Table S1 The five-lncRNAs-associated target genes and miRNAs using online tools

<table>
<thead>
<tr>
<th>target genes and miRNAs of five-lncRNAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>genes</td>
</tr>
<tr>
<td>A1CF RBFOX1 PTBP1 HNRNPA2B1 U2AF2</td>
</tr>
<tr>
<td>BUD13 RBFOX2 PTBP2 HNRNPK UCHL5</td>
</tr>
<tr>
<td>CELF6 RBM15 PUM2 HNRNPL UPF1</td>
</tr>
<tr>
<td>CPEB2 RBM22 QKI HNRNPLL YBX3</td>
</tr>
<tr>
<td>CPEB4 RBM24 RALY HNRNPUS LIN28A</td>
</tr>
<tr>
<td>CPSF6 RBM27 METAP2 HNRNPUL1 LIN28B</td>
</tr>
<tr>
<td>DDX3X RBM28 PABPC1 IGF2BP1 LSM11</td>
</tr>
<tr>
<td>DDX55 RBM4 PABPC3 IGF2BP2 MATR3</td>
</tr>
<tr>
<td>DDX6 RBM41 PABPC5 ILF3 SRSF9</td>
</tr>
<tr>
<td>EFTUD2 RBM42 PPIL4 KHDRBS1 SUB1</td>
</tr>
<tr>
<td>ELAVL1 RBM46 PPRC1 KHDRBS3 TARDBP</td>
</tr>
<tr>
<td>ELAVL2 RBM4B PRPF8 KHSRP TIA1</td>
</tr>
<tr>
<td>ENOX1 RBM5 TRA2A RPS5 SRSF10</td>
</tr>
<tr>
<td>FAM120A RBM8A TROVE2 SAFB2 SRSF12</td>
</tr>
<tr>
<td>FUS RBMS3 U2AF1 SART3 SRSF2</td>
</tr>
<tr>
<td>SRSF1 SNRNP70 SND1 SF3B1 SF3B4</td>
</tr>
</tbody>
</table>
Supplementary Figures Legends

Figure S1 Clinical features before and after propensity score matching between early BCR and long-term BCR survival groups.

Figure S2 The Enrichment Map of five-lncRNAs signature associated biological signaling pathway using GSEA (A, B). Circos plot showed the most correlated and co-expressed genes of PRKAG2-AS1 (C) and CRNDE (D) with respect to genomic coordinates.

Figure S3 Notable pathway enrichment of the target genes (A) and the enrichment in the GO terms: molecular function (B), biological process (C), cellular component (D).
Figure s1

A

Matched

\[ \geq 65 \]

\[ < 65 \]

Original

\[ \geq 65 \]

\[ < 65 \]

B

Gleason score

Matched sample

\( (9,10) \)

\( (8,9) \)

\( (7,8) \)

\( (6,7) \)

Original

\( (9,10) \)

\( (8,9) \)

\( (7,8) \)

\( (6,7) \)

C

T stage

Matched sample

\( T_x \)

\( T_4 \)

\( T_3 \)

\( T_2 \)

Original

\( T_x \)

\( T_4 \)

\( T_3 \)

\( T_2 \)

D

N stage

Matched sample

\( N_x \)

\( N_1 \)

\( N_0 \)

Original

\( N_x \)

\( N_1 \)

\( N_0 \)

\[ \text{long-term BCR survival} \]

\[ \text{early BCR} \]
Figure s3