

Supplementary Table S1: Search Strategies to be used for study identification and selection

Database	Search Strategy
<b>MEDLINE</b> <b>Ovid</b> <b>MEDLINE(R)</b> <b>ALL 1946 to</b> <b>April 14, 2023</b>	<ol style="list-style-type: none"> <li>1. (kidney adj3 transplant*).mp.</li> <li>2. (renal adj3 transplant*).mp.</li> <li>3. exp Kidney Transplantation/</li> <li>4. ((kidney or renal) and (graft* or allograft*)).mp.</li> <li>5. exp Organ Transplantation/ and exp Diabetes Mellitus, Type 2/</li> <li>6. (diabetes and (post-transplant* or posttransplant* or (after adj2 transplant*))).mp.</li> <li>7. or/1-6</li> <li>8. metformin.mp.</li> <li>9. (dimethylbiguanidine or dimethylbiguanidium or dimethylguanylguanidine or glucophage or glucovance).mp.</li> <li>10. 8 or 9</li> <li>11. 7 and 10</li> <li>12. limit 11 to english language</li> </ol>
<b>Embase</b> <b>Ovid Embase</b> <b>1974 to 2023</b> <b>April 14</b>	<ol style="list-style-type: none"> <li>1. (kidney adj3 transplant*).mp.</li> <li>2. (renal adj3 transplant*).mp.</li> <li>3. exp kidney transplantation/</li> <li>4. ((kidney or renal) and (graft* or allograft*)).mp.</li> <li>5. exp organ transplantation/ and exp non insulin dependent diabetes mellitus/</li> <li>6. (diabetes and (post-transplant* or posttransplant* or (after adj2 transplant*))).mp.</li> <li>7. or/1-6</li> <li>8. metformin.mp.</li> <li>9. (dimethylbiguanidine or dimethylbiguanidium or dimethylguanylguanidine or glucophage or glucovance).mp.</li> <li>10. 8 or 9</li> <li>11. 7 and 10</li> <li>12. limit 11 to english language</li> </ol>
<b>CINAHL</b>	<p>S1 kidney N3 transplant*</p> <p>S2 renal N3 transplant*</p> <p>S3 (MH "Kidney Transplantation+")</p> <p>S4 (kidney or renal) and (graft* or allograft*)</p> <p>S5 (MH "Organ Transplantation+")</p> <p>S6 (MH "Diabetes Mellitus, Type 2")</p> <p>S7 S5 AND S6</p> <p>S8 diabetes and (post-transplant* or posttransplant* or (after N2 transplant*))</p> <p>S9 S1 OR S2 OR S3 OR S4 OR S7 OR S8</p> <p>S10 metformin</p>

	<p>S11 dimethylbiguanidine or dimethylbiguanidium or dimethylguanylguanidine or glucophage or glucovance</p> <p>S12 S10 OR S11</p> <p>S13 S9 AND S12</p> <p>Limiter: English language</p>
<p><b>Cochrane Library</b></p> <p>via Wiley</p>	<p>#1 kidney NEAR/3 transplant*</p> <p>#2 renal NEAR/3 transplant*</p> <p>#3 [mh "Kidney Transplantation"]</p> <p>#4 ((kidney or renal) and (graft* or allograft*))</p> <p>#5 [mh "Organ Transplantation"] and [mh "Diabetes Mellitus, Type 2"]</p> <p>#6 diabetes and (post-transplant* or posttransplant* or (after NEAR/2 transplant*))</p> <p>#7 {OR #1-#6}</p> <p>#8 metformin</p> <p>#9 dimethylbiguanidine or dimethylbiguanidium or dimethylguanylguanidine or glucophage or glucovance</p> <p>#10 #8 AND #9</p> <p>#11 #7 AND #10</p>
<p><b>Web of Science Core Collection</b></p>	<p>TS=((kidney NEAR/3 transplant*) or (renal NEAR/3 transplant*) or ((kidney or renal) and (graft* or allograft*)) or (diabetes and (post-transplant* or posttransplant* or (after NEAR/2 transplant*)))) AND TS=(metformin or dimethylbiguanidine or dimethylbiguanidium or dimethylguanylguanidine or glucophage or glucovance)</p> <p>Languages: English</p>
<p><b>Google Scholar</b></p>	<p>(kidney transplant OR renal transplant OR kidney graft OR renal allograft) AND (metformin OR dimethylbiguanidine OR dimethylbiguanidium OR dimethylguanylguanidine OR glucophage OR glucovance)</p>

**Supplementary Figure 1: PRISMA Flowchart**