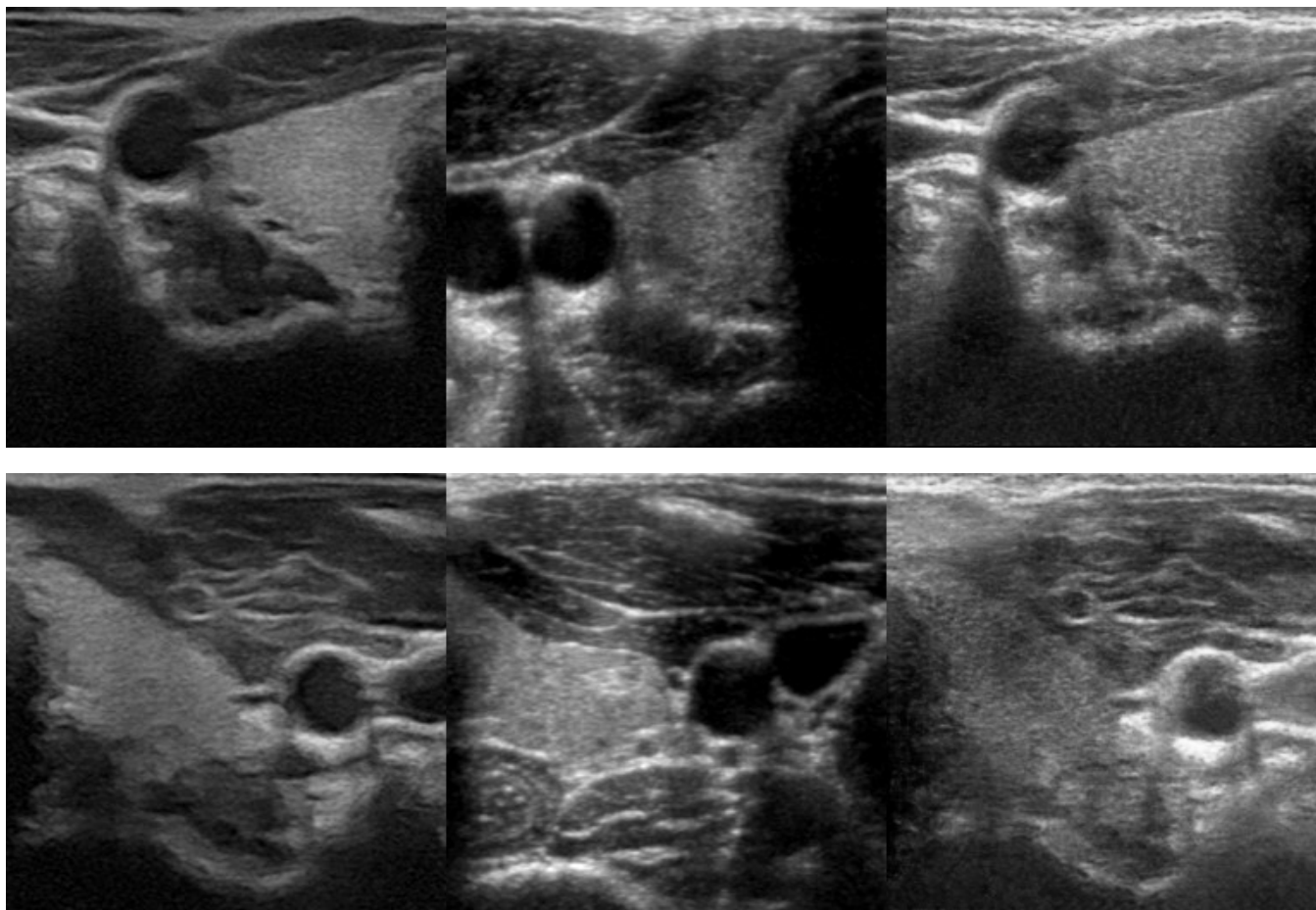


# C+R whole dataset pattern removed

LQ

HQ

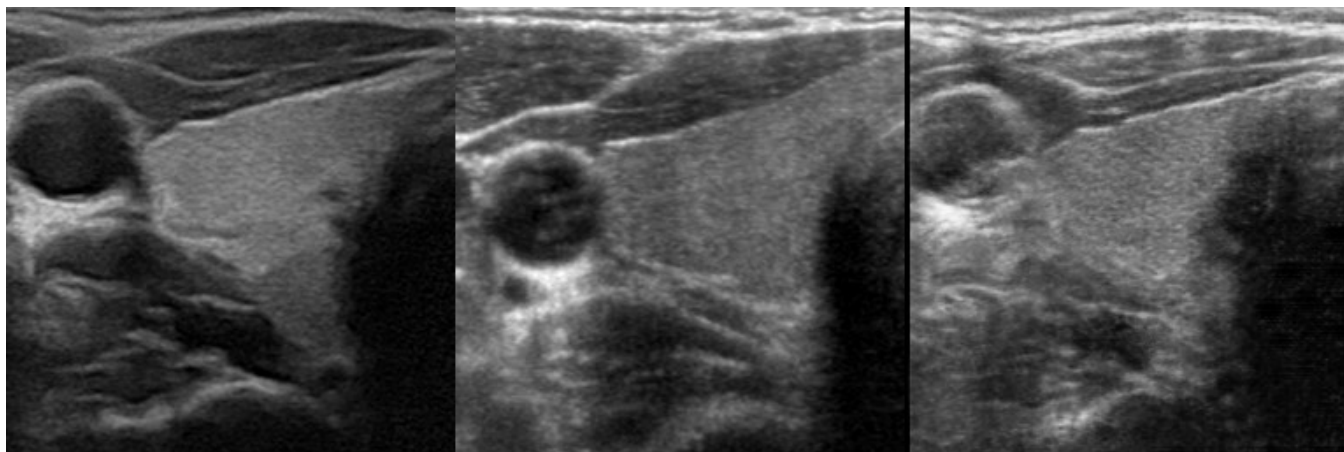
Generate



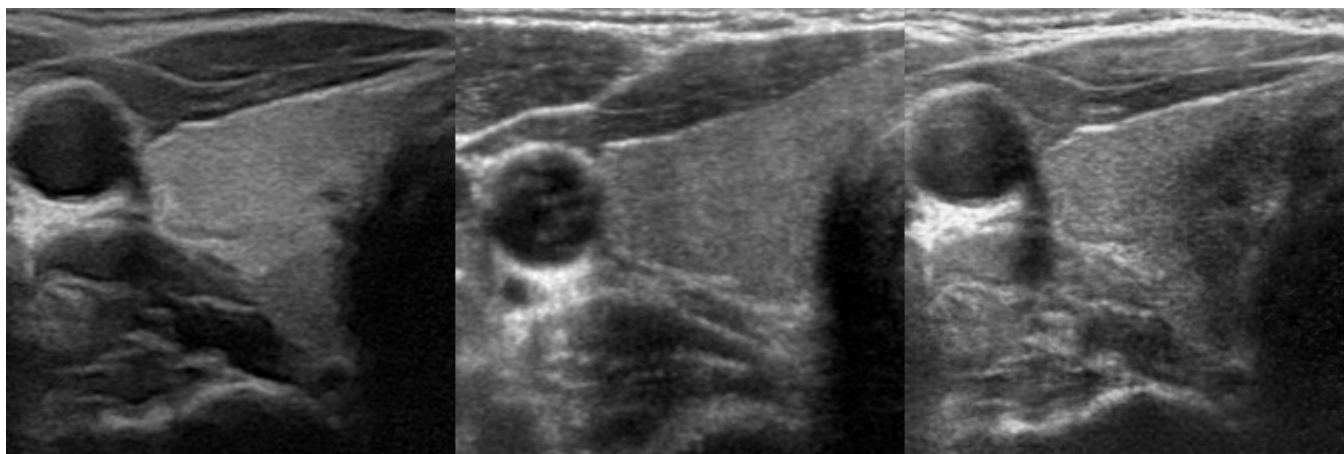
LQ

HQ

Generate



C+R



C+R  
whole



# Summary

	NC+R batch4	NC+R batch1	NC+R noise2	C+R	NC+R whole	C+R whole
MAE	0.1336926321 1886087	0.1327095346 9551527	0.1483208556 2057984	0.1323303880 2177477	0.1315196364 7359458	0.1377390720 5233207
PSNR	11.636956647 704261	14.118878271 793124	6.7788788778 5504	14.844585327 60756	14.974798179 576409	15.722188268 141261
SSIM	0.1818266418 2709227	0.1886943024 2236998	0.1715945486 3378318	0.1886943024 2236998	0.1939449055 1454466	0.1808374538 9988226