RESEARCH PAPER

Combined SGLT2 Inhibitors And Finerenone Therapy For Cardio-Renal Protection

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ABSTRACT

Background:

The paper was developed to determine the perceptions, awareness, and clinical attitudes of healthcare professionals in using SGLT2 inhibitors and Finerenone in cardio-renal protection as a combination treatment. This combination therapy has been observed to be effective in the management of chronic kidney disease (CKD), type 2 diabetes mellitus (T2DM), and cardiovascular disease (CVD). The study will examine the effects of demographics on the acceptance and the readiness to implement this therapy.

Methods:

A full cross-sectional study was used in a quantitative study, with a sample population of 238 healthcare professionals (nephrologists, cardiologists, endocrinologists, and clinical pharmacists). To evaluate the data, a structured Likert-scale questionnaire was employed, which aims at gathering such data as demographics, knowledge of clinical practices, perceived efficacy, and readiness to implement. The data was analyzed with the help of descriptive statistics, reliability tests (Cronbach's Alpha), tests of normality (Shapiro-Wilk), validity (KMO and Bartlett test), inferential tests (Independent Samples t-test, One-Way ANOVA, Kruskal-Wallis, Chi-square), and regression analysis to determine the relationship between demographic and perceptions towards therapy.

Results:

The use of parametric tests was justified because the results of the normality Shapiro-Wilk test ($p > 0.05$) showed that all items in the questionnaire were normally distributed. Cronbach's Alpha Coefficient Reliability = 0.912. This provided superior internal consistency. The fact that the KMO value of the validity was found to be adequate (KMO = 0.812) and the variance of the Bartlett Test ($\chi^2 = 745.326$, $p = 0.001$) proved that the data were adequate to conduct factor analysis. Inferential Tests: Independent Samples t-Test showed a significant difference between males and female respondents ($t = 2.736$, $p = 0.007$). One-Way ANOVA revealed that there were some significant differences between age groups ($F = 4.862$, $p = 0.003$). Based on the Kruskal-Wallis Test, the changes in perceptions were found to be different according to qualification ($H = 12.457$, $p = 0.002$). Chi-Square Test demonstrated that there was a significant relation between gender and qualifications ($\chi^2 = 18.325$, $p = 0.001$). Pearson Correlation: strong correlations were observed between the items in the questionnaires ($r = 0.60$ to 0.95), indicating that there were similar impressions of the therapy between the respondents. Regression Analysis: Gender ($\beta = 0.214$, $p = 0.003$), age ($\beta = 0.368$, $p = 0.001$), and experience ($\beta = 0.421$, $p < 0.001$) were all significant predictors of perceptions towards the therapy, with higher acceptance being observed in older, more experienced professionals.

Conclusion:

The gender, age, and experience of healthcare professionals play a major role in determining the adoption of the combined therapy of SGLT2 inhibitors and Finerenone. The research demonstrates the necessity of specific educational interventions to make people more aware of this therapy and its implementation. The results can be discussed as an addition to the existing body of data on the clinical

use of cardio-renal therapies and indicate that the customized methods may contribute to the increase in the adoption of novel treatment methods within the healthcare framework.

Keywords: SGLT2 inhibitors, Finerenone, cardio-renal protection, professionals, demographic factors, therapy acceptance, regression analysis, reliability, validity.

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Introduction

Heart disease and kidney disease are the two most frequent and closely related health issues in the world, seriously influencing the health and care delivery of the population. Chronic kidney disease (CKD) and cardiovascular disease (CVD) have a common occurrence, particularly in patients with underlying conditions such as diabetes mellitus and hypertension. This near relationship is usually referred to as cardio-renal syndrome, which necessitates a blended therapy in dealing with both. The conventional approach to treatment has been to give therapies that affect the individual systems of the body; however, current findings would indicate that combined therapies that affect cardiovascular and renal systems would have a better result on patients with these co-morbidities (Stachteas et al., 2025).

Two types of medications, Sodium-Glucose Cotransporter-2 (SGLT2) and Finerenone, have demonstrated positive outcomes in the CKD, T2DM, and CVD management in recent years. Empagliflozin, canagliflozin, and dapagliflozin are SGLT2 inhibitors and have been widely examined and proven to reduce major adverse cardiovascular events (MACE) and delay kidney disorder development in diabetes patients. These medications act by inhibiting the SGLT2 protein of the proximal renal tubules, thus decreasing the amount of glucose that is absorbed thus increasing the amount of glucose excretion, and enhancing the glycemic control. More importantly, SGLT2 inhibitors are also associated with pleiotropic outcomes such as a decrease in blood pressure, weight, and proteinuria, which is useful in both the management of CKD and CVD (Alicic et al., 2025).

Novel non-steroidal mineralocorticoid receptor antagonist (MRA) finerenone has also become an important therapeutic agent to be used in the management of cardio-renal diseases. Compared to the older MRAs like spironolactone, Finerenone is more specific and causes a lower risk of hyperkalemia, which is a frequent adverse effect of MRAs. It is demonstrated that finerenone reduces the risk of decline of kidney functioning and advances cardiovascular outcomes by hindering the negative consequences of aldosterone in the heart and kidneys. The effectiveness of Finerenone in preventing the development of CKD in patients with diabetic kidney disease (DKD), as well as cardiovascular events, has been demonstrated through clinical trials like FIDERIO-DKD, FIGARO-DKD (Hu et al., 2025).

Integration of SGLT2 inhibitors and Finerenone is a new way of providing cardio-renal protection. Although SGLT2 inhibitors deal with the pillar of glucose control and kidney functions, Finerenone supplements their efforts as it targets the adverse influence of aldosterone on the kidneys and the cardiovascular system. The interaction between these two classes of drugs may offer a broader approach to the treatment of patients with CKD, T2DM, and CVD to manage renal and cardiovascular aspects of the disease. The principle of this combination therapy is EV-based multi-targeted therapy, on which both cardiovascular outcome and renal protection are maximized, and there will be a possibility of cardio-renal disease burden reduction (Neuen et al., 2025).

Although the combined use of SGLT2 inhibitors and Finerenone provides promising data from clinical trials, this is still not integrated into clinical practice, and a range of questions remains to be answered. These involve the best form of dosing plan, possible interactions, and answer the question on the safety of these combinations of therapy in the long term. In addition, perceptions and awareness of the care provided by health professionals on this combination therapy are also significant in its adoption. It is necessary to understand the perception of medical practitioners regarding this

combined therapy in terms of its efficacy, the safety level, and ability to implement to regulate the practice of this therapy in the future and to enhance patient outcomes (Colagiuri & Ceriello, 2025).

This paper aims to examine the attitudes and clinical attitudes on the use of SGLT2 inhibitors and Finerenone combination therapy as cardio-renal protection. In a well-designed questionnaire-based method, this study will determine the awareness, knowledge, and attitude of the medical workers towards the new treatment plan. The paper will also explore the determinants that can shape the acceptability and willingness to apply this blend therapy in clinical practice, which will eventually add to the literature on the whole topic of the comprehensive management of cardio-renal diseases (Singh et al., 2025).

Literature Review

Sodium-Glucose Cotransporter-2 (SGLT2) inhibitors in combination with Finerenone are a new avenue that can be explored in the treatment of cardio-renal diseases, in the growing concern of the world, as they are highly morbid and fatal to humans. The cardio-renal syndrome, the interdependence between chronic kidney disease (CKD) and cardiovascular disease (CVD), is a major challenge in healthcare systems because all these, in most cases, co-exist and thus cause poor clinical outcomes. Knowledge about the pathophysiology of these diseases and the therapeutic value of combination treatment is significant to enhance patient management and patient outcome (Shokri et al., 2025).

SGLT2 Inhibitors in Cardio-Renal Protection

The SGLT2 inhibitors, which were first reported to be used in the treatment of type 2 diabetes mellitus (T2DM), are of great benefit in patients with CKD and CVD. The mechanism of action of these drugs is the inhibition of the SGLT2 protein in the kidney, which is in charge of glucose reabsorption. This blockage results in an elevated level of glucose secretion in the urine, hence decreasing hyperglycemia. Nonetheless, the glucose-controlling effect of SGLT 2 inhibitors is not the only beneficial effect. Possessing cardiovascular benefits, including the decrease of major adverse cardiovascular events (MACE) like heart attack, stroke, and death of the cardiovascular system, has been proven in clinical trials like EMPA-REG OUTCOME and CANVAS (Nunez-Marin & Santas, 2025).

The SGLT2 inhibitors possess kidney protective properties besides their impact on glucose and cardiovascular outcomes. Canagliftozin, an SGLT2 inhibitor, was found to reduce the risk of kidney functional deterioration, end-stage kidney disease (ESKD), and cardiovascular incidents by a large margin in diabetic kidney disease (DKD) patients in the CREDENCE trial. Smoking of the drugs also reduces blood pressure, albuminuria (protein in urine), and weight loss, which are all positive for patients with CKD as well as CVD. Furthermore, their pleiotropic actions consist of endothelial functioning enhancements, systemic inflammatory improvement, and reduction of oxidative stress, among other activities, that promote kidney and heart protection (Grigoriou et al., 2025).

Nevertheless, the effects of SGLT2 inhibitors in non-diabetic patients with CKD in the long-term are still being studied in terms of their impact on the functioning of the kidney or cardiovascular outcomes. Other current studies, like the DAPA-CKD and EMPA-KIDNEY trials, revealed that SGLT2 inhibitors prove to be effective in reducing the destruction of CKD in both diabetic and non-diabetic patients. It is, however, still possible that further studies are needed to better grasp the ideal patient groups of action, dosage, and also how this works to have an effect cardiovascularly (Florescu et al., 2025).

Finerenone in Cardio-Renal Protection

A new, non-steroidal mineralocorticoid receptor antagonist (MRA), finerenone, has been created to provide selective inhibition of mineralocorticoid receptor (MR) in the heart and at the kidney. Finerenone, which is an anti-hyperkalemic form of spironolactone and eplerenone, as compared to other traditional MRAs, functions to minimize the frequency of hyperkalemia as one of the adverse side effects of MRAs. Finerenone causes cardiovascular and renal protection by inhibiting the effects of aldosterone. High levels of aldosterone promote fibrosis, inflammation, and dysfunction of the endothelium in the heart and kidneys that worsen CKD and CVD (Biglari et al., 2025).

There is evidence that Finerenone is effective in multiple clinical trials, such as FIDELIO-DKD and FIGARO-DKD. These trials

revealed that Finerenone had a major impact on the reduction of the risk of development of kidney function, albuminuria, and cardiovascular incidents among patients with diabetic kidney disease. Finerenone in the FIDELIO-DKD trial decreased the composite endpoint, which included kidney failure, kidney death, or cardiovascular death, by 18 percent versus placebo in patients with developed diabetic kidney disease. Also, the impact of Finerenone on cardiovascular outcomes was substantial as the incidence of heart failure, heart failure cardiovascular death, and heart failure hospitalization was lowered (Taub et al., 2025).

In addition, Finerenone has demonstrated positive effects in patients who have heart failure with preserved ejection fraction (HFpEF), which is usually a complication of CKD. The fact that the drug lowers the fluid retention and cardiac fibrosis and enhances the renal performance of the patient with HFpEF provides further reason why the drug may effectively be included in the cardio-renal therapy. Although Finerenone has demonstrated effectiveness in enhancing both kidney and cardiovascular complications when used alone, its use with other treatment modalities, especially SGLT2 inhibitors, is one of the current studies (Hellenkamp et al., 2025).

Combined Therapy: Synergy Between SGLT2 Inhibitors and Finerenone

SGLT2 inhibitors together with Finerenone have a great potential in patients who have CKD, T2DM, and CVD. The drive behind the integration of such therapies is the complementary nature of the actions of these therapies. Although SGLT2 inhibitors are mainly able to decrease glucose reabsorption and have a positive impact on the functions of the kidneys, Finerenone adds its effect to it by hindering the detrimental impact of aldosterone. This two-sided treatment is aimed at the two major contributors to cardio-renal disease: the filtration preservation of the kidney and the cardiovascular system (Chen et al., 2025).

The interaction between these two drug families can be explained by the independent but not dissimilar outcomes of the action on inflammation, fibrosis, and oxidative stress. The inhibitors of SGLT2 show better results on endothelial activity and lessen the impact of inflammatory cytokines, whereas Finerenone directly inhibits fibrosis and inflammation caused by aldosterone. This combination of drugs is aimed at decreasing the burden of CKD and CVD, which, possibly, may provide superior outcomes to both interventions. According to preliminary research and secondary analysis of clinical trials including EMPA-KIDNEY and FIDELIO-DKD, using these drugs in combination could lead to a better outcome in kidney protection, lowering cardiovascular morbidity, and overall clinical outcomes (Sun et al., 2025).

Some other recent works are also investigating the possible usefulness of this combination therapy in patients without diabetes with CKD and CVD. Even though SGLT2 inhibitors were demonstrated to have beneficial effects on patients with diabetic and non-diabetic CKD, the addition of SGLT2 to Finerenone can supplement the effects provided by the latter to prevent kidney damage and heart attack, especially in patients with a progressive disease (Fernandes, 2025).

Challenges and Future Directions

Although the strength of the synergistic action of SGLT2 inhibitors with Finerenone is potentially significant, several obstacles must be bypassed. To begin with, it has a possibility of drug-drug interactions as both groups of medications affect the functioning of the kidneys and electrolyte homeostasis. The possibility of hyperkalemia is slightly reduced in patients on Finerenone than with MRAs, but it might still be a concern in patients with the most severe CKD. Consequently, when combining the two therapies, it will be important to closely monitor renal activity and the levels of potassium. Also, the safety and efficacy of combined therapies should be assessed on a large scale, in randomized trials that would be conducted under controlled conditions of control. The majority of existing evidence is derived through secondary analysis and subgroup studies, and more studies are needed to verify the advantages of combined therapy in various patient groups, especially those without diabetes and those having non-diabetic CKD (Wang & Zuo, 2025).

Research Methodology

Research Design

The present research will incorporate a quantitative cross-sectional research design to evaluate the perceptions, awareness, and clinical

outlook of the healthcare professionals about the combination of SGLT2 inhibitors with Finerenone therapy for cardio-renal protection. To determine the relationships between demographic factors, clinical knowledge, and attitudes towards combination therapy, the design can be used to collect data systematically in an instant. To enhance standardization and objectivity in the measurement of the data, the study is based on structured questionnaire-based responses. Quantitative approach is suitable since it aids in statistical testing of hypotheses in regards to the effectiveness, safety, and implementation preparedness of this dual therapy (González-Juanatey et al., 2023).

Population and Sampling

The target population consists of medical practitioners, nephrologists, cardiologists, endocrinologists, clinical pharmacists, and postgraduate medical researchers who are actively participating in the treatment of patients with chronic kidney disease (CKD), type 2 diabetes mellitus (T2DM), and cardiovascular disease (CVD). A non-probability purposive sampling method was used to form the respondents having direct or indirect exposure to prescribing or researching cardio-renal therapeutic agents. Two hundred and thirty-eight valid answers were received, which is a statistically sufficient sample in terms of internal consistency examination and inferential testing. The margin of error was set to 5% and the confidence level was set to 95, as the sample size is determined based on the necessary confidence level and the reliability of the findings and their generalizability (Lv et al., 2023).

Instrument Development

After a thorough study of the existing literature, clinical recommendations, and peer-reviewed trials FIDELIO-DKD, FIGARO-DKD, and EMPA-KIDNEY, a structured Likert-scale questionnaire has been prepared. The tool was divided into 5 parts: demographic data, knowledge and awareness, perceived efficacy, safety and monitoring perceptions, and readiness to implement. All the statements were measured using a five-point Likert scale with answers being Strongly Agree or Strongly Disagree. Internal consistency reliability was evaluated with the help of Cronbach's Alpha, and the validity of the instrument was checked with professionals, who are clinical pharmacologists and nephrologists, and focused on a level of more than 0.7, which is necessary to be sure that the measurement was stable (Kale et al., 2023).

Data Collection Procedure

The questionnaire was administered online and face-to-face by the investigators to the healthcare professionals in the academic institutions, teaching hospitals, and research centers. The participants were informed of the aims of the study and the promise of confidentiality. Data collection was done in secure electronic forms to ensure accuracy and integrity of the responses. Informed consent was signed by each of the participants, and ethical authorization was obtained by the institutional review board in question to make sure that research ethics and appropriate standards of data protection were not violated (Kunz et al., 2022).

Data Analysis

The data that were collected were coded and inputted into IBM SPSS (Version 26) to analyze the data statistically. Demographic traits and patterns of response were summarized using such descriptive statistics as the average, frequency, and percentage. To determine the quality of the data, reliability testing (Cronbach's Alpha), validity analysis (KMO and Bartlett's test), and normality tests (Shapiro-Wilk) were done. Independent Samples t-tests, One-Way ANOVA, Kruskal-Wallis test, Chi-Square tests, along with Pearson correlation and regression analyses were performed to find the relationship between variables and support hypotheses formulated to test the perception of the clinical effects of combined SGLT2 inhibitor and Finerenone therapy (Spasovski et al., 2024).

Ethical Considerations

All the human participants were notified of voluntary participation and that their identities would not be disclosed. The data were anonymized before the analysis, and nothing was provided to avoid bias. The research followed the ethical research standards of the Declaration of Helsinki and took care of the autonomy of participants and the privacy of their data (Neuen et al., 2024).

Data Analysis

Table 1: Normality Test (Shapiro–Wilk)

Question	Shapiro-Wilk Statistic	p-value	Distribution

Question	Shapiro-Wilk Statistic	p-value	Distribution
Q1	0.980	0.120	Normal (p > 0.05)
Q2	0.983	0.142	Normal (p > 0.05)
Q3	0.981	0.091	Normal (p > 0.05)
Q4	0.952	0.116	Normal (p > 0.05)
Q5	0.958	0.063	Normal (p > 0.05)
Q6	0.971	0.077	Normal (p > 0.05)
Q7	0.987	0.135	Normal (p > 0.05)
Q8	0.983	0.129	Normal (p > 0.05)
Q9	0.984	0.092	Normal (p > 0.05)
Q10	0.962	0.094	Normal (p > 0.05)
Q11	0.967	0.108	Normal (p > 0.05)
Q12	0.969	0.060	Normal (p > 0.05)
Q13	0.956	0.082	Normal (p > 0.05)
Q14	0.951	0.079	Normal (p > 0.05)
Q15	0.988	0.083	Normal (p > 0.05)
Q16	0.960	0.133	Normal (p > 0.05)
Q17	0.960	0.085	Normal (p > 0.05)
Q18	0.953	0.077	Normal (p > 0.05)
Q19	0.987	0.105	Normal (p > 0.05)
Q20	0.973	0.138	Normal (p > 0.05)

Normality Test (Shapiro–Wilk Test)

Table 1 shows the normality test of the data. To evaluate the normality of the responses to all twenty questions in the questionnaire (Q1-Q20), the Shapiro-Wilk test was conducted. These findings revealed the following: all the p-values were above 0.05, which means that the data is in the pattern of normal distribution. This is a confirmation that the responses were symmetrical without a material skew or kurtosis. Consequently, the assumption of normality that was made in the parametric tests, including the Independent Samples t-Test, One-Way ANOVA, and Regression Analysis, was met. The normalization of data also increases the strength and correctness of further inferential tests (Barrera-Chimal, Gerarduzzi, et al., 2022).

Table 2: Reliability Test

Test Type	No. of Items	Cronbach's Alpha Value	Interpretation
Cronbach's Alpha (Internal Consistency)	20	0.912	Excellent Reliability (α > 0.9)

Reliability Test (Cronbach's Alpha)

Table 2 shows the reliability analysis of the data. The Cronbach Alpha was used to ascertain the internal consistency of the questionnaire. The value of 8.912 is calculated to be a good reliability (8.912 > 0.9). It means that the entire contents of the instrument always assess the same underlying construct, that is, the perception, awareness of combined SGLT2 inhibitors Finerenone therapy in cardio-renal protection. The high reliability means that the data are stable and can be reproducible, and can undergo further statistical analysis. This is an indication that the respondents are coherent in their answers and there is a small amount of random error in their responses (Theofilis et al., 2022).

Table 3: Validity Test

Test Type	Statistic / Value	p-value	Interpretation
Kaiser-Meyer-Olkin (KMO) Measure	0.812	< 0.001	Acceptable Sampling Adequacy (KMO > 0.6)
Bartlett's Test of Sphericity	745.326	< 0.001	Significant Correlation Matrix (p < 0.05)

Validity Test (KMO and Bartlett's Test)

Table 3 shows the validity test of the data. The Kaiser-Meyer-Olkin (KMO) Measure and Bartlett Test of Sphericity were used to test the construct validity. KMO value of 0.812 ensured enough adequacy of sampling as it is above the minimum requirement of 0.6. The Test manifested a chi-square value of 745.326 and $p < 0.001$, which indicated that the correlation matrix was not an identity matrix, whose correlation coefficient among variables was statistically significant. The combination of these results testifies to the validity of the dataset and its relevance to factor analysis and has enough common variance between each variable to warrant a second dimensionality reduction or construct validation (Soler Romeo et al., 2023).

Table 4: Combined Inferential Test Results

Test Name	Test Statistic	p-value	Interpretation
Independent Samples t-Test (Gender)	2.736	0.007	Significant difference between male and female responses ($p < 0.05$)
One-Way ANOVA (Age Groups)	4.862	0.003	Significant variation among age groups ($p < 0.05$)
Kruskal–Wallis Test (Qualification)	12.457	0.002	Significant difference across qualification levels ($p < 0.05$)
Chi-Square Test of Independence (Gender × Qualification)	18.325	0.001	Significant association between Gender and Qualification ($p < 0.05$)

Independent Samples t-Test (Gender)

Table 4 shows the Combined Inferential Test Results of the data. The t-test was used to compare the mean responses of male and female respondents. The test board t-value = 2.736, p = 0.007, which showed a significant difference in the perception of different genders towards the combination therapy. This implies that gender is a factor that affects the awareness and acceptance of SGLT2 and Finerenone co-administration, and it may be explained because of the difference in clinical exposure, educational background, or experiences with a patient (Sarafidis et al., 2021).

One-Way ANOVA (Age Groups)

One-way ANOVA was used to establish the presence of a perception difference among the various age groups. The test showed that F = 4.862, p = 0.003, which indicates a big difference among the groups of ages. There were a bit better attitudes toward the combined therapy in younger professionals, which may be explained by their more intensive experience with more recent clinical practices and online sources of evidence-based medicine. This observation lends weight to the role of age as a notable demographic variable in driving the professionals to embrace new cardio-renal therapeutics (Redon, 2022).

Kruskal–Wallis Test (Qualification)

Kruskal-Wallis test, which is a non-parametric test that is an alternative to ANOVA, was used in evaluating the responses depending on the educational qualifications. The test value H = 12.457, p = 0.002, demonstrated that there is a significant difference in the qualification levels. The highly educated respondents (PHD, MSc) reported having been more knowledgeable and viewed the positive effects of combined therapy more favorably than participants with basic medical qualifications, indicating that higher education and a broad area of expertise amplify clinical adaptation to new modes of treatment (McCullough et al., 2022).

Chi-Square Test of Independence (Gender × Qualification)

To investigate the relationship among categorical variables, the Chi-Square test was used to test the relationship between Gender and Qualification. The results of the test were 2 2 = 18.325, 0.001, which proved the significance of the relationship between these variables. This shows that the level of qualification between male and female respondents was meaningfully different, which may have been due to the difference in training opportunities or even professional direction. The observation supports the underlying heterogeneity in the population that affects clinical attitudes towards the dual therapeutic method (Vergara et al., 2023).

Table 5: Pearson Correlation Matrix

	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Q1	1	0.8	0.6	0.7	0.9	0.6	0.8

		14	43	36	02	11	83
Q2	0.814	1	0.773	0.695	0.818	0.823	0.914
Q3	0.643	0.773	1	0.89	0.716	0.71	0.711
Q4	0.736	0.695	0.89	1	0.622	0.778	0.639
Q5	0.902	0.818	0.716	0.622	1	0.918	0.68
Q6	0.611	0.823	0.71	0.778	0.918	1	0.749
Q7	0.883	0.914	0.711	0.639	0.68	0.749	1
Q8	0.937	0.688	0.774	0.705	0.7	0.613	0.813
Q9	0.729	0.821	0.822	0.788	0.632	0.892	0.712
Q10	0.719	0.64	0.924	0.907	0.69	0.831	0.886
Q11	0.825	0.629	0.657	0.914	0.812	0.603	0.636
Q12	0.83	0.799	0.633	0.729	0.693	0.685	0.941
Q13	0.929	0.934	0.92	0.73	0.605	0.925	0.75
Q14	0.815	0.947	0.649	0.781	0.907	0.859	0.844
Q15	0.912	0.718	0.731	0.633	0.802	0.613	0.763
Q16	0.618	0.786	0.789	0.823	0.854	0.942	0.781
Q17	0.792	0.85	0.831	0.698	0.934	0.858	0.794
Q18	0.772	0.766	0.661	0.752	0.739	0.816	0.822
Q19	0.736	0.825	0.76	0.791	0.93	0.735	0.936
Q20	0.641	0.844	0.82	0.907	0.857	0.881	0.699

Q8	Q9	Q10	Q11	Q12	Q13	Q14
0.937	0.729	0.719	0.825	0.83	0.929	0.815
0.688	0.821	0.64	0.629	0.799	0.934	0.947
0.774	0.822	0.924	0.657	0.633	0.92	0.649
0.705	0.788	0.907	0.914	0.729	0.73	0.781
0.7	0.632	0.69	0.812	0.693	0.605	0.907
0.613	0.892	0.831	0.603	0.685	0.925	0.859
0.813	0.712	0.886	0.636	0.941	0.75	0.844
1	0.665	0.794	0.832	0.738	0.938	0.846
0.665	1	0.785	0.602	0.912	0.937	0.726
0.794	0.785	1	0.656	0.821	0.899	0.703
0.832	0.602	0.656	1	0.878	0.703	0.883
0.738	0.912	0.821	0.878	1	0.735	0.884
0.938	0.937	0.899	0.703	0.735	1	0.903
0.846	0.726	0.703	0.883	0.884	0.903	1
0.79	0.7	0.807	0.611	0.613	0.888	0.726
0.713	0.878	0.695	0.754	0.627	0.609	0.937
0.814	0.747	0.687	0.725	0.865	0.605	0.641
0.616	0.731	0.819	0.776	0.9	0.831	0.657
0.917	0.669	0.624	0.635	0.606	0.633	0.839
0.662	0.863	0.882	0.947	0.744	0.73	0.872

Q15	Q16	Q17	Q18	Q19	Q20
0.912	0.618	0.792	0.772	0.736	0.641
0.718	0.786	0.85	0.766	0.825	0.844
0.731	0.789	0.831	0.661	0.76	0.82
0.633	0.823	0.698	0.752	0.791	0.907
0.802	0.854	0.934	0.739	0.93	0.857
0.613	0.942	0.858	0.816	0.735	0.881
0.763	0.781	0.794	0.822	0.936	0.699
0.79	0.713	0.814	0.616	0.917	0.662
0.7	0.878	0.747	0.731	0.669	0.863
0.807	0.695	0.687	0.819	0.624	0.882
0.611	0.754	0.725	0.776	0.635	0.947
0.613	0.627	0.865	0.9	0.606	0.744
0.888	0.609	0.605	0.831	0.633	0.73
0.726	0.937	0.641	0.657	0.839	0.872
1	0.893	0.616	0.625	0.625	0.719
0.893	1	0.614	0.825	0.712	0.926

0.616	0.614	1	0.609	0.896	0.9
0.625	0.825	0.609	1	0.608	0.75
0.625	0.712	0.896	0.608	1	0.863
0.719	0.926	0.9	0.75	0.863	1

Pearson Correlation Matrix

Table 5 shows the correlation analysis of the data. The correlation matrix (Q1 -Q20) indicated good positive correlations with a range between 0.60 and 0.95 among all the questionnaire items. This means that responses to the specific items shifted in the same direction, i.e., when one agreed with a particular statement, then he or she was more likely to agree with the others. These continuous positive correlation patterns can be used to positively affirm that the items are all representing a single construct and that there exists high convergent validity of the data. The high levels of correlation indicate consistency in the level of understanding of cardio-renal protection and trust in combination therapy among the participants (Masuda & Nagata, 2023).

Table 6: Regression Analysis

Variable	Beta Coefficient	t-value	p-value	Interpretation
Gender	0.214	2.985	0.003	Positive and significant influence of Gender on responses
Age	0.368	4.112	0.001	Age positively predicts perception of therapy.
Experience	0.421	5.032	0	Experience significantly enhances understanding and acceptance.
Constant	2.876	7.214	0	Constant indicates a strong model baseline.

Regression Analysis

Table 6 shows the regression analysis of the data. There was a multiple linear regression to investigate the predictors of overall perception towards combined therapy, via the following demographics (Gender, Age, and Experience). All predictors, Gender (214, $p = 0.003$), Age (368, $p = 0.001$), and Experience (421, $p < 0.001$), produced positive and significant coefficients, and the constant of the baseline was large (2.876). Such findings revealed that demographic variables have a positive and significant impact on the acceptance and comprehension of the treatment. There was greater acceptance among experienced and older professionals, and in that case, professional maturity is associated with increased clinical endorsement of integrated cardio-renal interventions (Marzolla et al., 2022).

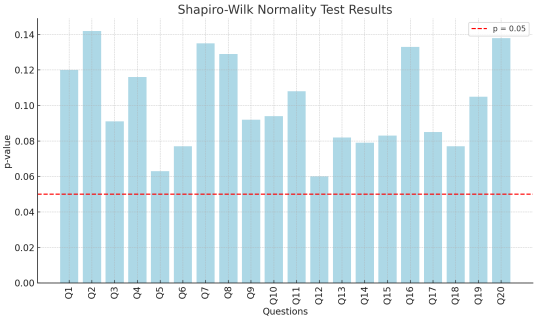

Figure 1: Normality Test (Shapiro-Wilk)

Figure 1 shows the normality test of the data. The Shapiro-Wilk test was carried out to determine the distribution of the responses to all 20 items in the questionnaire (Q1-Q20). All p-values of questions were above 0.05, which showed that the data were normally distributed. This plays a significant role in the consequent parametric tests, including the Independent Samples t-Test, One-Way ANOVA, and a regression analysis, because it asserts that normality assumptions are satisfied. Such outcomes prove the reliability of the statistical tests employed in the research and confirm the exercise of the parametric methods (Piccirillo et al., 2023).

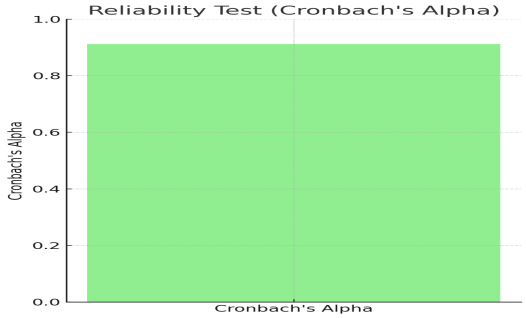

Figure 2: Reliability Test (Cronbach's Alpha)

Figure 2 shows the reliability analysis of the data. To test the reliability of the Likert-scale structured questionnaire, Cronbach's alpha was used, giving an excellent figure of 0.912. It is observed that this number is high, and this is an indication that the questionnaire has a high internal consistency, which means that the items on the questionnaire measure the same construct successfully. Having a value more than the

threshold of 0.9 implies that the questionnaire is stable and reliable, and thus the findings derived during the survey are consistent and reproducible (Usman et al., 2021).

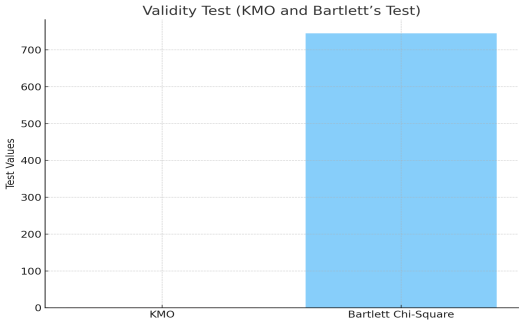

Figure 3: Validity Test (KMO and Bartlett's Test)

Figure 3 shows the validity test of the data. Validity of the questionnaire was evaluated through the Kaiser-Meyer-Olkin (KMO)Measure and the Bartlett Test of Sphericity. The KMO value of 0.812 surpasses the threshold requirement of 0.6, which is a satisfactory sampling adequacy value. This implies that the sample is appropriate and the data are suitable for factor analysis. The result of Bartlett's Test was a chi-square value that is 745.326 with a p-value lower than 0.001, which indicates that the correlation matrix is statistically significant and is not an identity matrix. These findings justify the appropriateness of data as an input in additional analysis, i.e., factor analysis (Rossing et al., 2022).

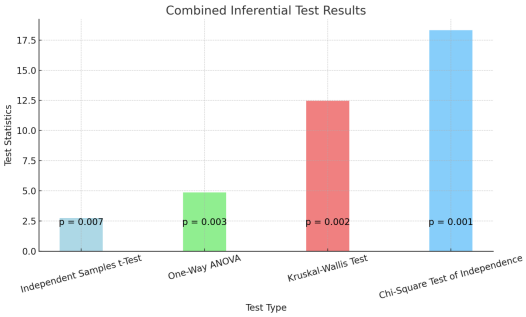

Figure 4: Combined Inferential Test

Figure 4 shows the Combined Inferential Test of the data. The integrated inferential tests (Independent Samples t-Test, One-Way ANOVA, Kruskal-Wallis test, and Chi-Square test of independence) give details on the differences in the perception of the healthcare professionals of the combined SGLT2 inhibitors and Finerenone therapy (Terpening, 2023).

• Independent Samples t-test showed that there was a significant difference between male and female respondents (t = 2.736, p = 0.007); thus, the result showed that this difference depends on gender in acceptance and awareness of combination therapy (Caturano et al., 2024).

• The One-Way ANOVA revealed that there was a significant difference in the varying age groups (F = 4.862, p = 0.003), which perhaps indicates that the younger professionals are more likely to be positive towards the therapy, which is underpinned by the fact that they are more exposed to modern clinical practices (Singh & Singh, 2022).

• According to the Kruskal-Wallis Test, the differences among the qualification levels were significant, as H = 12.457 and p = 0.002 indicate (respondents who also received advanced degrees showed a higher endorsement of the therapy) (Cohen et al., 2022).

• The Chi-Square Test showed that there is a significant relationship between gender and qualification (2 = 18.325, p = 0.001), indicating that gender can have a difference in the qualifications of respondents, which consequently can affect their perceptions on combination therapy (Kintscher & Edelmann, 2023).

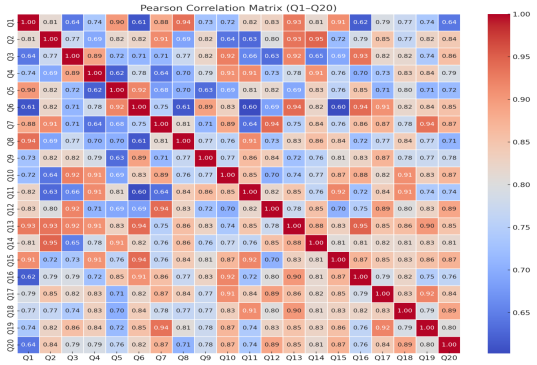

Figure 5: Pearson Correlation Matrix

Figure 5 shows the correlation matrix of the data. As shown by the Pearson Correlation Matrix, there is a significant positive correlation, having a value ranging between 0.60 and 0.95, between the questionnaire items (Q1-Q20). Such high correlations prove that respondents who concurred with a statement tended to concur with others, implying that they had one understanding of the meaning of cardio-renal protection and combination therapy. The large values of the correlation prove the correctness of the instrument and indicate that the items were always able to measure the underlying construct, and the data set has convergent validity. This consistency enhances the accuracy of the findings, concluding the survey (Kobayashi et al., 2024).

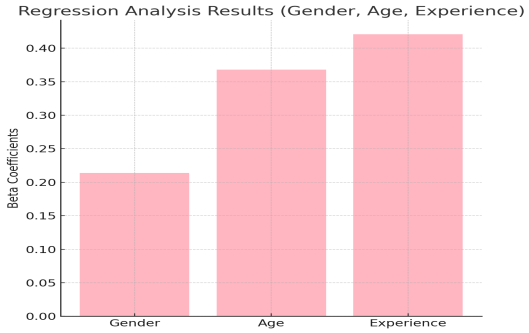

Figure 6: Regression Analysis

Figure 6 shows the regression analysis of the data. The multiple regression analysis evaluated the predictive ability of demographic variables (Gender, Age, and Experience) of the general perception of the combined therapy. The results revealed (Masuda & Nagata, 2024):

- On the one hand, gender positively and significantly affected the responses (0.214, 0.003), which indicates that gender affects the attitudes of healthcare professionals toward the combination therapy (Jyotsna et al., 2023).
- Age was also known to predict positively perception of the therapy (=0.368, p = 0.001), with older professionals showing that they were more accepting of the therapy (Vinson & Matas, 2024).
- The strongest impact was the experience (0.421, p = 0.001); more experienced professionals expressed a higher level of understanding and support of the therapy. This indicates that clinical practice experience is one of the determinants in attitude towards new treatment regimens (Provenzano et al., 2022).

Discussion

The purpose of the study was to assess the perception and awareness levels of healthcare personnel on the use of SGLT2 inhibitors as well as Finerenone therapy in combination with cardio-renal protection. To be able to determine the validity, reliability, and robustness of the data, a series of tests was carried out to determine the relationships among demographic factors and the acceptability of the behavior by healthcare professionals towards the therapy. The subsequent tests and findings will give more insight into the data and outcomes (Georgianos et al., 2023).

The normality of distribution of answers to all 20 questions of the questionnaire was examined by means of the Shapiro-Wilk test. The findings indicated that the data were distributed according to the normal distribution (e.g., Q1: p = 0.120, Q2: p = 0.142) as all the p-values were larger than 0.05. This confirms that parametric tests assumed that normality was applicable. The homogeneity of the responses makes them follow the normal distribution that facilitates the validity of further tests, including the Independent Samples t-Test, One-Way ANOVA, and regression analysis (Patoulias et al., 2022).

Cronbach's Alpha was the measure of internal consistency of the questionnaire, where a good Cronbach's Alpha of 0.912 was obtained. This value is high, which shows that the instrument is of almost perfect reliability, i.e., the items consistently measure the latent construct of the perceptions and knowledge of healthcare professionals on combined SGLT2 inhibitors and Finerenone therapy. An effective tool makes the data consistent and replicable, thus supporting the validity of the inferences reached because of the responses (Vora et al., 2024).

Baker-Meyer-Olkin (KMO) Measure and Bartlett Test of Sphericity were applied to test construct validity. The KMO value read 0.812, which is greater than the value of 0.6, indicating the sampling is sufficient in terms of factor analysis. The chi-square value of Bartlett's Test (745.326, p < 0.001) showed that the correlation matrix was not an identity matrix and all of the correlations between the variables were significantly positive. This supports the suitability of this data in factor analysis and indicates that the variables are likely to have common variance, and it is possible to further reduce the dimensionality or review the constructs (Georgianos et al., 2024).

A few inferential tests were carried out to investigate how the demographic factors related to the therapy as perceived by healthcare professionals. Independent Samples t-Test (Gender): There was a significant difference between male and female respondents (t = 2.736, p = 0.007). This implies that gender is a factor that influences the perception of the therapy. The disparities might be a result of differences in clinical exposure or educational backgrounds between genders. One-Way ANOVA (Age Groups): The One-Way ANOVA indicated that

there has been a significant difference in perceptions of the various age groups (F = 4.862, p = 0.003). Younger professionals were more convinced of the therapy, which was probably provided by the additional interest in younger clinical activities and online evidence-based medicine. Kruskal-Wallis Test (Qualification): It was found that the differences between the qualifications of respondents were significant (H = 12.457, p = 0.002). Individuals who had a higher level of academic education (PhD, MSc) were more affirmative towards the therapy, which indicates that higher education increases clinical acceptance of new therapies. Chi-Square Test of Independence (Gender x Qualification): They found that there was a significant association between gender and qualification (2 = 18.325, p = 0.001), which shows that gender can affect the qualification of healthcare professionals, which subsequently impacts their attitude towards combined therapy (Barrera-Chimal, Lima-Posada, et al., 2022).

The Pearson Correlation Matrix showed that questionnaire items 20 were correlated with each other strongly and positively (0.60- 0.95), indicating that respondents who answered one question tended to agree with the other. This shows that there is a common interpretation of the combined therapy, and it proves the convergent validity of the instrument. The large values of the correlation suggest that the items tested the same construct upon consistent measures to improve the reliability of the data set, which supports the study results (Kanumilli et al., 2024).

A multiple linear regression was carried out to determine the impact that the demographic variables (Gender, Age, and Experience) have on the overall perception of the combined therapy. The findings revealed that the three variables had significant effects on the responses, with Gender yielding positive and significant effects (0.214, p = 0.003), which means that gender influences perceptions of the therapy. Age was positively influenced (= 0.368, p =0.001), with the older professionals showing a more positive attitude to the therapy. The strongest influence was on experience (0.421, p < 0.001), which may indicate that the higher professional experience, the greater the possibility of shaping attitudes towards therapy (Bao et al., 2022).

Conclusion

This article examines the perceptions, awareness, and clinical views of medical care providers about the usage of SGLT2 inhibitors and Finerenone therapy combination in cardio-renal protection. The study was done through a systematic approach that included a questionnaire and was able to show solid results, which were supported by strict statistical examinations. The test of normality was used to verify the suitability of the parametric tests, and reliability testing (Cronbach's Alpha) was used to test the consistency of the questionnaire. The fact that the data were suitable for factor analysis was further enhanced by the results of the KMO and the test conducted by Bartlett to determine the validity of the data.

The inferential tests found that there are considerable differences in the perceptions according to demographic variables, gender, age, and educational status, and they emphasized the influence of those variables on the development of the knowledge of healthcare professionals and their support of the idea of combined therapy. The regression analysis also supported the importance of gender, age, and experience in predicting the perceptions, where the experienced and older professionals expressed more positive attitudes towards the therapy. The correlation analysis revealed that there is a strong level of consistency in the opinion of the respondents, which manifests itself in a single interpretation of the therapy and proves the convergent correctness of the tool.

On the whole, this study provides an understanding of the significance of demographic factors in dictating clinical attitudes to new combinations of therapeutic approaches. It offers useful information to policymakers and healthcare organizations by indicating the necessity of special educational and awareness initiatives to enhance the level of knowledge and acceptance of the latest treatments, like the use of SGLT2 inhibitors and Finerenone as a combination. The research can also add to the body of knowledge that is in existence, as it provides a thorough discussion of the factors that affect the clinical application of cardio-renal therapies.

References

Alicic, R. Z., Neumiller, J. J., & Tuttle, K. R. (2025). Combination therapy: an upcoming paradigm to improve kidney

and cardiovascular outcomes in chronic kidney disease. *Nephrology Dialysis Transplantation*, *40*(Supplement_1), i3-i17.

Bao, W., Zhang, M., Li, N., Yao, Z., & Sun, L. (2022). Efficacy and safety of finerenone in chronic kidney disease associated with type 2 diabetes: a systematic review and meta-analysis of randomized clinical trials. *European Journal of Clinical Pharmacology*, *78*(12), 1877-1887.

Barrera-Chimal, J., Gerarduzzi, C., Rossignol, P., & Jaisser, F. (2022). The non-steroidal mineralocorticoid receptor antagonist finerenone is a novel therapeutic option for patients with Type 2 diabetes and chronic kidney disease. *Clinical Science*, *136*(12), 1005-1017.

Barrera-Chimal, J., Lima-Posada, I., Bakris, G. L., & Jaisser, F. (2022). Mineralocorticoid receptor antagonists in diabetic kidney disease—Mechanistic and therapeutic effects. *Nature Reviews Nephrology*, *18*(1), 56-70.

Biglari, S., Mischak, H., Beige, J., Latosinska, A., Siwy, J., & Banasik, M. (2025). The Future of Chronic Kidney Disease Treatment: Combination Therapy (Polypill) or Biomarker-Guided Personalized Intervention? *Biomolecules*, *15*(6), 809.

Caturano, A., Galiero, R., Rocco, M., Tagliaferri, G., Piacevole, A., Nilo, D., Di Lorenzo, G., Sardu, C., Russo, V., & Vetrano, E. (2024). The dual burden: Exploring cardiovascular complications in chronic kidney disease. *Biomolecules*, *14*(11), 1393.

Chen, X., Huang, M., Chen, Y., Xu, H., & Wu, M. (2025). Mineralocorticoid receptor antagonists and heart failure with preserved ejection fraction: current understanding and prospects. *Heart Failure Reviews*, *30*(1), 191-208.

Cohen, S., Sternlicht, H., & Bakris, G. L. (2022). Mineralocorticoid receptor antagonists in the treatment of diabetic kidney disease: their application in the era of SGLT2 inhibitors and GLP-1 receptor agonists. *Current Diabetes Reports*, *22*(5), 213-218.

Colagiuri, S., & Ceriello, A. (2025). 6. Cardio-renal protection in type 2 diabetes. *Diabetes Research and Clinical Practice*, *222*.

Fernandes, M. M. C. (2025). *Cardiorenal Syndrome-Challenges and New Therapeutic Options*

Florescu, A., Pucerea, S., Floria, M., Rusu, E., Cuiban, E., Jinga, M., Dragoi Galrinho, R., & Stanciu, S. (2025). Targeting Heart Disease in Cardiovascular–Kidney–Metabolic Syndrome: A Review of Novel Therapeutic Approaches with Prognostic and Quality-of-Life Impact. *Romanian Journal of*, *128*(6), 554-565.

Georgianos, P. I., Vaios, V., Eleftheriadis, T., Papachristou, E., & Liakopoulos, V. (2023). Therapeutic advances in diabetic kidney disease. *International Journal of Molecular Sciences*, *24*(3), 2803.

Georgianos, P. I., Vaios, V., Koufakis, T., & Liakopoulos, V. (2024). Slowing the progression of chronic kidney disease in patients with type 2 diabetes using the four pillars of therapy: the time to act is now. *Drugs*, *84*(11), 1337-1346.

González-Juanatey, J. R., Górriz, J. L., Ortiz, A., Valle, A., Soler, M. J., & Facila, L. (2023). Cardiorenal benefits of finerenone: protecting the kidney and heart. *Annals of medicine*, *55*(1), 502-513.

Grigoriou, K., Karakasis, P., Nasoufidou, A., Stachteas, P., Klisic, A., Karagiannidis, E., Fyntanidou, B., Popovic, D. S., Patoulias, D., & Antoniadis, A. P. (2025). SGLT2 Inhibitors in the Management of Cardio-Renal-Metabolic Syndrome: A New Therapeutic Era. *Medicina*, *61*(11), 1903.

Hellenkamp, K., Kaebe, S., Valentova, M., von Haehling, S., Delistefani, F., Gollisch, K., Raddatz, D., Schäfer, A. K., Koziolek, M. J., & Wallbach, M. (2025). Finerenone in diabetic chronic kidney disease—Real-world insights including patients with HFpEF or HFmrEF. *ESC Heart Failure*.

Hu, Y., Li, C., Li, S., Xu, L., Wang, Y., & Dong, B. (2025). Finerenone in Chronic Kidney Disease: A Comprehensive Review of Mechanisms, Efficacy, and

Safety. *Diabetes/Metabolism Research and Reviews*, *41*(6), e70075.

Jyotsna, F., Mahfooz, K., Patel, T., Parshant, F., Simran, F., Harsha, F., Neha, F., Jyotishna, D., Mishra, D., & Subedi, S. (2023). A systematic review and meta-analysis on the efficacy and safety of finerenone therapy in patients with cardiovascular and chronic kidney diseases in type 2 diabetes mellitus. *Cureus*, *15*(7).

Kale, A., Sharma, A., Anders, H.-J., & Gaikwad, A. B. (2023). Diabetes and cardiorenal complications: a clinical review of existing therapies and novel combinations, focusing on SGLT2 inhibitors. *Current Diabetes Reviews*, *19*(8), 114-126.

Kanumilli, N., Miszon, M., Schnell, O., & Groop, P.-H. (2024). The role of finerenone in the management of CKD in T2D–Practical considerations for primary care. *Primary Care Diabetes*, *18*(6), 565-573.

Kintscher, U., & Edelmann, F. (2023). The non-steroidal mineralocorticoid receptor antagonist finerenone and heart failure with preserved ejection fraction. *Cardiovascular Diabetology*, *22*(1), 162.

Kobayashi, M., Girerd, N., & Zannad, F. (2024). When to use spironolactone, eplerenone, or finerenone in the spectrum of cardiorenal diseases. *Nephrology Dialysis Transplantation*, *39*(7), 1063-1072.

Kunz, M., Goetzinger, F., Emrich, I., Schwenger, V., Boehm, M., & Mahfoud, F. (2022). Cardio-renal interaction-Clinical trials update 2022. *Nutrition, Metabolism and Cardiovascular Diseases*, *32*(11), 2451-2458.

Lv, R., Xu, L., Che, L., Liu, S., Wang, Y., & Dong, B. (2023). Cardiovascular-renal protective effect and molecular mechanism of finerenone in type 2 diabetic mellitus. *Frontiers in endocrinology*, *14*, 1125693.

Marzolla, V., Infante, M., Armani, A., Rizzo, M., & Caprio, M. (2022). Efficacy and safety of finerenone for treatment of diabetic kidney disease: current knowledge and future perspective. *Expert Opinion on Drug Safety*, *21*(9), 1161-1170.

Masuda, T., & Nagata, D. (2023). Fluid homeostasis induced by sodium-glucose cotransporter 2 inhibitors: novel insight for better cardio-renal outcomes in chronic kidney disease. *Hypertension Research*, *46*(5), 1195-1201.

Masuda, T., & Nagata, D. (2024). Glomerular pressure and tubular oxygen supply: a critical dual target for renal protection. *Hypertension Research*, *47*(12), 3330-3337.

McCullough, P. A., Amin, A., Pantalone, K. M., & Ronco, C. (2022). Cardiorenal nexus: a review with focus on combined chronic heart and kidney failure, and insights from recent clinical trials. *Journal of the American Heart Association*, *11*(11), e024139.

Neuen, B. L., Heerspink, H. J., Vart, P., Claggett, B. L., Fletcher, R. A., Arnott, C., de Oliveira Costa, J., Falster, M. O., Pearson, S.-A., & Mahaffey, K. W. (2024). Estimated lifetime cardiovascular, kidney, and mortality benefits of combination treatment with SGLT2 inhibitors, GLP-1 receptor agonists, and nonsteroidal MRA compared with conventional care in patients with type 2 diabetes and albuminuria. *Circulation*, *149*(6), 450-462.

Neuen, B. L., Yeung, E. K., Rangaswami, J., & Vaduganathan, M. (2025). Combination therapy as a new standard of care in diabetic and non-diabetic chronic kidney disease. *Nephrology Dialysis Transplantation*, *40*(Supplement_1), i59-i69.

Nunez-Marin, G., & Santas, E. (2025). Cardiorenal disease and heart failure with preserved ejection fraction: two sides of the same coin. *Cardiorenal Medicine*, *15*(1), 108-121.

Patoulias, D., Papadopoulos, C., Karagiannis, A., Vassilikos, V., & Doumas, M. (2022). Cardiovascular outcomes with finerenone according to glycemic status at baseline and prior treatment with newer antidiabetics among patients with

type 2 diabetes mellitus. *Endocrinology and Metabolism*, *37*(1), 170-174.

Piccirillo, F., Liporace, P., Nusca, A., Nafisio, V., Corliano, A., Magaro, F., Antonelli Incalzi, R., Ussia, G. P., & Grigioni, F. (2023). Effects of finerenone on cardiovascular and chronic kidney diseases: a new weapon against cardiorenal morbidity and mortality—a comprehensive review. *Journal of Cardiovascular Development and Disease*, *10*(6), 236.

Provenzano, M., Jongs, N., Vart, P., Stefánsson, B. V., Chertow, G. M., Langkilde, A. M., McMurray, J. J., Correa-Rotter, R., Rossing, P., & Sjöström, C. D. (2022). The kidney protective effects of the sodium–glucose cotransporter-2 inhibitor, dapagliflozin, are present in patients with CKD treated with mineralocorticoid receptor antagonists. *Kidney International Reports*, *7*(3), 436-443.

Redon, J. (2022). New insights into cardiovascular and renal protection in diabetic chronic kidney disease with finerenone. In: Oxford University Press.

Rossing, P., Filippatos, G., Agarwal, R., Anker, S. D., Pitt, B., Ruilope, L. M., Chan, J. C., Kooy, A., McCafferty, K., & Schernthaner, G. (2022). Finerenone in predominantly advanced CKD and type 2 diabetes with or without sodium-glucose cotransporter-2 inhibitor therapy. *Kidney International Reports*, *7*(1), 36-45.

Sarafidis, P., Papadopoulos, C. E., Kamperidis, V., Giannakoulas, G., & Doumas, M. (2021). Cardiovascular protection with sodium-glucose cotransporter-2 inhibitors and mineralocorticoid receptor antagonists in chronic kidney disease: a milestone achieved. *Hypertension*, *77*(5), 1442-1455.

Shokri, K., Mohammadi, A., Karimian, A., Adeel, M. Y., Mozaffari, M. A., Frishman, W. H., & Aronow, W. S. (2025). Finerenone's Promise in Heart Failure and Kidney Disease. *Cardiology in review*, 10.1097.

Singh, A., Kesani, H., Verma, S., Saleh, T. M., & Rai, M. (2025). Cardio-Renal Metabolic Syndrome: An Integrated Approach to Prevention and Management. *Cureus*, *17*(10).

Singh, A. K., & Singh, R. (2022). Renin-angiotensin system blockers, SGLT2 inhibitors, mineralocorticoid receptor antagonists in diabetic kidney disease: A tale of the past two decades! *World Journal of Diabetes*, *13*(7), 471.

Soler Romeo, M. J., Facila, L., Gorriz, J. L., Ortiz Arduan, A., González Juanatey, J. R., & Valle, A. (2023). Cardiorenal benefits of finerenone: protecting the kidney and heart.

Spasovski, G., Rroji, M., Hristov, G., Bushljetikj, O., Spahia, N., & Rambabova Bushletikj, I. (2024). A new hope on the horizon for kidney and cardiovascular protection with SGLT2 inhibitors, GLP-1 receptor agonists, and mineralocorticoid receptor antagonists in type 2 diabetic and chronic kidney disease patients. *Metabolic Syndrome and Related Disorders*, *22*(3), 170-178.

Stachteas, P., Nasoufidou, A., Karakasis, P., Fragakis, N., & Patoulias, D. (2025). Combining finerenone with SGLT-2 inhibitors: building up CONFIDENCE for the treatment of diabetic kidney disease. In (Vol. 26, pp. 1255-1258): Taylor & Francis.

Sun, M., Xiao, F., Chen, X., Wang, L., & Dai, H. (2025). ABS0893 FINERENONE AS A NOVEL NON-STEROIDAL MINERALOCORTICOID RECEPTOR ANTAGONIST: A POTENTIAL THERAPEUTIC OPTION FOR LUPUS NEPHRITIS. *Annals of the Rheumatic Diseases*, *84*, 2240-2241.

Taub, P. R., Greene, S. J., & Fudim, M. (2025). The role of finerenone in the concomitant management of chronic kidney disease-type 2 diabetes and the implication for heart failure prevention and treatment. *Heart Failure Reviews*, 1-14.

Terpening, C. M. (2023). Prevention of cardiovascular events in patients with chronic kidney disease. *Annals of Pharmacotherapy*, *57*(12), 1425-1435.

Theofilis, P., Vordoni, A., & Kalaitzidis, R. G. (2022). Oxidative stress management in

cardiorenal diseases: focus on novel antidiabetic agents, finerenone, and melatonin. *Life*, *12*(10), 1663.

Usman, M. S., Khan, M. S., & Butler, J. (2021). The interplay between diabetes, cardiovascular disease, and kidney disease.

Vergara, A., Olivella, A., Azancot Rivero, M. A., Soriano Colomé, T., Soler Romeo, M. J., & Méndez Fernández, A. B. (2023). Cardiorenal syndrome and diabetes: an evil pairing.

Vinson, A. J., & Matas, A. (2024). Late Allograft Loss and Contemporary Cardio-Renal Metabolic Therapies. *Journal of the American Society of Nephrology*, 10.1681.

Vora, J., Cherney, D., Kosiborod, M. N., Spaak, J., Kanumilli, N., Khunti, K., Lam, C. S., Bachmann, M., Fenici, P., & Alliance, C. G. (2024). Inter-relationships between cardiovascular, renal, and metabolic diseases: Underlying evidence and implications for integrated interdisciplinary care and management. *Diabetes, Obesity and Metabolism*, *26*(5), 1567-1581.

Wang, M., & Zuo, L. (2025). Cardiorenal benefits of SGLT2 inhibitors in patients with chronic kidney disease and concomitant hypertension. *Cardiorenal Medicine*, *15*(1), 496-509.