



# Corrigendum: FI-Net: Identification of Cancer Driver Genes by Using Functional Impact Prediction Neural Network

Hong Gu<sup>1</sup>, Xiaolu Xu<sup>1</sup>, Pan Qin<sup>1\*</sup> and Jia Wang<sup>2\*</sup>

<sup>1</sup> Faculty of Electronic Information and Electrical Engineering, Dalian University of Technology, Dalian, China, <sup>2</sup> Department of Breast Surgery, Institute of Breast Disease, Second Hospital of Dalian Medical University, Dalian, China

**Keywords:** cancer research, driver genes, functional impact, artificial neural network, multi-omics features, hierarchical clustering algorithm

## OPEN ACCESS

### Edited and reviewed by:

Yunyan Gu,  
Harbin Medical University, China

### \*Correspondence:

Pan Qin  
qp112cn@dlut.edu.cn  
Jia Wang  
wangjia77@hotmail.com

### Specialty section:

This article was submitted to  
Computational Genomics,  
a section of the journal  
Frontiers in Genetics

**Received:** 03 March 2021

**Accepted:** 15 March 2021

**Published:** 13 April 2021

### Citation:

Gu H, Xu X, Qin P and Wang J (2021)  
Corrigendum: FI-Net: Identification of  
Cancer Driver Genes by Using  
Functional Impact Prediction Neural  
Network. *Front. Genet.* 12:675351.  
doi: 10.3389/fgene.2021.675351

## A Corrigendum on

### FI-Net: Identification of Cancer Driver Genes by Using Functional Impact Prediction Neural Network

by Gu, H., Xu, X., Qin, P., and Wang, J. (2020). *Front. Genet.* 11:564839.  
doi: 10.3389/fgene.2020.564839

In the original article, there was an error. The “ExInAtoR” code was incorrectly used for a comparison with our method. ExInAtoR is designed to only be used with mutations from Whole Genome Sequences, not with Whole Exome Sequences as was done in this article. As such, the ExInAtoR results present in the Supplementary Material and those referenced in the text and Figures should be discounted.

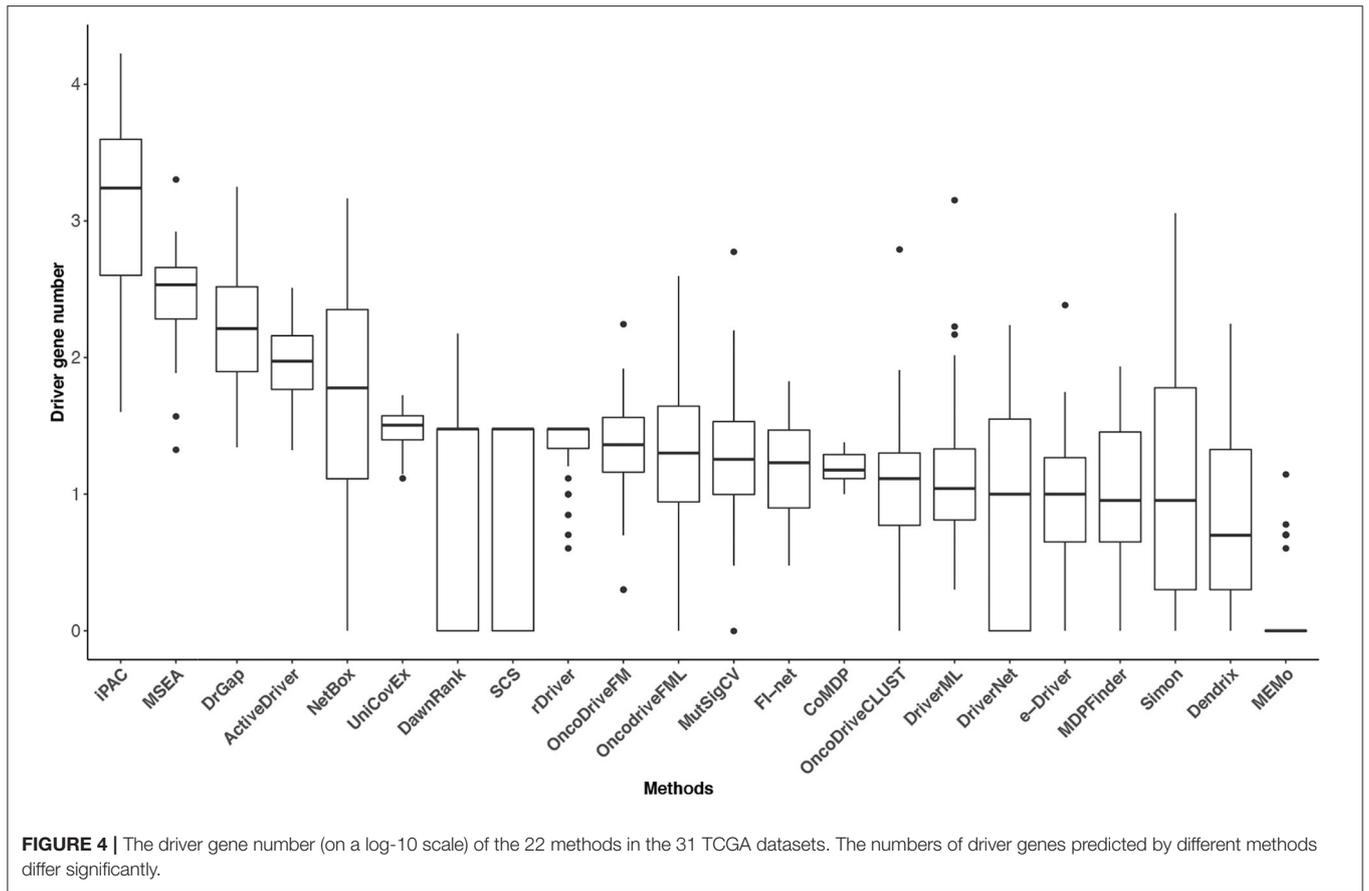
A correction has been made to **Figure 4**. The corrected Figure 4 appears below.

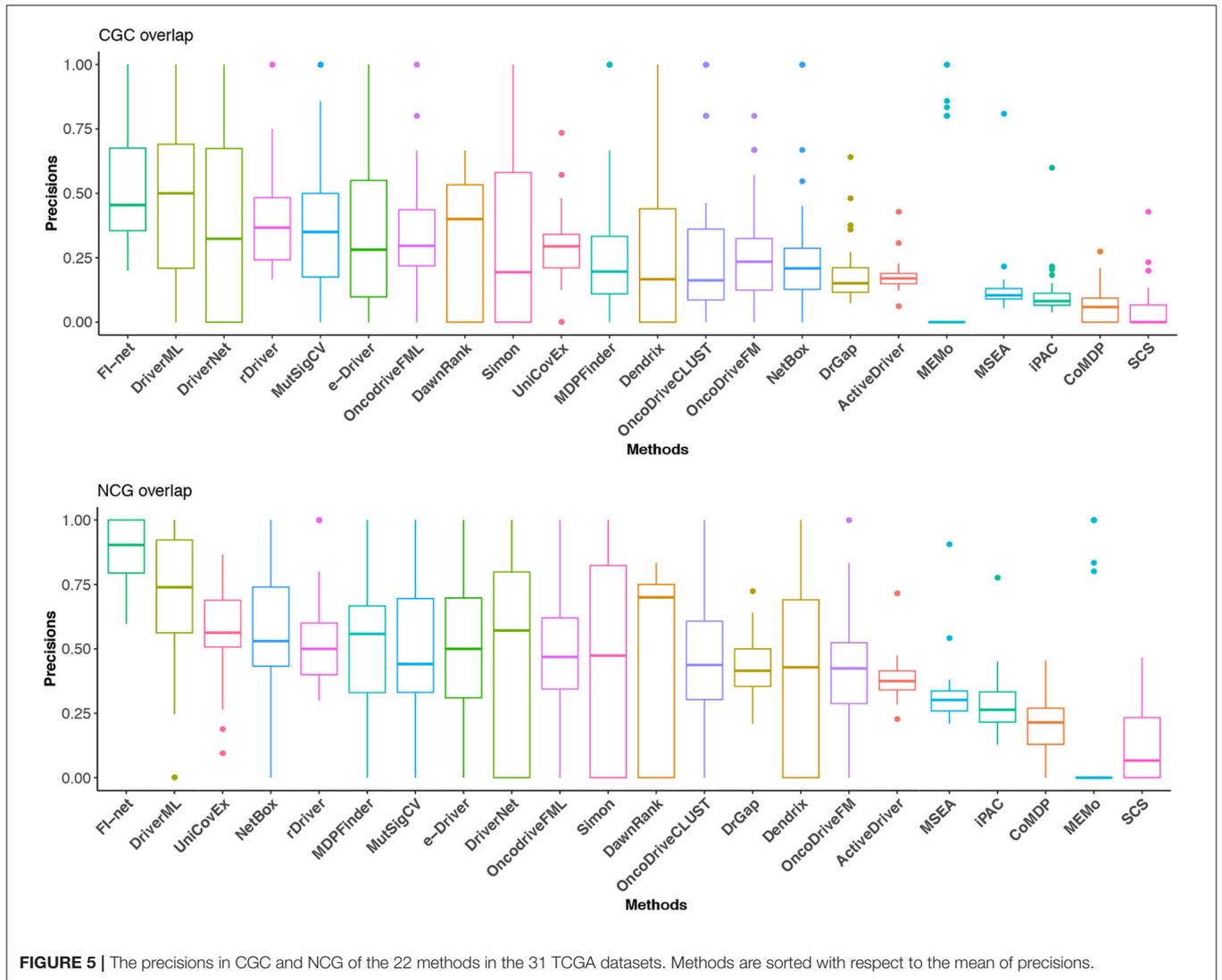
Further, a correction has been made to **Figure 5**. The corrected Figure 5 appears below.

Lastly, a correction has been made to **Table 1**. The corrected **Table 1** appears below.

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

Copyright © 2021 Gu, Xu, Qin and Wang. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.





**FIGURE 5 |** The precisions in CGC and NCG of the 22 methods in the 31 TCGA datasets. Methods are sorted with respect to the mean of precisions.

**TABLE 1** | Overall performances of 22 driver gene prediction methods on 31 TCGA datasets.

Methods	CGC overlap	NCG overlap	Consensus No.1	Consensus No.2	CGC rank	NCG rank	Consensus No.1 rank	Consensus No.2 rank	Average rank
ActiveDriver	17.92%	38.51%	52.28%	2.03%	17	17	18	20	18
Dendrix	28.75%	42.26%	69.38%	19.11%	12	15	12	6	11.25
MDPFinder	28.82%	51.58%	79.34%	24.15%	11	6	8	2	6.75
Simon	29.25%	45.26%	62.13%	7.36%	9	11	14	14	12.25
NetBox	26.41%	54.26%	74.18%	11.10%	15	4	11	13	10.75
OncoDriveFM	26.52%	42.04%	76.92%	13.96%	14	16	10	9	12.25
MutSigCV	37.07%	51.30%	89.94%	18.24%	5	7	3	8	5.75
MEMo	17.07%	18.17%	18.71%	11.37%	18	22	23	11	18.5
CoMDP	6.70%	20.39%	37.89%	0.51%	22	21	19	22	21
DawnRank	31.66%	44.97%	36.60%	3.08%	8	12	20	18	14.5
DriverNet	39.38%	50.67%	59.15%	22.39%	3	9	16	3	7.75
e-Driver	36.07%	51.05%	78.85%	<b>28.65%</b>	6	8	9	<b>1</b>	6
iPAC	11.13%	29.16%	32.71%	1.38%	21	20	21	21	20.75
MSEA	13.36%	32.01%	64.81%	2.58%	20	19	14	19	18
OncoDriveCLUST	44.32%	21.61%	87.10%	19.38%	13	13	6	7	9.75
DrGap	18.81%	42.69%	88.79%	3.30%	16	14	4	16	12.5
DriverML	48.19%	70.55%	94.01%	20.38%	2	2	2	5	2.75
OncodriveFML	33.78%	48.03%	81.15%	11.02%	7	10	7	12	9
SCS	5.15%	1.32%	19.66%	0.23%	23	23	22	23	22.75
rDriver	38.18%	53.17%	87.89%	12.97%	4	5	5	10	6
UniCovEx	29.01%	55.70%	65.56%	3.52%	10	3	13	17	10.75
FI-net	<b>53.01%</b>	<b>88.20%</b>	<b>95.18%</b>	21.46%	<b>1</b>	<b>1</b>	<b>1</b>	4	<b>1.75</b>

The bold number indicates the best result.