I. Course Description
A lecture and skills course where students practice skills (such as calculating caloric intake and modifying intake, calculating diabetic diets, calculating sodium content of intakes, etc.) under the supervision of a Registered Dietitian. Nutrition 611 and 630 or equivalents are required as a prerequisite or as a co-requisite.

II. Instructor
Amanda S. Holliday MS, RD, LDN
Office: 261 Rosenau
Office Hours: By Appointment
Telephone: 966-7214
Email: amanda_holliday@unc.edu
Twitter: @amandasholliday

III. Textbooks
Required:
• Mahan, K. and Escott-Stump, S. Krause’s Food, Nutrition and Diet Therapy, 13th Edition
• eNCPT https://www.eatright.org/shop/product.aspx?id=6442482026 (Please wait to purchase until discussed in class)

Other resources:
• Academy of Nutrition and Dietetics web site: http://www.eatrightpro.org for Position Papers link (under “Practice” tab) and other menu items of interest (explore and learn more about the profession)
• Sakai website. Please be sure to download the zip file titled Coursepack Download.
• AND Nutrition Care Manual (www.nutritioncaremanual.org), AND Evidence Analysis Library (http://www.andeal.org/)
• Chair’s Office (main waiting area) contains supporting text
  - A physiology text and a medical dictionary

IV. Student Learning Outcomes covered in this course:
• CRD 1.2 Apply evidence-based guidelines, systematic reviews and scientific literature (such as the Academy’s Evidence Analysis Library and Evidence-based Nutrition Practice Guidelines, the Cochrane Database of Systematic Reviews and the U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality, National Guideline Clearinghouse Web sites) in the nutrition care process and model and other areas of dietetic practice.
• CRD 3.1b Diagnose nutrition problems and create problem, etiology, signs and symptoms (PES) statements
• CRD 3.1c Plan and implement nutrition interventions to include prioritizing the nutrition diagnosis, formulating a nutrition prescription, establishing goals and selecting and managing intervention
• CRD 3.1d Monitor and evaluate problems, etiologies, signs, symptoms and the impact of interventions on the nutrition diagnosis
• CRD 3.1e Complete documentation that follows professional guidelines, guidelines required by health care systems and guidelines required by the practice setting

By the end of this course students will have demonstrated the ability to:
1. screen individuals for nutritional risk
2. collect pertinent information for comprehensive nutrition assessments
3. interpret medical terminology
4. interpret laboratory parameters relating to nutrition
5. calculate and interpret nutrient composition of foods
6. calculate and/or define diets for health conditions
7. calculate enteral and parenteral nutrition formulations
8. translate nutrition needs into food choices and menus
9. counsel individuals on nutrition

V. Learning Experiences
1. Students will independently complete assignments covering varying aspects of the disorders under discussion.
2. Study Guides/Modules are provided that will help the student organize information around various disease states. Completion of the study guides is optional for Nutrition 640 but will be required for the MPH/RD students during NUTR 710.
3. In the assigned groups, students will work on the case study and lead a discussion of about 20 minutes on the case.
4. Each student who plans to become a registered dietitian in the near future would benefit from developing a Pocket Brain/Cheat Book to be used during supervised practice experiences. This is a collection of material you feel will help you get through your day. Throughout the semester suggestions will be made about what to put in your pocket brain but it is really up to the individual. **Pocket brains can be used during the completion of the open book portions of exams in this class.**

VI. Grading
Evaluation of student performance in this course will be based on the following:

- Learning experiences: 60%
- Exams (3): 40%

Exams in this class are both closed book and open book. The open book exams will be practical work similar to homework assignments. Any reference that you have can be used.

**Grading Scale:**

<table>
<thead>
<tr>
<th>Undergraduates</th>
<th>Graduates</th>
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<tbody>
<tr>
<td>97-100</td>
<td>805-870 (&gt;93%)</td>
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<tr>
<td>93-96</td>
<td>649-804 (75-92%)</td>
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<tr>
<td>90-92</td>
<td>605-648 (70-74%)</td>
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<tr>
<td>87-89</td>
<td>&lt;605 (Below 70%)</td>
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<td>83-86</td>
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<td>70-72</td>
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<td>Below 70</td>
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<td>Below 60</td>
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**Honor System:** The Honor Code is in effect in this class and all others at the University. I am committed to treating Honor Code violations seriously and urge all students to become familiar with its terms set out at [http://instrument.unc.edu](http://instrument.unc.edu). If you have questions, it is your responsibility to ask me about the Code’s application.

**All exams and assignments must be submitted with the following signed statement:**
On my honor, no unauthorized assistance has been received or given in the completion of this work.

Signature: ____________________________

NOTE: THOSE STUDENTS PLANNING TO TAKE NUTRITION 720: PUBLIC HEALTH NUTRITION MANAGEMENT AND/OR NUTRITION 710: CLINICAL NUTRITION PRACTICE DURING SUMMER, MUST RECEIVE A GRADE OF P OR BETTER IN NUTR 640 IN ORDER TO ENROLL IN EITHER CLASS.
### VII. Course Schedule

#### Nutrition Assessment

Helpful Videos for Studying this section:
- Nutrition Focused Physical Assessment: [http://anhi.org/courses/7D801AE87DCE45FAB9C49857D888B0FAF](http://anhi.org/courses/7D801AE87DCE45FAB9C49857D888B0FAF)

<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Activity</th>
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</table>
| Th  | 1/12 | **Introduction to the course**  
Medical Terminology Practice  
Text: Krause, Chapter 11 and Appendix 1-4: General Abbreviations  
Sakai:  
- NCP and MNT (side by side)  
- Summary: Health IT and Patient Safety (p S1-S11), IOM 2012  
- Code of Ethics, JADA, August 2009  
- Mr. Hill’s Admission Note  
- Mp3 Download for ipod: Basic Word Structure (follow with Chabner Ch.1)  
- Tools  
- JCAHO Do Not Use List (March 2009)  
- Medical Terminology Study Guide |
| T   | 1/17 | **The Nutrition Care Process: Nutrition Screening and Introduction to Nutrition Assessment**  
Readings: Krause, Chapter 11  
Sakai:  
**Medical Terminology Practice Extra Credit (3pts) Due** |
| Th  | 1/19 | **Anthropometric Data - Adult**  
Readings: Lee, Chapter 6; Krause, Chapter 6  
Sakai:  
- Fox, Maggie. Americans a bit taller, much heavier than in 1960.  
- Reuters Health Information, October 27, 2005.  
| T   | 1/24 | **Anthropometric Data (Adult) Continued and Assessment of the Adult Hospitalized Patient**  
Readings: Lee, Chapter; Krause, Chapter 6 (pgs.171-172)  
Sakai:  
- Picus, S. S. Evaluation of the nutrition counseling environment of hospitalized patients. JADA 89(3): 403-404, 1989. (Old but interesting)  
<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Topic</th>
<th>Readings/Tools</th>
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</thead>
<tbody>
<tr>
<td>Th</td>
<td>1/26</td>
<td><strong>Biochemical Data</strong></td>
<td>Lee, Chapter 9; Krause, Chapter 8</td>
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<td>Sakai:</td>
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<td></td>
<td>• Review online Case Studies in Laboratory Assessment of Nutritional</td>
<td>Status.</td>
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<td>Status.</td>
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<tr>
<td>T</td>
<td>1/31</td>
<td><strong>Biochemical Data, Continued</strong></td>
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<tr>
<td>Th</td>
<td>2/2</td>
<td><strong>Clinical Data – Nutrition Focused Physical Assessment</strong></td>
<td>Lee, Chapter 10; Krause, Chapter 6</td>
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<td>Sakai:</td>
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<tr>
<td></td>
<td></td>
<td>• Kight et al. Conducting Physical Examination Rounds for Manifestations</td>
<td>Nutrient Deficiency or Excess: An essential component of JCAHO Assessment</td>
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<td>of Nutrient Deficiency or Excess: An essential component of JCAHO</td>
<td>Performance NCP 14: 93-98, 1999. (oldy but goldy)</td>
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<td>Assessment Performance NCP 14: 93-98, 1999. (oldy but goldy)</td>
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<td>statement of the Academy of Nutrition and Dietetics/American Society</td>
<td>Parenteral and Enteral Nutrition: characteristics recommended for the</td>
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<td>for Parenteral and Enteral Nutrition: characteristics recommended</td>
<td>identification and documentation of adult malnutrition (undernutrition). J.</td>
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<td>F</td>
<td>2/3</td>
<td>**1:00-Noon: Practice session (Adult) - Collecting anthropometric</td>
<td>(Be sure to wear clothing appropriate for taking measurements, bring your</td>
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<td>data**</td>
<td>calculator and a pen and pencil.)</td>
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<td><em>Bring Lee Book as a reference tool</em></td>
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<td>T</td>
<td>2/7</td>
<td><strong>Routine Hospital Diets</strong></td>
<td>Krause, Chapter 2 and Appendices 19-31</td>
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<td></td>
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<td>Tools</td>
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<td></td>
<td></td>
<td>• Nutrition Care Manual Formulary (Oral)</td>
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<td>• UNC Formulary Card (Oral)</td>
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<td>Assignment #1 Due: Anthropometrics (60 pts)</td>
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<td>Text: Krause, Chapter 2 and Appendices 19-31</td>
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<td>Tools</td>
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<td></td>
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<td>• Zeman Chapter 6 (print for pocket guide)</td>
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<td>• Exchange Lists for Weight Management (from Nutrition 630)</td>
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<td>Hospitalized Patients, JADA 107 (3): 393-401, 2007</td>
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<tr>
<td></td>
<td></td>
<td>• Support Line article by Fish: Using equations to estimate caloric</td>
<td>requirements in obese people 26 (6): 20-22, 2004</td>
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<td>requirements in obese people 26 (6): 20-22, 2004</td>
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<tr>
<td>F</td>
<td>2/10</td>
<td><strong>11:00-12:00pm: Ackland Art Museum, Learning Descriptive Skills</strong></td>
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<tr>
<td>T</td>
<td>2/14</td>
<td><strong>Documenting Services – Practice Writing Notes</strong></td>
<td></td>
</tr>
</tbody>
</table>
The Digestive System

Helpful Videos for Studying this section:

**GI Anatomy and Physiology:**

- Khan Academy "Meet the GI Tract": [https://www.youtube.com/watch?v=Oh_Pt_UrtEE](https://www.youtube.com/watch?v=Oh_Pt_UrtEE)
- Khan Academy "Mouth": [https://www.youtube.com/watch?v=KyEk35-Uwh0](https://www.youtube.com/watch?v=KyEk35-Uwh0)
- Khan Academy "Esophagus": [https://www.youtube.com/watch?v=wU9_daCwr_w](https://www.youtube.com/watch?v=wU9_daCwr_w)
- Khan Academy "Stomach": [https://www.youtube.com/watch?v=OzLoUCCASwM](https://www.youtube.com/watch?v=OzLoUCCASwM)
- Khan Academy "Small Intestine 1 - Structure": [https://www.youtube.com/watch?v=UgnF1w-H8vw](https://www.youtube.com/watch?v=UgnF1w-H8vw)
- Khan Academy "Small Intestine 2 - Digestion": [https://www.youtube.com/watch?v=nLCNoT79-o](https://www.youtube.com/watch?v=nLCNoT79-o)
- Khan Academy "Small Intestine 3 – Absorption": [https://www.youtube.com/watch?v=7zq3s3F5Do8](https://www.youtube.com/watch?v=7zq3s3F5Do8)
- Khan Academy "Colon, Rectum, Anus": [https://www.youtube.com/watch?v=Lzr9GGjh6YQ](https://www.youtube.com/watch?v=Lzr9GGjh6YQ)
- Khan Academy "Exocrine Pancreas": [https://www.youtube.com/watch?v=BtqlMr1rUT8](https://www.youtube.com/watch?v=BtqlMr1rUT8)

**GI Disorders and Malabsorption:**

- International Foundation for Functional Gastrointestinal Disorders: [http://www.aboutgimotility.org](http://www.aboutgimotility.org)
- NDDIC "Pancreatitis": [http://www.niddk.nih.gov/health-information/health-topics/liver-disease/pancreatitis/Pages/facts.aspx](http://www.niddk.nih.gov/health-information/health-topics/liver-disease/pancreatitis/Pages/facts.aspx)

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<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>2/16</td>
<td>Exam 1: Case Based Exam (Open Book, Nutrition Assessment Section) (120 pts)</td>
</tr>
</tbody>
</table>

**T 2/21**

**The Upper GI Tract**

Text: Krause, Chapter 28

Course Download:


**Th 2/23**

**The Upper GI (con’t) and Malabsorption Problems**

Texts: Krause, pp. 790-794 (CF information)

Course Download:

Tools
• Gluten Free Pocket Guide (keep for your pocket)
• Gluten Free Website: [www.zeer.com](http://www.zeer.com)  (Have fun!!)

T 2/28  Malabsorption and The Lower GI Track: Part I
Texts: Krause, Chapter 29; Appendix 41
Course Download:

Th 3/2  The Lower GI Track: Part II
• Soothing the Symptoms of IBS With Diet Therapy. Today’s Dietitian, June 2009.

The Liver, Gallbladder and Exocrine Pancreas

T 3/7  Liver, Gallbladder and Pancreatic Disorders
Text: Krause, Chapter 30
Sakai:
[Study Guide: Liver and Gallbladder Disease](#)

Assignment #3 Due: GI Nutrition (50pts)

Th 3/9  Liver, Gallbladder and Pancreatic Disorders, Continued
Group 1: Cirrhosis of the Liver Case #12
Group 2: Celiac Disease, Case #9

T 3/14  Spring Break
Th 3/16  Spring Break

The Cardiovascular System
Helpful Videos for Studying this section:
• American Heart Association Interactive Cardiovascular Library “Atherosclerosis”: [http://www.heart.org/heartguy/atherosclerosis](http://www.heart.org/heartguy/atherosclerosis)
<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Subject</th>
<th>Text</th>
<th>Course Download</th>
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</thead>
<tbody>
<tr>
<td>T</td>
<td>3/21</td>
<td>Cardiovascular Disease: HTN</td>
<td>Krause, Chapter 34</td>
<td></td>
</tr>
</tbody>
</table>
|     |       |         |      | - James, et al. 2014 Evidence-Based Guidelines for the Management of High Blood Pressure in Adults. Report from the panel members appointed to the eighth joint National Committee (JNC 8), December 18, 2013. 
| Th  | 3/23  | Cardiovascular Disease: Atherosclerosis | Krause, Chapter 34 | 
|     |       | Practical Work related to Cardiovascular Disease (take home) |      | 
|     |       |         |      | - Your Guide to Lowering Cholesterol With TLC NIH Publication 06-5235 
|     |       |         |      | - PBS Video: [The Hidden Epidemic: Heart Disease in America](http://www.nhlbi.nih.gov/health/public/heart/hbp/dash/Your Guide To Lowering Your Blood Pressure With DASH; NIH Publication #06- 4082) |
| T   | 3/28  | Cardiovascular Disease: Heart Failure | Group #3: Hypertension and Cardiovascular Disease, Case #4 |
| Th  | 3/30  | Exam 2: Case Based Exam (Open Book, The Digestive System, Liver and Cardiovascular System) (120 pts) |
## The Endocrine System

**Helpful Videos for Studying this section:**
- Khan Academy “Endocrine Pancreas”: [https://www.youtube.com/watch?v=xNf-q0YMq8](https://www.youtube.com/watch?v=xNf-q0YMq8)
- Khan Academy “Glucose, Insulin, and Diabetes”: [https://www.youtube.com/watch?v=rPLjSY00JfE](https://www.youtube.com/watch?v=rPLjSY00JfE)

### T 4/4
**Type 1 Diabetes**

*Discuss Take Home Practical Work*

Text: Krause, Chapter 31

Course Download:
- Gregory, P. Nutrition management of a collegiate football player with insulin dependent diabetes: Guidelines and a case study. JADA 94(7): 775-777, 1994. (Getting old but illustrates a point)
- Mayer-Davis, et. al The Many Faces of Diabetes in American Youth: Type 1 and Type 2 Diabetes in Five Race and Ethnic Populations: The SEARCH for Diabetes in youth Study. Diabetes Care 32(S2): S99-S101, 2009. (Read the rest of the supplement if you are interested.)

### Th 4/6
**Type 1 Diabetes, Continued**

*Guest Lecturer*

Course Download:
- Evidence Based Nutrition Principles and Recommendations for the Treatment and Prevention of Diabetes and Related Complications, Diabetes Care 26:S51-S61, 2003

### T 4/11
**Practical Work in Diabetes**

*Group #4: Type 1 Diabetes, Case #15*
*Group #6: Type 2 Diabetes, Case #17*

### Th 4/13
**Type 2 Diabetes and Gestational Diabetes**

Text: Krause, Chapter 31

Course Download:
- My Plate for Gestational Diabetes

**Assignment #4 Due: Diabetes-100 pts**

## The Renal System

**Helpful Videos for Studying this section:**
- Khan Academy “How do our kidneys work?”: [https://www.youtube.com/watch?v=ctGkLYuUCvU](https://www.youtube.com/watch?v=ctGkLYuUCvU)
- National Kidney Foundation “Kidney Failure Treatment”: [https://www.youtube.com/watch?v=nQdCctkedVY](https://www.youtube.com/watch?v=nQdCctkedVY)
<table>
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<tr>
<th>Day</th>
<th>Date</th>
<th>Topic</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>T</td>
<td>4/18</td>
<td>Renal Disease - Pre-dialysis and Chronic Kidney Disease</td>
<td>Text: Krause, Chapter 36</td>
</tr>
</tbody>
</table>
| Th  | 4/20 | Renal Disease - Peritoneal Dialysis | Text: Krause, Chapter 36  
Course Download:  
| Th  | 4/21 | Renal Disease – Hemodialysis | Text: Krause, Chapter 36  
Course Download:  
| T   | 4/25 | Practical work related to kidney disease | Group #5: Renal Disease, Case #18 |
| Th  | 4/27 | Adult Obesity |  
*Guest Lecturer:* Toni Hartley MPH, RD, LDN  
Text: Krause, Chapter 22  
Course Download:  
| F   | 5/5  | Noon-3pm, Room TBA | Final Exam Case Based Exam (Open Book, The Endocrine and Renal Systems + Adult Obesity) |
Case Studies: There is a lot of material covered in the case studies so I will work with each group to identify which questions in the case study to focus on. Some of it will be didactic and some of it will be practical/hands on. Please schedule a time to meet with me. During our group meeting, we will discuss the case and help you get prepared for your presentation. Please turn in your completed case study questions 2 days prior to our meeting so I can review it and be prepared during our meeting. Please turn in your final case questions and your handout to me by 8am of the morning you present your case.

<table>
<thead>
<tr>
<th>Group</th>
<th>Case Studies</th>
<th>Presentation</th>
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</thead>
<tbody>
<tr>
<td>Group 5</td>
<td>Renal Disease, Case #18</td>
<td>April 25, 2017</td>
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<td></td>
<td>Group 3: Hypertension and Cardiovascular Disease, Case #4</td>
<td>March 28, 2017</td>
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<tr>
<td>Group 1</td>
<td>Cirrhosis of the Liver, Case #12</td>
<td>March 9, 2017</td>
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<td>Group 2</td>
<td>Celiac Disease, Case #9</td>
<td>March 9, 2017</td>
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<tr>
<td>Group 4</td>
<td>Type I Diabetes, Case #15</td>
<td>April 11, 2017</td>
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<tr>
<td>Group 6</td>
<td>Type 2 Diabetes, Case #17</td>
<td>April 11, 2017</td>
</tr>
</tbody>
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Aiken
Evans
Kennedy
Pillepich
Vnk

Bartz
Ghazi-
moghaddam
Linares
Reid
Wallis

Brooks
Harrell
Nebolisa
Stephan
Treece

Byrd
Hart
Pearsall
Taylor
Tzeel

Caldwell
Guy
Moser
Reiter

Antonelli
Fredrickson
Koonce
Pimentel
Vos